



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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November 8, 2012

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Subject: EPA Radiological Study of the Santa Susana Field Laboratory Area IV and the Northern Buffer Zone; **Final Biological Monitoring Report**

Dear Ms. Marek, Mr. Humble, and Ms. Meyer:

The United States Environmental Protection Agency (US EPA) is concluding its radiological study at Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL) located in eastern Ventura County. EPA is conducting this project pursuant to federal legislative mandate HR2764, the Consolidated Appropriations Act of 2008, and the authority granted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Attached is EPA's Final Biological Monitoring Report dated October 3, 2012. The purpose of this report is to provide a monitoring summary, which addresses:

- Project Activities and Operations,
- Biological Surveys, Monitoring, and Impacts to Federally Listed Species, and their Critical Habitat, if applicable,
- Biological Surveys, Monitoring, and Impacts, to State listed species, and Species of Special Concern,
- Riparian Area impacts,
- Issues Encountered and Adaptive Management.

The attached report covers EPA project activities during the period from April 1st to July 13th, 2012, summarizes the findings of the fifth through the eighth quarterly monitoring periods as the Second Annual Monitoring Report (July 1, 2011 through July 13, 2012), and also provides a Final Monitoring Report summarizing the findings of all eight quarterly monitoring periods. EPA issued biological monitoring status reports to document our compliance with the Biological Opinion concerning the subject project issued by the U.S. Fish and Wildlife Service (USFWS)

on May 25, 2010 and our compliance with the substantive technical requirements of the California Endangered Species Act, the California Department of Fish and Game Code Section 1602 (riparian protection), the Federal Migratory Bird Treaty Act and the California Fish and Game Code Sections 3503 and 3503.5 (for protection of nesting birds).

Thank you for suggesting a call with EPA and our consultants to provide a general update on the status of our radiological study. I understand we are considering a call the week of November 13 or early the week of the 19th. As for the overall Site cleanup process, it is true that DTSC is overseeing the cleanup and the various administrative areas are proceeding on separate timelines and approaches. You might be interested in attending a portion of EPA's Project Closeout Workshop tentatively scheduled December 6 with DOE and DTSC near the Site or to follow up directly with those parties. On the afternoon agenda will be transferring our data and lessons learned with respect to the Biological Monitoring.

Please give me a call at (415) 972-3167 if you have any questions regarding the information provided herein.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Bain", written over a light blue horizontal line.

Andrew Bain
Remedial Project Manager
SSFL Site

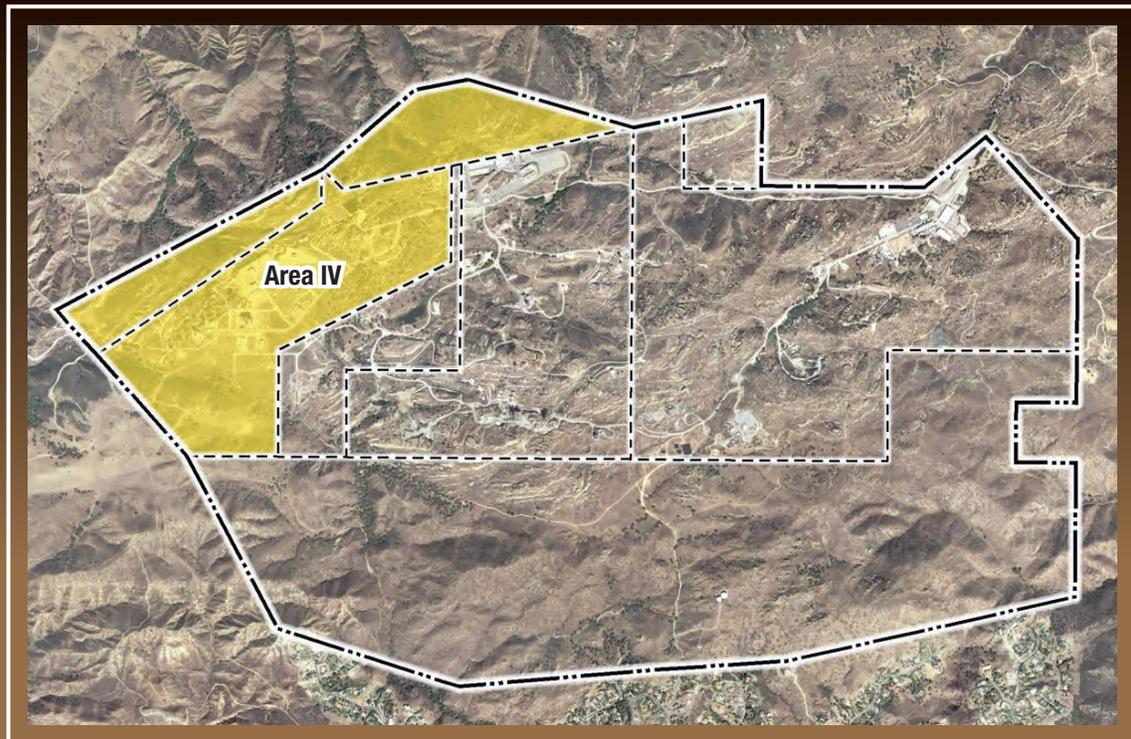
cc: Stephanie Jennings, Department of Energy
Rick Brausch, California Department of Toxic Substances Control

Attachment: Final Quarterly Biological Monitoring Report dated October 3, 2012

RADIOLOGICAL STUDY OF THE

SANTA SUSANA FIELD LABORATORY

Area IV and Northern Buffer Zone



Prepared For:
**U.S. Environmental
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October 3, 2012

**FINAL BIOLOGICAL MONITORING REPORT
2010 - 2012**

**RADIOLOGICAL STUDY OF THE
SANTA SUSANA FIELD LABORATORY AREA IV AND
NORTHERN BUFFER ZONE**

Prepared for:

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INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has completed a radiological characterization of a portion of the Santa Susana Field Laboratory (SSFL), located in the Simi Hills of eastern Ventura County, California (**Figure 1**). The two areas at SSFL characterized are identified as Area IV, a 290-acre administrative section where the U.S. Department of Energy and its contractors once operated several nuclear reactors and associated fuel facilities and laboratories, and the Northern Buffer Zone (NBZ), a 182-acre area with no history of development that lies adjacent to Area IV. These two areas comprise the Area IV study area.

Several activities associated with the radiological study of the Area IV Study Area have the potential to impact federally listed species and their critical habitat, as well as biological resources protected under other Federal and State laws. These activities include vegetation cutting, gamma scanning, geophysical survey, surface and subsurface soil sampling, groundwater monitoring well sampling, surface water sampling, and sediment sampling. The scope of these project activities is described in further detail in the Biological Assessment (BA) prepared for EPA by HydroGeoLogic, Inc. (HGL), and Envicom Corporation on February 12, 2010. To minimize the impact to natural resources and riparian habitat within the study area, protection measures were developed and implemented during scanning and sampling activities on the project site, including associated vegetation clearance. These measures are detailed in Appendices E, G, and N of the Site Management Plan (dated September 24, 2010).

EPA conducted this project pursuant to federal legislative mandate HR2764, the Consolidated Appropriations Act of 2008, and the authority granted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Formal consultation under Section 7 of the Endangered Species Act was conducted with the U.S. Fish and Wildlife Service (USFWS), and a Biological Opinion was issued on May 25, 2010. The USFWS Biological Opinion identified Avoidance and Minimization Measures (AMMs) keyed to each of the proposed activities and Federally listed species with potential to occur within the Action Area. EPA agreed to implement the various components of the Radiological Survey in compliance with the Biological Opinion and its requirements. Although not under discretionary approval, EPA also made efforts to comply with the substantive technical requirements of State of California natural resource protection laws, such as the California Endangered Species Act and California Fish and Game Code Section 1602 for impacts to riparian resources. Additional applicable biological resource laws or regulations to which the project adhered include the Federal Migratory Bird Treaty Act and California Fish and Game Code 3503 and 3503.5 (for protection of nesting birds).

This report conveys the findings of the eighth quarterly biological monitoring conducted during the period April 1 to July 13, 2012, summarizes the findings of the fifth through the eighth quarterly monitoring periods as the Second Annual Monitoring Report (July 1, 2011 through July 13, 2012), and also provides a Final Monitoring Report summarizing the findings of all eight quarterly monitoring periods. This Final Monitoring Report documents the EPA's implementation of the AMMs identified in the Biological Opinion to minimize impacts to biological resources throughout the entire period of project activities, and fulfills the monitoring and reporting obligations associated with this project.

PROJECT ACTIVITIES AND OPERATIONS

The Area IV Study Area is subdivided into Subareas 3, 5A, 5B, 5C, 5D North, 5D South, 6, 7, 8 North, 8 South, NBZ-W, and NBZ-E (**Figure 2**). The subareas have been divided into 76 Survey Sections (SS) and 23 NBZ Priority Areas. The SSs include roads. At this time, EPA has concluded all six of the

primary project tasks: vegetation cutting, gamma scanning, geophysical survey, surface and subsurface soil sampling, groundwater monitoring well sampling, and surface water and sediment sampling. The following is a discussion of the project tasks and the locations in which they have been conducted during the eighth quarterly monitoring period. Various equipment and work activities that were monitored during this quarter are shown in representative photographs in **Plate 1**.

Vegetation within the study area was selectively cut or trimmed to allow access to vehicles and equipment for soil sampling activities. Vegetation cutting protocols are found in Appendix E of the Site Management Plan. Vegetation cutting was monitored during this quarterly monitoring period in Subareas 5D North and 8 North (Figure 2). Vegetation cutting equipment used during this quarter was limited to handheld tools such as weed whackers.

Gamma scanning activities concluded in mid January 2012 during the seventh quarterly monitoring period and was not observed to occur during this monitoring quarter.

Geophysical surveys were completed in all Subareas of the project area during the first annual monitoring period and were not observed to occur during this monitoring quarter.

Surface and subsurface soil sampling activities were monitored during this eighth quarterly period in Subareas 5A, 5B, 5D-North, 5D-South, 6, 7, 8-North, 8-South, NBZ-E, and NBZ-W. Biological clearance surveys were performed for each of the affected soil sampling sites and sensitive resources were clearly identified and flagged. Sampling equipment used for this task included a mobile drilling/coring rig, a hand auger, and a shovel. Support equipment for the soil sampling effort includes a pressure steam cleaner, decontamination rack, radiation and chemical detection meters, tables, chairs, glass and plastic sample containers, and equipment boxes. The number of sampling points within each SS varies depending on the findings of the Historical Site Assessment (HSA) and the results of the gamma scanning surveys already conducted. The sampling procedure at each sample point involves retrieving a surface sample of approximately one gallon of soil from 0 to 6 inches below ground surface (bgs). A subsurface soil sample consisting of a core sample obtained from a depth of 10 feet bgs is collected at a subset of the surface sampling sites.

Monitoring well sampling was completed during the fourth quarterly monitoring period and therefore was not conducted during the eighth quarterly monitoring period.

BIOLOGICAL CLEARANCE SURVEYS, MONITORING, AND IMPACTS

Clearance Survey Methodology

Before project activities commenced within each of the subareas, one of the USFWS-approved biologists from Envicom conducted clearance surveys to document the presence/absence and location of Federal and State special-status biological resources and riparian habitat (**Figure 3**). The locations of the resources were marked in the field with conspicuous flagging and mapped using Global Positioning System (GPS) technology and Geographic Information System (GIS) software. Mapped resources are shown on **Figures 4, 5, and 6**. Clearance survey monitoring forms were prepared for each clearance survey to document the resources observed and to identify which AMMs included in the Biological Opinion were applicable to the activities performed within each survey area during this monitoring period. The clearance survey monitoring forms compiled during the eighth quarterly monitoring period are included with this report as Appendix 1.

Biological Monitoring Methodology

One or more of the approved biological monitors from Envicom were present on a daily basis. The monitors attended the safety meeting with crews and monitor project activities. During the eighth quarterly monitoring period (April 1 to July 13, 2012), the following primary project tasks were conducted: vegetation cutting, and surface and subsurface soil sampling. The biological monitor(s) worked alongside the field crews to point out the locations of special-status biological resources and assist the crews in avoiding impacts. Daily biological monitoring forms (Attachment 2) were prepared to document the activities monitored, any special-status biological resources encountered, and impacts resulting from project activities. Any further recommendations on reducing impacts to biological resources also were reported on this form. In compliance with the Biological Opinion, all project-related crews participated in an environmental education program administered by the USFWS-approved biologist to inform participants as to the sensitive biological resources within the project area and the AMMs to be employed.

Eighth Quarter Clearance Survey and Monitoring Results for Federally Listed Species

Of the federally listed species identified in the Biological Opinion, only one (Braunton's milkvetch) has been positively identified in the study area, although suitable habitat or unidentifiable individuals that could, in fact, be listed were identified as well. **Table 1** summarizes the locations where these species have been detected during either clearance surveys or monitoring.

Braunton's milkvetch (Astragalus brauntonii); Federally Endangered

During the eighth quarterly monitoring period soil sampling activities were conducted within the occupied milkvetch habitat in 5D South and 8 South. Vegetation clearing had been completed in these subareas prior to this monitoring period and was not conducted at these locations during the eighth quarterly monitoring period. During a biological resource clearance survey performed by Mr. Scott Werner on June 6, 2012, a total of 6 new Braunton's milkvetch plants were identified growing in the central "parking" area of SS-59. These plants were clearly marked in the field and were subsequently monitored when activities were conducted in the vicinity, as were all identified Braunton's milkvetch individuals (**Plates 2A and 2B**).

All soil sampling activities in the occupied milkvetch habitat area that occurred during the eighth quarterly monitoring period was conducted using hand tools including a hand auger and a shovel to limit the intrusion into this area with vehicles or heavy machinery. However, even with these precautions and implementation of AMM SS-1, two Braunton's milkvetch plants were impacted during this period by being inadvertently stepped on. This impact was recorded on the May 29 Biological Resource Monitoring Form prepared by Mr. Jack Stone, who reported that even though the plants were clearly flagged at the tops of the higher branches, lower horizontal branches near the ground were not noticed by workers in the area. As described in **Table 2**, it was determined that the impacts had not damaged the plants and no stems were bent or broken. To prevent similar incidents, the monitoring biologist placed brightly colored material on the lower branches of individual Braunton's milkvetch plants that were in areas where workers were likely to walk nearby.

As discussed above, soil sampling activities occurred during this monitoring period within SS-59, which includes an area designated as Critical Habitat Unit 1d for Braunton's milkvetch. These activities were limited to the use of hand tools in this area, which resulted in minimal impact to the habitat's primary constituent elements (PCEs) for Braunton's milkvetch (calcium carbonate soils derived from marine sediment, low proportion (<10%) of shrub cover directly around the plant, and chaparral and coastal sage

scrub communities characterized by periodic disturbances that stimulate seed germination [e.g., fire, flooding, erosion] and reduce vegetative cover). As such, the designated Critical Habitat Unit 1d for Braunton's milkvetch was not negatively impacted during the eighth quarterly monitoring period.

Dudleya species: Conejo dudleya (Dudleya abramsii subsp. parva [=D. parva]), Santa Monica Mountains live-forever (D. cymosa subsp. ovatifolia [inclusive of D. cymosa subsp. agourensis]), and marcescent dudleya (D. cymosa subsp. marcescens); all Federally Threatened

None of the Federally or State listed dudleya species have been encountered. Many flowering dudleya individuals were identified as *D. lanceolata* (no protection status), while some dudleya were unidentifiable because they were not flowering at the time of observation. All unidentifiable dudleya were flagged and protected during project activities. During this monitoring period, species were flagged in Subareas 6, 7, 8 North, 8 South, NBZ-E, and NBZ-W (SS-18, SS-37, SS-38, SS-39, SS-42, SS-43, SS-46, P1A, P1B, P1C, P1D, P1E, P1F, P1J, P2N, P2Q, and P3X). No flagged dudleya have been harmed during project activities.

Vernal Pool Branchiopods: Riverside fairy shrimp (Streptocephalus woottoni), Federally Endangered, and vernal pool fairy shrimp (Branchinecta lynchi), Federally Threatened

A vernal pool habitat with confirmed occupation by fairy shrimp was observed in a pothole on a sandstone outcrop during monitoring within survey section P1C of the NBZ-W. No work activities were performed in the vicinity of the vernal pool habitat during this monitoring period, as soil samples were not collected on the sandstone outcrop where the habitat is located, and no observations were made of workers approaching the vernal pools in this location. No impacts to the vernal pools or vernal pool branchiopods occurred as a result of EPA's activities.

California red-legged frog (Rana draytonii); Federally Threatened

Project activities occurred in proximity to areas identified in the Biological Assessment as potentially suitable habitat for the California red-legged frog. These habitat areas consist of outfall collection pools in Subareas 6 (SS-38) and 8 North (SS-43). A 300-foot buffer was mapped around these features using a GIS, and the biological monitor supervised all project activities within the upland buffer area. During the monitoring period, soil sampling was conducted within the buffer zones, but the wetlands were not affected. No red-legged frogs were observed.

Least Bell's vireo (Vireo bellii pusillus); Federally Endangered

Soil samples were collected within the least Bell's vireo habitat areas in Subarea 5B (SS-12) and Subarea 6 (SS-26) during the monitoring period, which occurred during the least Bell's vireo nesting season (March 15-September 30). All soil sampling conducted in this area was accomplished with a hand auger to minimize the use of heavy equipment or vehicles. Prior to the work activities occurring in these areas, consisting of approximately 14 acres previously identified as potential vireo habitat, Mr. Scott Werner, Principal Biologist of Werner Biological Consulting, conducted a Least Bell's Vireo Protocol Survey. Mr. Werner holds a U.S. Fish and Wildlife Service Recovery Permit # 179013-1 issued under Section 10(a)1(A) of the Endangered Species Act, authorizing take (locating and monitoring nests) of the least Bell's vireo, although the survey methodology did not require implementation of the permit (no take of the vireo occurred or was expected to occur). Mr. Werner was one of the primary biological monitors working on the EPA Radiological Study from 2010 to 2012 and was familiar with the EPA activities and biological surveys that had previously been conducted in the habitat areas. A total of eight surveys were conducted 10 to 11 days apart from April 10 to June 21, 2012 in accordance with the methodology described in Least Bell's Vireo Survey Guidelines provided by the USFWS. There were no least Bell's

vireos detected throughout the survey, which concluded that the least Bell's vireo is considered absent from Area IV and the NBZ in the context of the EPA Radiological Study. Although the results of the survey were negative for least Bell's vireo, Mr. Scott Werner closely monitored all work activities that occurred in these survey sections throughout this monitoring period. The complete report of the Least Bell's Vireo Protocol Survey is included as Appendix 4

California gnatcatcher (Polioptila californica californica); Federally Threatened

A third yearly protocol-level survey for California gnatcatcher was conducted for an area defined as having potentially suitable habitat. The complete survey consisted of 6 replicate surveys conducted between April 4 and May 16 per the survey protocol. The results of the 2012 survey were negative with no individuals observed and it is considered that the California gnatcatcher is absent from the survey area in the 2012 breeding season. Identical protocol surveys were conducted in 2010 and 2011, which also reported an absence of the California gnatcatcher in the survey area. The complete Gnatcatcher Habitat Assessment and Protocol Survey is included as Appendix 5.

On April 6, 2012, U.S. Fish and Wildlife authorized EPA to conduct soil sampling activities within potential coastal California gnatcatcher habitat within Area IV and the NBZ prior to completion of the protocol-level survey for the 2012 breeding season, provided that a USFWS-approved coastal California gnatcatcher biologist accompany soil sampling teams and monitor activities in these areas. Activities within potential coastal California gnatcatcher habitat during the eighth quarter of the study consisted of soil sampling using hand tools (hand auger or shovel) in NBZ-W (P1A, P1B, P1C, P1I, P2K, P2L, P2M, P2N, P2O, P3S). All project activities in potential coastal California gnatcatcher habitat during the eighth quarterly monitoring period were conducted in the presence of an USFWS-approved coastal California gnatcatcher monitor (Mr. John Griffith or Mr. Scott Werner). No California gnatcatcher individuals or nests were observed during this monitoring period.

Eighth Quarter Clearance Surveys and Monitoring Results for Non-Federally listed Protected Biological Resources (excludes non-special status nesting birds)

The Santa Susana tarplant is the only State-listed species observed during the clearance surveys and biological monitoring. However, other State-protected biological resources have been observed. The locations of Santa Susana tarplant and other State-protected biological resources within the Action Area are illustrated on **Figures 4, 5, and 6**. The following is a more detailed description of the observations and impacts associated with State-protected biological resources. A summary of the State-Sensitive resource observations listed by Survey Section is shown in **Table 3**, and any reported impacts to non-Federally listed protected biological resources are listed in **Table 4**.

Santa Susana tarplant (Deinandra minthornii); State Rare, CNPS List 1B.2

This species is locally common in sections of Area IV with sandstone outcrops and was observed in the vicinity of work activities in Subareas 5A, 6, 7, 8 North, NBZ-E, and NBZ-W (Table 3). These plants were flagged when identified (**Plate 2C**), and no impacts to Santa Susana tarplant were reported during this quarterly monitoring period (Table 4).

Malibu baccharis (Baccharis malibuensis); CNPS List 1B.1

Malibu baccharis was recorded in Subarea 8 South (SS-49) on the hilly terrain at the extreme southern end of the study area. It is the codominant species with chamise in most of the unburned northern mixed chaparral on SS-49. Malibu baccharis exhibits a flexible growth form whereby it is not easily damaged

by project equipment when properly marked. No plants were reported to have been damaged during this monitoring period.

Plummer's mariposa lily (Calochortus plummerae); CNPS List 1B.2

This species was observed in Subareas 5D South (SS-59), 6 (SS-26, SS-38, SS-39), 7 (SS-39), 8 South (SS-49, NBZ-E (P1D, P1F, P1J, P2Q), and in NBZ-W (P1C). All specimens observed were protected from project activities (**Plate 2D**).

Slender mariposa lily (Calochortus clavatus var. gracilis); CNPS List 1B.2

Although *Calochortus clavatus* were not positively identified during this monitoring period, all *Calochortus sp.* were protected from soil sampling activities occurring in the area during the eighth quarterly monitoring period.

Catalina mariposa lily (Calochortus catalinae); CNPS List 4.2

This species was not positively identified during this monitoring period, however, all *Calochortus sp.* were protected from soil sampling activities occurring in the area during the eighth quarterly monitoring period.

Non-flowering mariposa lilies (Calochortus sp.)

Non-flowering lilies were observed in Subareas 8 South, NBZ-E, and NBZ-W (SS-49, P1A, P1B, P1C, P1D, P1F, P1I, P1J, P2K, P2L, P2M, P2N, P2O, P2Q, P3S) and were not able to be identified to a species level. All observed unidentified mariposa lilies were protected from project activities and no impacts were reported.

Southern California black walnut (Juglans californica); CNPS List 4.2; Protected by Ventura County Trimming Ordinance

A population of southern California black walnut trees is located along the north-facing slopes of Subarea 5D South and 8 South as reported in previous quarterly reports. Although the biological resource monitoring forms that were compiled during this quarter did not specifically identify that southern California black walnut trees were observed, there were reports of "Protected Trees" observed near soil sampling points. There were no reports of tree trimming or other impacts to protected trees during this quarter.

Coast horned lizard (Phrynosoma blainvillii); State Species of Special Concern

Suitable habitat for this species was identified in most of the undeveloped survey sections of the study area, particularly in a large portion of Subareas 8 South and 5D South, which is identified as "Occupied Coast Horned Lizard Habitat" in **Figure 3**. Although individuals of this species were observed during this monitoring period (**Plate 3A**), the nature of the work activities did not present an immediate danger, and there were no reports of individuals of this species being relocated, or otherwise impacted during this monitoring period.

Silvery legless lizard (Anniella pulchra pulchra); State Species of Special Concern

Suitable habitat was identified in many of the undeveloped survey sections of the study area. No silvery legless lizards were observed during this quarterly monitoring period.

Coast patch-nosed snake (Salvadora hexalepis virgultea); State Species of Special Concern

Suitable habitat was identified in many of the undeveloped survey sections of the study area. No coast patch-nosed snakes were observed during this quarterly monitoring period.

Western spadefoot (Spea hammondi); State Species of Special Concern

Spadefoot toads are generally found in arid or semi-arid areas and breed in pools or ditches that form after heavy rains, and slow-moving streams. They are adapted to an environment with fluctuating amounts of rainfall and variability in available breeding sites. Adults spend dry periods in self-made or pre-existing burrows and breed from January to May. Spadefoots have characteristic vertical “cat-eye” pupils and a sharp-edged “spade” on the hind foot for digging. Western spadefoots are extinct throughout much of their former range in southern California due to urban development and loss of seasonal wetlands. Western spadefoot juveniles, tadpoles, and metamorphs were observed in a manmade holding pond by David Lee, Scott Werner, Jim Anderson, and Jack Stone near Outfall 6 (8N, SS-46) from approximately May 3, 2012 to June 4, 2012 (**Plate 3B**). The ponded area was about 35 feet by 20 feet in area when the tadpoles were identified, 2 to 3 feet deep, and lined with a dense cloth-like material over plastic. The pond was dry by July 11. The pond contained dense algae and also supported tadpoles of western toad (*Bufo boreas*) and Pacific treefrog (*Pseudacris regilla*). Several hundred western spadefoot tadpoles were observed on May 3 and 4, at which time many tadpoles were already starting to develop vestigial hind limbs. Two juveniles were captured, photographed, and released on May 10 and May 11. Surrounding habitat is Coast Live Oak (*Quercus agrifolia*) Woodland, with laurel sumac (*Malosma laurina*) and an understory of non-native annual grasses, branching phacelia (*Phacelia ramosissima*), and poison oak (*Toxicodendron diversilobum*) with an abundance of sandstone outcrops. There were no impacts to this species from EPA activities. There are currently three CNDDDB records of western spadefoot in the Simi Valley/Santa Susana area, the closest of which (Occ. #163) is located 3.0 miles northeast of the occurrence described here.

Grasshopper sparrow (Ammodramus savannarum); State Species of Special Concern

A singing male grasshopper sparrow was observed by Scott Werner and Jack Stone in Subarea 5DN (SS-55, SS-56) from June 7, 2012 to approximately June 27, 2012 (**Plate 3C**). The habitat in this area was non-native annual grassland, dominated by oats (*Avena* sp.) (mostly dead), with milk thistle (*Silybum marianum*) (mostly dead) and patchy summer mustard (*Hirschfeldia incana*). No additional grasshopper sparrows were observed in the area, and no nesting was suspected. There were no impacts to this species from EPA activities. Grasshopper sparrows are summer residents in Ventura County, spending the winter in Mexico or the southeastern United States. The Ventura County Audubon Society describes this species as ‘fairly common’ in appropriate habitat during the months of March to July.

Cooper’s Hawk (Accipiter cooperii); State Watch List

Cooper’s hawks were not observed during this monitoring period and no nests attributed to this species were observed during the eighth quarter monitoring period.

Golden eagle (Aquila chrysaetos); Fully Protected (Federal and State), State Watch List

A resident pair of golden eagles has been observed to occupy a nest site located on the SSFL property boundary in the NBZ-E. Project monitors identified the location of the eagles nest in February 2011 and established a buffer zone for portions of Subareas 6, 7, and NBZ-E (SS-35, SS-39, P1D, P1E, P1F, P3W, P3X). Project activities within the buffer were highly restricted during the incubation period and fledging

of eaglets. Observations of the nest during this monitoring period indicated that the nest site was active, however, there were no reported impacts regarding this species.

Costa's hummingbird (Calypte costae); Federal Bird Species of Conservation Concern

Costa's hummingbirds breed in coastal southern California, the Mojave Desert, and Baja California. In Ventura County they nest in coastal sage scrub and chaparral communities such as the type that occur at SSFL. There were no observations of a Costa's hummingbird nest reported during this monitoring period.

Rufous hummingbird (Selasphorus rufus); Federal Bird Species of Conservation Concern

Rufous hummingbirds are primarily found in Ventura County during spring migration en route to nesting grounds in the northwestern U.S. and western Canada. None of these birds were recorded in the project area during the monitoring period and none were impacted by project activities.

Allen's hummingbird (Selasphorus sasin); Federal Bird Species of Conservation Concern

Allen's hummingbird nests in Ventura County and is common in the project area. No nests were found during the monitoring period and no Allen's hummingbirds were impacted by project activities.

Lewis's woodpecker (Melanerpes lewis); Federal Bird Species of Conservation Concern

Lewis's woodpeckers are occasionally seen in coastal Ventura County during the wintering period, which may extend into April or May before the birds migrate to breeding areas. In the southern half of California they generally nest in higher elevation areas such as the Tehachapi and Sierra Nevada Mountains. No nests were found during the monitoring period and no Lewis's woodpeckers were impacted by project activities.

Nuttall's woodpecker (Picoides nuttallii); Federal Bird Species of Conservation Concern

Nuttall's woodpeckers nest in cavities and are commonly seen in woodland areas of the project area. No nests were recorded during clearance surveys or monitoring, and none were impacted by project activities during the eighth quarterly monitoring period.

Oak titmouse (Baeolophus inornatus); Federal Bird Species of Conservation Concern

Oak titmice are common in oak woodland habitats in the study area. They nest in tree cavities and inhabit most SSs that have not been developed and contain coast live oak woodland. There were no oak titmouse nests observed during the monitoring period, and no impacts from project activities were reported.

Yellow warbler (Dendroica petechia brewsteri); Federal Bird Species of Conservation Concern

In southern California, yellow warblers mainly nest in riparian woodlands after spending the winter in Mexico and other southern latitudes. There were no observations of yellow warblers recorded in the project area during the monitoring period.

Southern California rufous-crowned sparrow (Aimophila ruficeps canescens); State Watch List

Southern California rufous-crowned sparrows are year-round residents in the Simi Hills and Santa Susana Mountains, typically nesting at or near ground-level near rocky outcrops and associated low-growing shrubby and herbaceous cover. During the monitoring period, there were no positively identified nests of this species observed in the vicinity of work activities. One observed nest was identified as likely that of

a rufous-crowned sparrow and was described as being located in the general area north of SS-45. This observation was made from NBZ-W (P1A) during monitoring of soil sampling activities in that survey section. There were no impacts reported during this monitoring period.

San Diego desert woodrat (Neotoma lepida intermedia); State Species of Special Concern

Suitable habitat was identified in much of the study area, especially areas that contain shrubby vegetation and rocky outcrops. No San Diego desert woodrats or nest structures attributed to this species have been found in the project area.

Eighth Quarter Clearance Surveys and Monitoring Results for Protected Nesting Birds

Native bird species nesting in the study area are protected under several different laws at the State and Federal level, depending on the species. These laws include the Federal Endangered Species Act, Federal Migratory Bird Treaty Act, Federal Bald and Golden Eagle Protection Act, California Endangered Species Act, and California Department of Fish and Game Code Sections 3503, 3503.5, 3511, and 3513. At least 24 native bird species have been recorded in the study area during the eighth quarterly monitoring period.

Bird nests were located using standard techniques such as observing nesting behavioral cues and conducting random searches of vegetation. Although searches were conducted for all nests regardless of location in the activity area, an emphasis was placed on shrub-nesting and ground-nesting species that could be directly impacted by vegetation cutting or moving equipment. Because of the highly cryptic nature of bird nests, clearance surveys conducted during the nesting bird season were detailed and intensive when surveying in and around dense vegetation. When active nests were found, the biologist would establish a buffer zone within which project activities were restricted, except for limited mule-mounted scanning activity that was conducted under strict supervision by the biological monitor. Buffers ranged in size from as little as 10 to 20 feet for small songbirds nesting near well traveled areas to as much as 800 feet for golden eagles. The shape and size of the nest buffer depended on the tolerance of the bird to human activity, the type of activity proposed, the nest stage, and the topography and density of vegetation surrounding the nest. Nests were then monitored by a biologist during project activities and the nest buffer modified if necessary based on behaviors observed. In addition, buffers were left intact if vulnerable fledglings had left the nest but were still in the area under parental care.

Table 5 lists the active nests monitored during this reporting period and the survey section where they were found, including those first identified during the eighth quarterly monitoring period, as well as previously observed nests that continued to be monitored, such as an occupied red-tail hawk nest located in SS-39 (**Plate 3D**). The locations of each monitored nest were determined by GPS and are shown on Figures 3, 4, and 5. **Table 6** lists any reported impacts to these nests that resulted from project activities. Two adaptive management techniques regarding vegetation cutting were instituted during the fourth quarterly monitoring period to minimize the number of undiscovered nests that could potentially be harmed by EPA activities. These techniques were followed during all vegetation cutting operations throughout the duration of project activities. These adaptive management techniques were: (1) the biological monitors are to be given at least 24 to 48 hours notice to survey areas scheduled for vegetation cutting during the nesting bird season to allow adequate time for a thorough survey, and (2) mechanical mowing is not allowed on any woody vegetation during the nesting bird season. Representative photographs of monitored nests are provided in **Plates 4A through 4D**.

Eighth Quarter Clearance Surveys and Monitoring Results for Riparian Habitat

Riparian habitat areas were noted in the vicinity of monitored soil sampling activities that occurred during this eighth quarterly monitoring period. These occurrences were noted to be in Subarea NBZ-W (P1C), where soil sampling activities were conducted during this quarter. These riparian areas consist of ephemeral drainages that remained dry throughout any project activities that occurred in the vicinity during this monitoring period. No vegetation cutting was reported in riparian areas, and activities were limited to soil sampling using a hand auger. Project activities that occurred in designated Least Bell's Vireo habitat are discussed above, under the heading Eighth Quarter Clearance Survey and Monitoring Results for Federally Listed Species.

EIGHTH QUARTERLY MONITORING PERIOD TABLES

Table 1
List of Federally Listed Resources and Critical/Suitable Habitat
Observed in Survey Sections during the Eighth Quarterly Monitoring Period

Species/Resource	Survey Sections	Subareas
Braunton's milkvetch	SS-49, SS-59	5D South, 8 South
Braunton's milkvetch Critical Habitat	SS-59	5D South
<i>Dudleya</i> sp.	SS-18, SS-37, SS-38, SS-39, SS-42, SS-43, SS-46, P1A, P1B, P1C, P1D, P1E, P1F, P1J, P2N, P2Q, P3X	6, 7, 8 North, 8 South, NBZ-E, and NBZ-W
Occupied vernal pool branchiopod habitat (unidentified branchiopods)	P1C	NBZ-W
Coastal California gnatcatcher potential habitat	P1A, P1B, P1C, P1I, P2K, P2L, P2M, P2N, P2O, P3S	NBZ-W
Least Bell's vireo potentially suitable habitat	SS-12, SS-26	5B, 6
California red-legged frog potentially suitable habitat	SS-38, SS-43	6, 8 North

Table 2
List of Federally Listed Resources Impacted
During Eighth Quarterly Monitoring Period

Species/ Resource	Survey Section	Date recorded	Associated project activity¹	Impact	Description
Braunton's milkvetch	SS-49	5/30/12	SS	2 plants disturbed	Lower stems of two plants were stepped on, stems did not bend or break, no permanent impacts resulted, lower limbs flagged to enhance visibility

¹ VC = Vegetation Clearing, GS = Gamma Scanning, SS = Soil Sampling

Table 3
List of Non-Federally Listed Resources Observed during the Eighth Quarterly Monitoring Period,
(grouped by area/subarea)

Species/Resource	Survey Section	Subarea
Santa Susana tarplant	SS-14, SS-16, SS-17, SS-18, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-42, SS-43, SS-104, P1A, P1B, P1C, P1D, P1E, P1F, P1J, P2N, P2Q, P3X	5A, 6, 7, 8 North, NBZ-E, NBZ-W
Malibu baccharis	SS-49	8 South
Plummer's mariposa lily	SS-26, SS-38, SS-39, SS-49, SS-59, P1C, P1D, P1F, P1J, P2Q	5D South, 6, 7, 8 South, NBZ-E, NBZ-W
Potential special-status mariposa lilies	SS-49, P1A, P1B, P1C, P1D, P1F, P1I, P1J, P2K, P2L, P2M, P2N, P2O, P2Q, P3S	8 South, NBZ-E, and NBZ-W
Protected Trees	SS-14, SS-16, SS-17, SS-18, SS-29, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-42, SS-43, SS-49, SS-59, SS-104, P1C, P1D, P1E, P1F, P1J, P2Q, P3X	5A, 5D South, 6, 7, 8 North, 8 South, NBZ-E, NBZ-W
Nesting birds	SS-12, SS-14, SS-16, SS-17, SS-26, SS-37, SS-38, SS-39, SS-46, SS-47, SS-49, SS-50, SS-56, SS-59, SS-109, P1A, P1B, P1C, P1D, P1E, P1F, P1J, P2K, P2L, P2N, P2Q, P3S, P3X	5A, 5B, 5D North, 5D South, 6, 7, 8 North, 8 South, NBZ-E, NBZ-W
Western spadefoot	SS-46	8N
Grasshopper sparrow	SS-55, SS-56	5D North
Golden eagle nest and nest buffer	SS-35, SS-39, P1D, P1E, P1F, P3X	6, 7, NBZ-E
Southern California rufous-crowned sparrow	SS-45	8 North

Table 4
List of Non-Federally Listed Resources Impacted during the Eighth Quarterly Monitoring Period
(excludes non-special status nesting birds)

Species/Resource	Survey Section	Date recorded	Associated project activity¹	Impact	Description
There were no impacts to Non-Federally listed resources reported during this monitoring period.					
¹ VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, SWSS=Surface Water and Sediment Sampling					

Table 5
List of Active Bird Nests Monitored in the Study Area¹

Common Name	Survey Section	Subarea	Date Recorded	Impacts
Golden Eagle	Outside of NBZ-E boundary	NBZ-E	2/9/11	None
Red-tailed hawk	P1C	NBZ-W	3/1/12	None
Red-tailed hawk	P2M	NBZ-W	4/12/12	None
Bushtit	P1A	NBZ-W	4/17/12	None
Anna's hummingbird	P1A	NBZ-W	4/18/12	None
Lesser goldfinch	P1A	NBZ-W	4/18/12	None
Bushtit	SS-45	8 North	4/19/12	None
Barn owl	SS-43	8 North	4/27/12	None
House wren	SS-50	8 North	4/27/12	None
Song sparrow	SS-50	8 North	5/4/12	None
Bushtit	SS-43	8 North	5/9/12	None
California towhee	SS-43	8 North	5/9/12	None
California towhee	SS-43	8 North	5/9/12	None
Lesser goldfinch	SS-49	8 South	5/18/12	None
California towhee	SS-39	7	5/21/12	None
California towhee	SS-43	8 North	5/21/12	None
Phainopepla	SS-46	8 North	5/21/12	None
Spotted towhee	SS-49	8 South	5/21/12	None
California towhee	SS-39	7	5/25/12	None
California towhee	SS-39	7	5/29/12	None
Wrentit	SS-39	7	5/29/12	None
Wrentit	SS-39	7	5/29/12	None
Anna's hummingbird	SS-43	8 North	5/31/12	None
California towhee	SS-39	7	5/31/12	None
Song sparrow	SS-39	7	5/31/12	None
Wrentit	SS-39	7	5/31/12	None
Anna's hummingbird	SS-39	7	6/1/12	None
Bushtit	SS-39	7	6/1/12	None
Lesser goldfinch	SS-39	7	6/1/12	None
California towhee	SS-38	6	6/6/12	None
Lazuli bunting	SS-38	6	6/6/12	None
Hooded oriole	SS-58	5D South	6/7/12	None
House wren	SS-43	8 North	6/7/12	None
Lazuli bunting	SS-49	8 South	6/7/12	None
Lesser goldfinch	SS-58	5D South	6/7/12	None
Spotted towhee	SS-49	8 South	6/7/12	None
California quail	SS-39	7	6/11/12	None
Cliff swallow	SS-39	7	6/11/12	None
Lazuli bunting	SS-39	7	6/11/12	None
American kestrel	SS-3	5c	6/18/12	None

Common Name	Survey Section	Subarea	Date Recorded	Impacts
Hooded oriole	SS-55	5D North	6/18/12	None
Ash-throated flycatcher	SS-12	5B	6/21/12	None
California towhee	SS-12	5B	6/21/12	None
Lark sparrow	SS-12	5B	6/21/12	None
Lazuli bunting	SS-39	7	6/25/12	None
Mourning dove	SS-39	7	6/25/12	None
Northern mockingbird	SS-12	5B	6/25/12	None
Phainopepla	SS-26	6	6/25/12	None
California towhee	55-56	5D North	6/28/12	None
House finch	SS-59	5D South	6/28/12	None
Blue grosbeak	SS-16	5A	7/2/12	None
House finch	SS-17	5A	7/2/12	None
House finch	SS-17	5A	7/2/12	None
Lazuli bunting	SS-38	6	7/2/12	None
White-throated swift	SS-38	6	7/2/12	None
California towhee	SS-17	5A	7/3/12	None
Lazuli bunting	SS-14	5A	7/3/12	None
Mourning dove	SS-17	5A	7/3/12	None
California towhee	SS-59	5D South	7/5/12	None
Cliff swallow	SS-17	5A	7/10/12	None
Lesser goldfinch	SS-17	5A	7/10/12	None
Lazuli bunting	SS-17	5A	7/11/12	None

¹ Each nest is listed by the date that it was first observed.

Table 6
List of Nesting Birds Impacted during the Eighth Quarterly Monitoring Period

Species/Resource	Survey Section	Date of impact	Associated project activity¹	Impact	Description
There were no impacts to nesting birds associated with work activities during this quarter.					
¹ VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, SWSS=Surface Water and Sediment Sampling					

ANNUAL SUMMARY OF BIOLOGICAL MONITORING ACTIVITIES:

JULY 1, 2011, TO JULY 13, 2012

Quarterly monitoring reports were prepared on October 8, 2011 (for the monitoring period July 1, 2011, to September 30, 2011), February 29, 2012 (for the monitoring period October 1, 2011, to December 31, 2011), and June 1, 2012 (for the monitoring period January 1, 2012, to March 31, 2012) for the Fifth, Sixth, and Seventh monitoring periods respectively. This annual summary and the associated data in the following tables were derived from information reported in this document for the eighth quarter monitoring period and the three previous quarterly monitoring reports.

During the second year of project activities, EPA implemented all AMMs included in the Biological Opinion that were applicable to the activities performed within each survey area, and was successful at keeping impacts to the listed and sensitive species at very low levels and in compliance with the Biological Opinion. A summary of Federally protected resources found within the Study Area throughout the second annual monitoring period is included in **Table 7**, and impacts are described in **Table 8**. Non-Federally listed protected resources are summarized in **Table 9**, with impacts provided in **Table 10**. **Table 11** identifies impacts to riparian habitat in the Study Area. **Table 12** lists the active bird nests monitored near project activities, and **Table 13** identifies bird nests impacted during project activities.

Protocol surveys were conducted in the spring of 2012 for California gnatcatcher and least Bell's vireo within potential habitat areas that were designated for each of these species. The conclusions of both of these surveys were that each of these species was absent from the project area.

Throughout the second year of monitoring, 52 Braunton's milkvetch (*Astragalus brauntonii*) have been impacted by project activities. Of these 52 impacts, one plant was destroyed, two plants had branches stepped on with no damage, and 49 impacts consisted of bent or broken stems. Project activities were conducted in the Braunton's milkvetch Critical Habitat Unit 1d, but the Primary Constituent Habitat components were not adversely affected. One vernal pool, described as a pothole on a sandstone outcrop, was monitored while soil sampling was occurring nearby; however, no project activities were conducted within vernal pools and no impacts occurred to the vernal pool habitats monitored during the second annual monitoring period.

Impacts to non-Federally listed species or critical habitat were as follows:

- 2 Santa Susana tarplants (*Deinandra minthornii*) were damaged by equipment during project activities.
- Approximately 39 Malibu baccharis (*Baccharis malibuensis*) were damaged.
- 1 potentially sensitive non-flowering mariposa lily was destroyed.
- 1 Plummer's mariposa lily was severed at its base after going to seed.
- An unknown number of protected trees including southern California black walnuts (*Juglans californica*) were trimmed in accordance with the Ventura County Trimming Ordinance.
- 4 coast horned lizards (*Phrynosoma coronatum*) were relocated nearby out of harm's way.
- 19 ephemeral riparian areas were selectively trimmed to the minimum amount necessary to allow gamma scanning or soil sampling equipment to enter the areas. One soil sample was collected by hand trowel from an active stream bed.
- One adult barn owl was flushed from its nest and did not return until the work crew left the area. The monitoring biologist later verified the presence of at least one nestling within the nest during the monitoring period.

FINAL REPORT AND SUMMARY OF BIOLOGICAL MONITORING ACTIVITIES: JULY 22, 2010, TO JULY 13, 2012

A total of eight quarterly monitoring reports were prepared throughout the two-year duration of project activities. This final report and summary of biological monitoring activities and the associated data in the following tables were derived from information reported in this document for the eighth quarter monitoring period and the seven previous quarterly monitoring reports.

Throughout the project's duration, EPA implemented all AMMs included in the Biological Opinion within each survey area as applicable to the specific activities being performed. EPA was successful at keeping impacts to the listed and sensitive species at very low levels and in compliance with the Biological Opinion. A summary of Federally protected resources found within the Study Area throughout the project's duration is included in **Table 7**, and impacts are described in **Table 8**. Non-Federally listed protected resources are summarized in **Table 9**, with impacts provided in **Table 10**. **Table 11** identifies impacts to riparian habitat in the Study Area. **Table 12** lists the active bird nests monitored near project activities, and **Table 13** identifies bird nests impacted during project activities.

During two years of project activities, 129 Braunton's milkvetch (*Astragalus brauntonii*) were impacted, mostly in the form of damaged branches to mature plants. Of these impacts, four plants were destroyed by vegetation clearance activities or by mule-mounted gamma scanning. Project activities were conducted in the Braunton's milkvetch Critical Habitat Unit 1d, but the Primary Constituent Habitat components were not adversely affected. Four vernal pools located within the project area were found to be occupied by unidentified branchiopods. Under dry conditions, one vernal pool was subjected to minor damage from mule hoof prints when the mule was accidentally guided through the pool, making only one pass.

Project impacts to non-Federally listed species or critical habitat were as follows:

- 10 Santa Susana tarplants (*Deinandra minthornii*) were either damaged or destroyed by equipment during project activities.
- Approximately 177 Malibu baccharis (*Baccharis malibuensis*) were damaged or uprooted. Many of these were located in a portion of the study area where the plant is very common and is even the codominant species with chamise (*Adenostoma fasciculatum*) in one stand.
- 10 potentially sensitive non-flowering mariposa lilies were damaged.
- 1 Plummer's mariposa lily was severed at its base after going to seed.
- An unknown number of protected trees were trimmed in accordance with the Ventura County Trimming Ordinance. These included over 131 southern California black walnuts (*Juglans californica*) consisting of mature trees as well as smaller individuals still resprouting from the 2005 Topanga Fire. This total may be biased high because many of the same trees were trimmed during 2010 and 2011 and recounted.
- 33 coast horned lizards (*Phrynosoma coronatum*) have been either held temporarily or relocated nearby out of harm's way, while many more have been encountered but not relocated due to no immediate potential for harm.
- Work activities were conducted within 39 ephemeral riparian areas, which included selective vegetation trimming within approximately 22 of those riparian areas. The vegetation trimming was restricted to the minimum amount necessary to allow gamma scanning or soil sampling equipment to enter the areas. One soil sample was collected by hand trowel from one active creek channel.

- One protected migratory bird, a California towhee (*Melospiza crissalis*), was injured after being caught in a glue-type mouse trap located in a piece of equipment and was cleaned and released by the biologist.
- A total of 11 protected migratory bird nests were impacted, although not all were lost.
 - Vegetative cover around 1 southern California rufous-crowned sparrow nest with 3 eggs was temporarily reduced, but the cover was restored and the young were able to eventually fledge from the nest successfully.
 - Vegetative cover around 2 mourning dove (*Zenaidura macroura*) nests was reduced and the nests were later found empty, although predation was not confirmed at one of the nests.
 - 4 wrenit (*Chamaea fasciata*) nests, 2 California towhee nests, and one song sparrow (*Melospiza melodia*) nest were either directly damaged and lost or experienced reduced cover and were later depredated. However, 2 of the 4 nestlings in one of the wrenit nests described above were successfully raised and released by a wildlife rescue facility. One California towhee nestling may have fledged early due to excessive disturbances by project activities but was later found to be in good condition and tended by its parents.
- One adult barn owl was flushed from its nest during the nesting season, but returned when the work crew left the area. The monitoring biologist later verified the presence of at least one nestling within the nest during the monitoring period.

Table 7
List of Federally Listed Resources Observed in Survey Sections

Species/Resource	Survey Sections	Subareas
First Annual Monitoring Period		
First Quarterly Monitoring Period (July 22, 2010 - October 5, 2010)		
Braunton's milkvetch	SS-7, SS-10, SS-51, SS-58	5B, 5C, 5D South
<i>Dudleya</i> sp.	SS-4, SS-17, SS-19	5A, 5C, 6
Vernal pool branchiopod habitat	SS-7	5C
Second Quarterly Monitoring Period (October 6, 2010 – January 6, 2011)		
Braunton's milkvetch	SS-7, SS-10, SS-51, SS-52, SS-58	5B, 5C, 5D South, 8 South
<i>Dudleya</i> sp.	SS-43, SS-44, SS-46, SS-48, SS-58	5D South, 8 South, 8 North
Vernal pool branchiopod habitat occupied by unidentified branchiopods	SS-7	5C
California red-legged frog potentially suitable habitat	SS-38, SS-43, SS-46, n/a	6, 8 North, NBZ-E
California red-legged frog Critical Habitat	SS-52	5D South
Coastal California gnatcatcher habitat	SS-43, SS-48, SS-49, SS-51, SS-52, SS-58	5D South, 8 North, 8 South
Least Bell's vireo habitat	SS-12	5B
Third Quarterly Monitoring Period (January 7, 2011 – April 6, 2011)		
Braunton's milkvetch	SS-10	5B
<i>Dudleya</i> sp.	SS-26, SS-28, SS-31, SS-32, SS-33, SS-34, SS-35, SS-38, SS-43, SS-46	6, 8 North
Occupied vernal pool branchiopod habitat (unidentified branchiopods)	SS-7, SS-17, NBZ-W	5A, 5C, NBZ-W
Suitable vernal pool branchiopod habitat	SS-15, SS-34	5A, 6
California red-legged frog suitable habitat	SS-34, SS-35, SS-38, SS-43, SS-46, SS-47	6, 8 North
Least Bell's vireo habitat	SS-12, SS-26	5B, 6
Coastal California gnatcatcher potential habitat	SS-39, SS-42, SS-43, SS-45, SS-46, SS-47	7, 8 North
Fourth Quarterly Monitoring Period (April 7, 2011 – June 30, 2011)		
Braunton's milkvetch	SS-49, SS-51, SS-52, SS-58, SS-59	5D South, 8 South
Braunton's milkvetch Critical Habitat	SS-49, SS-51, SS-52, SS-58, SS-59	5D South, 8 South
<i>Dudleya</i> sp.	SS-35, SS-39, P1E, P1F, P1I, P2K, P3T, P2O	6, 7, NBZ-W, NBZ-E
Occupied vernal pool branchiopod habitat (unidentified branchiopods)	SS-7	5C

Species/Resource	Survey Sections	Subareas
Coastal California gnatcatcher potential habitat	SS-42, SS-43, SS-46, SS-47, SS-48, SS-49, SS-51, SS-52, SS-58, SS-59, P1A, P1C, P1I, P2K, P2N, P2O, P3T	5D North, 5D South, 7, 8 North, 8 South, NBZ-W
Second Annual Monitoring Period		
Fifth Quarterly Monitoring Period (July 1, 2011 - September 30, 2011)		
Braunton's milkvetch	SS-49, SS-51, SS-52, SS-58, SS-59	8 South, 5D South
Braunton's milkvetch Critical Habitat Unit 1d	SS-51, SS-52, SS-58, SS-59	5D South
<i>Dudleya</i> sp.	P1A, P1B, P1C, P1D, P1E, P1F, P1I, P2O, P3V	NBZ-W, NBZ-E
Occupied vernal pool branchiopod habitat (unidentified branchiopods)	P1C, P3V	NBZ-W
Suitable vernal pool branchiopod habitat	SS-34	6
California red-legged frog potentially suitable habitat	P1A, P1D	NBZ-W, NBZ-E
California red-legged frog Critical Habitat	SS-52, SS-59	8 South, 5D South
Coastal California gnatcatcher potential habitat	SS-39, SS-43, SS-48, SS-49, SS-50, SS-51, SS-52, SS-58, SS-59, P1A, P1B, P1C, P2O, P1I	7, 8 South, 8 North, 5D South, NBZ-W
Sixth Quarterly Monitoring Period (October 1, 2011 - December 31, 2011)		
Braunton's milkvetch	SS-59	5D South
Braunton's milkvetch Critical Habitat Unit 1d	SS-59	5D South
<i>Dudleya</i> sp.	SS-43, SS-59, P1A, P1B, P1C, P1D, P1E, P1F, P1I, P2K	5D South, 8 North, NBZ-W, NBZ-E
Red-legged frog potentially suitable habitat	SS-1, P1A, P1B, P1C, P1E, P2R	5B, NBZ-E, NBZ-W
Coastal California gnatcatcher potential habitat	SS-43, SS-59, P1A, P1B, P1C, P1I, P2K	5D South, 8 North, NBZ-W
Seventh Quarterly Monitoring Period (January 1, 2012 - March 31, 2012)		
Braunton's milkvetch	SS-59	5D South
Coastal California gnatcatcher habitat	SS-59, P1B, P1I	5D South, NBZ-W
Confirmed occupied vernal pool branchiopods (Fairy shrimp) habitat	SS-17, P1C	5A, NBZ-W
<i>Dudleya</i> sp.	SS-8, SS-14, SS-17, SS-29, SS-107, SS-40, P1B, P1C, P1D, P1F, P1I, P3Y	5A, 5C, 6, 7, NBZ-E, NBZ-W
Least Bell's vireo potentially suitable habitat	SS-12	5B

Species/Resource	Survey Sections	Subareas
California red-legged frog potentially suitable habitat	SS-12, P1D, P2R	5B, NBZ-E
Eighth Quarterly Monitoring Period (April 1, 2012 – July 13, 2012)		
Braunton's milkvetch	SS-49, SS-59	5D South, 8 South
Braunton's milkvetch Critical Habitat	SS-59	5D South
<i>Dudleya</i> sp.	SS-18, SS-37, SS-38, SS-39, SS-42, SS-43, SS-46, P1A, P1B, P1C, P1D, P1E, P1F, P1J, P2N, P2Q, P3X	6, 7, 8 North, 8 South, NBZ-E, and NBZ-W
Occupied vernal pool branchiopod habitat (unidentified branchiopods)	P1C	NBZ-W
Coastal California gnatcatcher potential habitat	P1A, P1B, P1C, P1I, P2K, P2L, P2M, P2N, P2O, P3S	NBZ-W
Least Bell's vireo potentially suitable habitat	SS-12, SS-26	5B, 6
California red-legged frog potentially suitable habitat	SS-38, SS-43	6, 8 North

Table 8
List of Federally Listed Resource Impacted by Project Activities

Species/ Resource	Survey Section	Date Recorded	Associated Project Activity ¹	Impact	Description
First Annual Monitoring Period					
First Quarterly Monitoring Period (July 22, 2010 - October 5, 2010)					
Braunton's milkvetch	SS-51	9/24/10	VC	Uprooted	Growing in clump of 4 milkvetch, plant was not flagged but surrounding ones were flagged.
Braunton's milkvetch	SS-51	9/24/10	VC	Stem cut	1 foot from toyon stem clump, milkvetch stem mistaken for toyon stem.
Braunton's milkvetch	SS-51	9/24/10	VC	Damaged root base	Stem nudged by skidster hauling cut material. Still standing but wobbly. May fall in high winds or rain.
Braunton's milkvetch	SS-51	9/28/10	VC	Damaged	Large branch torn away from main stem.
Braunton's milkvetch	SS-51	10/1/10	VC	Damaged	Badly damaged on lower main stem (likely from weed whacker).
Vernal pool branchiopod habitat	SS-7	7/29/10	GS	Soil disturbed by hoof prints.	Mule made one pass through a portion of the vernal pool during dry conditions. Minor soil disturbance.
Second Quarterly Monitoring Period (October 6, 2010 – January 6, 2011)					
Braunton's milkvetch	SS-10	12/3/10*	SS or GS*	Damaged	One main branch bent over. *Date and cause of damage not known.
Braunton's milkvetch	SS-51	11/5/10- 11/15/10	VC	Damaged or knocked down	Branches damaged or older brittle plants knocked down.
Braunton's milkvetch	SS-52	11/17/10- 11/22/10	VC	Damaged or knocked down	Branches damaged or older brittle plants knocked down.
Braunton's milkvetch	SS-58	10/12/10	VC	Cut	One plant inadvertently cut at base of stem.
Braunton's milkvetch	SS-58	10/18/10, 11/4/10	VC	Damaged or bent	Plants sustained some branch damage, most are older individuals with little to no fresh leaf growth.
Braunton's milkvetch Critical Habitat Unit 1d	SS-51 SS-52 SS-58	October 2010 through January 2011	VC	Trimmed	Most unprotected plant species trimmed to 6" above ground except trees and some large shrubs.

Species/ Resource	Survey Section	Date Recorded	Associated Project Activity¹	Impact	Description
Third Quarterly Monitoring Period (January 7, 2011 – April 6, 2011)					
No Resources Impacted.					
Fourth Quarterly Monitoring Period (April 7, 2011 – June 30, 2011)					
Braunton's milkvetch	SS-58	5/25/11	GS	1 plant damaged	1 mature plant damaged by mule but still standing
Braunton's milkvetch	SS-49	5/26/11	GS	2 plants damaged	2 seedlings run over by TMGS but still standing
Braunton's milkvetch	SS-52	5/26/11	GS	2 plants damaged	1 large and 1 small milkvetch damaged by mule, still standing
Braunton's milkvetch	SS-59	5/26/11	VC	2 plants destroyed	1 plant hit with weed whacker, 1 stepped on
Braunton's milkvetch	SS-51 SS-52	5/31/11	GS	2 plants damaged	2 mature plants damaged by mule, still standing
Braunton's milkvetch	SS-52	6/1/11	GS	3 plants damaged	3 mature milkvetch damaged by mule, still standing
Braunton's milkvetch	SS-49	6/9/11	GS	2 small plants damaged	Plants slightly bent after contact with TMGS, still standing
Second Annual Monitoring Period					
Fifth Quarterly Monitoring Period (July 1, 2011 - September 30, 2011)					
Braunton's milkvetch	SS-58	7/18/11	VC	6 plants damaged	6 plants slightly damaged by weed whackers, but not destroyed
Braunton's milkvetch	SS-58	7/19/11	VC	1 plant damaged	Small plant knocked over during vegetation cutting
Braunton's milkvetch	SS-58	7/19/11	GS	2 plants damaged	Mature plants damaged by ERGS
Braunton's milkvetch	SS-51	7/22/11	VC	5 plants damaged	Three plants stepped on, but not uprooted or severed. Secondary stems of two plants were severed
Braunton's milkvetch	SS-51	7/27/11	GS	10 plants damaged	Damaged during use of TMGS
Braunton's milkvetch	SS-52	7/28/11	VC	1 plant destroyed	Severed near the base by weed whacker
Braunton's milkvetch	SS-51	8/4/11	GS	1 plant damaged	Impacts to plants by MMGS
Braunton's milkvetch	SS-52	8/4/11	GS	8 plants damaged	Impacts to plants by MMGS
Braunton's milkvetch	SS-51	8/11/11	GS	1 plant damaged	Damaged by TMGS during previous day's activity
Braunton's milkvetch	SS-52	8/11/11	GS	7 plants damaged	Damaged by TMGS

Species/ Resource	Survey Section	Date Recorded	Associated Project Activity ¹	Impact	Description
Braunton's milkvetch	SS-51	8/16/11	GS	4 damaged and 1 destroyed	Impacts to plants by MMGS
Sixth Quarterly Monitoring Period (October 1, 2011 - December 31, 2011)					
Braunton's milkvetch	SS-59	12/01/11	VC	3 plants damaged	Stems were broken on 3 plants, but the plants were not uprooted or destroyed.
Seventh Quarterly Monitoring Period (January 1, 2012 - March 31, 2012)					
No federally listed resources were impacted during this reporting period.					
Eighth Quarterly Monitoring Period (April 1, 2012 – July 13, 2012)					
Braunton's milkvetch	SS-49	5/30/12	SS	2 plants disturbed	Lower stems of two plants were stepped on, stems did not bend or break, no permanent impacts resulted, lower limbs flagged to enhance visibility
¹ VC = Vegetation Clearing, GS = Gamma Scanning, SS = Soil Sampling					

Table 9
List of Non-Federally listed Resources Observed Throughout all Monitoring Periods

Species/Resource	Survey Section	Subarea
First Annual Monitoring Period		
First Quarterly Monitoring Period (July 22, 2010 - October 5, 2010)		
Santa Susana tarplant	SS-7, SS-9, SS-10, SS-14, SS-15, SS-16, SS-17, SS-18, SS-19	5A, 5B, 5C, 6
Malibu baccharis	SS-51	5D South
Southern California black walnut	SS-51	5D South
Coast horned lizard	SS-51, SS-113	5D South
Mourning dove active nest	SS-19	5A
Loggerhead shrike (non-nesting)	SS-54	5D North
Riparian area	SS-1, SS-12	5B, 5C
Santa Susana tarplant	SS-43, SS-44, SS-48, SS-58	8 North, 8 South
Calochortus sp. (likely Plummer's)	SS-49, SS-51	5D South, 8 South
Malibu baccharis	SS-49, SS-51, SS-52, SS-58	5D South, 8 South
Southern California black walnut	SS-48, SS-49, SS-50, SS-51, SS-52, SS-58	5D South, 8 South
Coast horned lizard	SS-49, SS-51, SS-58	5D South, 8 South
Loggerhead shrike (non-nesting)	SS-15, SS-54	5A, 5D North
Southern California rufous-crowned sparrow	n/a	NBZ-E
Riparian area	SS-1, SS-12	5B, 5C
Third Quarterly Monitoring Period (January 7, 2011 – April 6, 2011)		
Santa Susana tarplant	SS-9, SS-13, SS-14, SS-15, SS-16, SS-17, SS-18, SS-27, SS-28, SS-31, SS-32, SS-33, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-42, SS-43, SS-44, SS-104	5A, 5B, 6, 7, 8 North
Potentially special-status mariposa lilies	SS-32, SS-34, SS-35, SS-38, SS-39, SS-42, SS-43	3, 6, 7, 8 North
Southern California black walnut	SS-48, SS-50	8 South, 8 North
Cooper's hawk	SS-39, SS-42, SS-43, SS-50	7, 8 North
Golden eagle nest and nest buffer	NBZ-E	NBZ-E
Golden eagle nest buffer	SS-35/39	6
Northern harrier	SS-35	6
Peregrine falcon	SS-10	5B
Lewis's woodpecker	SS-34/36/104 (likely same individual)	6

Species/Resource	Survey Section	Subarea
Loggerhead shrike	SS-19, SS-38	5A, 6
Southern California rufous-crowned sparrow	SS-38, NBZ-E	6, NBZ-E
Riparian area	SS-12, SS-26, SS-27, SS-35, SS-38, SS-43	5B, 6, 8 North
Fourth Quarterly Monitoring Period (April 7, 2011 – June 30, 2011)		
Santa Susana tarplant	SS-31, SS-35, SS-39, SS-41, SS-42, SS-44, SS-49, SS-58, SS-59, P1D, P1E, P1F, P1J, P1I, P2K, P2O, P3T	3, 6, 7, 5D South, NBZ-E, NBZ-W
Malibu baccharis	SS-49, SS-51, SS-52, SS-58, SS-59	5D South, 8 South
Potential special-status mariposa lilies	SS-35, SS-38, SS-39, SS-42, SS-51, SS-52, SS-58, SS-59, P1I, P2K, P3T, P2O	6, 7, 5D South, NBZ-W
Catalina mariposa lily	SS-58, P1I	5D South, NBZ-W
Plummer's mariposa lily	SS-35, P1E, P1F, P1J	6, NBZ-E
Southern California black walnut	SS-48, SS-49, SS-51, SS-52, SS-58, SS-59	5D South, 8 South
Coast horned lizard	SS-32, SS-35, SS-49, SS-51, SS-58, SS-59	3, 6, 5D South, 8 South
Nesting birds	SS-38, SS-39, SS-42, SS-43, SS-44, SS-47, SS-49, SS-51, SS-52, SS-55, SS-56, SS-58, SS-59, P1A, P1C, P1D, P1E, P1F, P1I, P1J, P2K, P3W, P3X	6, 5D North, 5D South, 8 North, 8 South, NBZ-E, NBZ-W
Cooper's hawk	SS-39, SS-59	5D South, 7
Golden eagle nest and nest buffer	SS-35, SS-39, P1D, P1E, P1F, P3W, P3X	6, 7, NBZ-E
Lewis's woodpecker	SS-34, SS-36, (likely same individual)	6
Oak titmouse	Throughout Study Area	All
Southern California rufous-crowned sparrow	SS-39, SS-59, P1D, P1E, P1F	5D South, 7, NBZ-E
Second Annual Monitoring Period		
Fifth Quarterly Monitoring Period (July 1, 2011 - September 30, 2011)		
Santa Susana tarplant	SS-17, SS-36, SS-38, SS-39, SS-58, P1A, P1B, P1C, P1D, P1E, P1F, P1I, P1J, P2O, P3V	5D South, 6, 7, NBZ-W, NBZ-E
Malibu baccharis	SS-49, SS-51, SS-52, SS-58, SS-59	8 South, 5D South
Potential special-status mariposa lilies	SS-59, P1C, P1D	NBZ-W, NBZ-E
Plummer's mariposa lily	SS-38, SS-39, SS-49, SS-51, SS-52, SS-58, SS-59, P1A, P1B, P1D, P1E, P1F, P1J	5D South, 6, 7, 8 South, NBZ-W, NBZ-E
Southern California black walnut	SS-49, SS-51, SS-52, SS-58, SS-59, P1A, P1B, P1C, P1F, P1I, P1J, P2O, P3V	8 South, 5D South, NBZ-W, NBZ-E

Species/Resource	Survey Section	Subarea
Coast horned lizard	SS-51, SS-58, P1B, P1I	5D South, NBZ-W
Nesting birds	SS-17, SS-38, SS-48, SS-50, SS-51, SS-52, SS-58, SS-59, P1A, P1D, P1E, P1F, P1I, P1J	5D South, 6, 8 South, 8 North, NBZ-W, NBZ-E
Cooper's hawk	SS-58, P1D, P1I	5D South, NBZ-W, NBZ-E
Loggerhead Shrike	SS-15, SS-43, SS-56	5A, 5D North, 8 North
Oak titmouse	Observed throughout study area	all
White-tailed kite	SS-58, P1A, P1B	5D South, NBZ-W
San Diego desert woodrat	P1A, P1I	NBZ-W
Southern California rufous-crowned sparrow	P1A, P1F, P1I	NBZ-W, NBZ-E
Riparian habitat	P1A, P1B, P1C, P1I, P3V	NBZ-W
Sixth Quarterly Monitoring Period (October 1, 2011 - December 31, 2011)		
Santa Susana tarplant	SS-15, SS-39, SS-43, SS-59, P1A, P1B, P1C, P1D, P1E, P1F, P1I, P1J, P2K, P2R	5A, 5D South, 7, 8 North, NBZ-W, NBZ-E
Malibu baccharis	SS-59	5D South
Plummer's mariposa lily	SS-39, SS-59, P1A, P1D, P1F, P1J, P2R	5D South, 7, NBZ-W, NBZ-E
Protected trees	SS-1, SS-15, SS-39, SS-43, SS-59, P1A, P1B, P1C, P1D, P1E, P1F, P1G, P1H, P1J, P2K, P2R, P3X	5A, 5B, 5D South, 7, 8 North, NBZ-W, NBZ-E
Riparian habitat	SS-1, P1A, P1B, P1C, P1F, P1J, P2R	5B, NBZ-W, NBZ-E
Southern California Rufous-crowned sparrow	n/a	NBZ-E
Riparian area	SS-1, SS-12	5B, 5C
Seventh Quarterly Monitoring Period (January 1, 2012 - March 31, 2012)		
Coast horned lizard occupied habitat	SS-59, SS-107, P1B, P1D, P1C, P1I, P2R	5D South, 7, NBZ-E, NBZ-W
Malibu baccharis	SS-59	5D South
Nesting Birds	SS-43, P1F	8 North, NBZ-E
Plummer's mariposa lily	SS-14, SS-59, P1D, P1F, P1I, P1J	5D South, 7, NBZ-E, NBZ-W
Potential special-status mariposa lilies	P1J	NBZ-E
Protected trees	SS-1, SS-8, SS-9, SS-12, SS-14, SS-15, SS-17, SS-29, SS-34, SS-37, SS-39, SS-40, SS-59, SS-107, P1B, P1C, P1D, P1F, P1I, P1J, P2R, P3V	5A, 5B, 5C, 5D South, 6, 7, NBZ-E, NBZ-W
Santa Susana tarplant	SS-8, SS-9, SS-12, SS-14, SS-15, SS-17, SS-18, SS-29, SS-34, SS-37, SS-39, SS-	5A, 5B, 5C, 6, 7, NBZ-E, NBZ-W

Species/Resource	Survey Section	Subarea
	40, P1B, P1C, P1D, P1F, P1I, P1J, P2R	
Eighth Quarterly Monitoring Period (April 1, 2012 – July 13, 2012)		
Santa Susana tarplant	SS-14, SS-16, SS-17, SS-18, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-42, SS-43, SS-104, P1A, P1B, P1C, P1D, P1E, P1F, P1J, P2N, P2Q, P3X	5A, 6, 7, 8 North, NBZ-E, NBZ-W
Malibu baccharis	SS-49	8 South
Plummer's mariposa lily	SS-26, SS-38, SS-39, SS-49, SS-59, P1C, P1D, P1F, P1J, P2Q	5D South, 6, 7, 8 South, NBZ-E, NBZ-W
Potential special-status mariposa lilies	SS-49, P1A, P1B, P1C, P1D, P1F, P1I, P1J, P2K, P2L, P2M, P2N, P2O, P2Q, P3S	8 South, NBZ-E, and NBZ-W
Protected Trees	SS-14, SS-16, SS-17, SS-18, SS-29, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-42, SS-43, SS-49, SS-59, SS-104, P1C, P1D, P1E, P1F, P1J, P2Q, P3X	5A, 5D South, 6, 7, 8 North, 8 South, NBZ-E, NBZ-W
Nesting birds	SS-12, SS-14, SS-16, SS-17, SS-26, SS-37, SS-38, SS-39, SS-46, SS-47, SS-49, SS-50, SS-56, SS-59, SS-109, P1A, P1B, P1C, P1D, P1E, P1F, P1J, P2K, P2L, P2N, P2Q, P3S, P3X	5A, 5B, 5D North, 5D South, 6, 7, 8 North, 8 South, NBZ-E, NBZ-W
Western spadefoot	SS-46	8N
Grasshopper sparrow	SS-55, SS-56	5D North
Golden eagle nest and nest buffer	SS-35, SS-39, P1D, P1E, P1F, P3X	6, 7, NBZ-E
Southern California rufous-crowned sparrow	SS-45	8 North

Table 10
List of Non-Federally Listed Resources Impacted by Project Activities
 (excludes non-special status nesting birds)

Species/ Resource	Survey Section	Date recorded	Associated project activity ¹	Impact	Description
First Annual Monitoring Period					
First Quarterly Monitoring Period (July 22, 2010 - October 5, 2010)					
Santa Susana tarplant	SS-51	9/24/10	VC	1 plant destroyed	Small individual growing in pavement cracks in previously disturbed road at SS-17.
Santa Susana tarplant	SS-51	9/24/10	VC	2 plants damaged	Two large plants covered in mulch. Biologist brushed some off. Winter rains may wash rest away.
Malibu baccharis	SS-51	(various)	VC	10-15 plants trimmed	No plants have been completely lost but some have been trimmed back by weed whackers when not properly flagged ahead of time.
Southern California black walnut	SS-51	(various)	VC	Approx. 40 trees trimmed	Many resprouts from 2005 fire have been trimmed to accommodate scanning equipment.
Coast horned lizard	SS-51, SS-58	(various)	VC	1 lizard relocated	Relocated to other Survey Sections or outside Area IV.
Second Quarterly Monitoring Period (October 6, 2010 – January 6, 2011)					
Santa Susana tarplant	SS-43	10/22/10	VC	1 plant trampled/uprooted	Small clump along only footpath into area. 1 plant lost.
Malibu baccharis	SS-58	10/14/10-10/18/10	VC	13 plants damaged	Plants trimmed and/or uprooted inadvertently.
Malibu baccharis	SS-51	11/9/10-11/10/10	VC	10 plants damaged	Plants damaged by nearby brush removal.
Malibu baccharis	SS-52	11/17/10-11/22/10	VC	6 plants trimmed	Plants trimmed inadvertently.
Malibu baccharis	SS-49	12/1/10-1/4/10	VC	72 plants trimmed/damaged	Some plants inadvertently trimmed back or damaged during brush removal. Majority of these plants still alive and well rooted.
Southern California black walnut	SS-48	Oct-Dec	VC	3 trees trimmed	Mature trees trimmed.

Species/ Resource	Survey Section	Date recorded	Associated project activity ¹	Impact	Description
Southern California black walnut	SS-49	Oct-Dec	VC	2 trees trimmed	Mature trees trimmed.
Southern California black walnut	SS-51	Oct-Dec	VC	Approx. 20 trees trimmed	Resprouts from 2005 fire trimmed.
Southern California black walnut	SS-52	Nov-Dec	VC	6 trees trimmed	Resprouts from 2005 fire trimmed.
Southern California black walnut	SS-58	Oct-Dec	VC	Approx. 30 trees trimmed	Resprouts from 2005 fire trimmed.
Coast horned lizard	SS-49	12/8/10	VC	1 lizard relocated nearby	Adult relocated 30 feet away, off SS-49 in similar habitat.
Coast horned lizard	SS-51	11/5/10	VC	2 lizards held temporarily	2 juveniles held and then released at end of day in same location.
Coast horned lizard	SS-51	11/9/10	VC	1 lizard held temporarily	1 juvenile held and then released at end of day in same location.
Coast horned lizard	SS-58	10/14/10	VC	1 lizard relocated nearby	Adult relocated nearby, off Area IV in similar habitat.
Coast horned lizard	SS-58	10/26/10	VC	3 lizards relocated nearby	2 adults and 1 juvenile relocated nearby, in similar habitat.
Coast horned lizard	SS-58	11/4/10	VC	4 lizards relocated nearby	4 juveniles relocated nearby, off Area IV in similar habitat.
Third Quarterly Monitoring Period (January 7, 2011 – April 6, 2011)					
Santa Susana tarplant	SS-9	1/20/11	SS	1 plant destroyed	Sole plant on SS-9 lost due to vehicle/foot traffic.
Santa Susana tarplant	SS-17	4/4/11	SS	2 plants trampled/ damaged	Small plants growing in pavement in parking area.

Species/ Resource	Survey Section	Date recorded	Associated project activity¹	Impact	Description
Fourth Quarterly Monitoring Period (April 7, 2011 – June 30, 2011)					
Santa Susana tarplant	SS-42	5/18/11	GS	1 plant destroyed	Impact occurred at least several weeks ago and was not documented/monitored at the time. Likely impacted by work trucks or ERGS.
Malibu baccharis	SS-58	5/11/11	GS	2 plants damaged	Run over with ERGS
Malibu baccharis	SS-49	5/16/11	GS	1 plant damaged	Plant damaged by TMGS, will survive
Malibu baccharis	SS-51	5/16/11	VC	damaged	Plant damaged with weed whacker, still alive
Malibu baccharis	SS-51	5/16/11	GS	5 plants damaged	Plants damaged by mule, still alive
Malibu baccharis	SS-51	5/26/11	GS	5 plants damaged	Plants damaged by mule, still alive
Malibu baccharis	SS-26	5/26/11	VC	1 plant damaged	Plant damaged by weed whacker
Malibu baccharis	SS-49	6/2/11	GS	7 plants damaged/destroyed	4 plants slightly damaged and 3 plants uprooted by TMGS
Non-flowering mariposa lily	SS-39	4/7/11	GS	1 plant damaged	1 small non-flowering lily run over with TMGS
Non-flowering mariposa lily	SS-59	5/3/11	VC	4 plants damaged	Run over with ERGS
Non-flowering mariposa lily	SS-58	5/11/11	GS	4 plants damaged	Run over with ERGS
Southern California black walnut	SS-51, SS-52, SS-59	April-June	VC	Approx. 30 trees trimmed	Mature trees trimmed and some trees with girths less than 3" were trimmed to ground, in accordance with Ventura County trimming guidelines
Coast horned lizard	SS-59	5/2/11	VC	1 lizard relocated	Moved 400 feet away along property boundary
Coast horned lizard	SS-49	5/9/11	GS	3 lizards relocated	Moved nearby to safe location
Coast horned lizard	SS-58 SS-59	5/11/11	GS	3 lizards relocated	Moved < 100 ft away from ERGS activity
Coast horned lizard	SS-58	5/11/11	VC	3 lizards relocated	Moved away from scheduled VC activity
Coast horned lizard	SS-59	5/23/11	VC	1 lizard relocated	Moved away from vegetation removal zone

Species/ Resource	Survey Section	Date recorded	Associated project activity ¹	Impact	Description
Coast horned lizard	SS-59	5/24/11	VC	1 lizard relocated	Moved away from vegetation removal zone
Coast horned lizard	SS-49	5/26/11	VC	1 lizard relocated	Moved 50 feet away, past Area IV fence
Coast horned lizard	SS-59	5/27/11	VC	1 lizard relocated	Moved away from vegetation removal zone
Coast horned lizard	SS-49	6/1/11	GS	1 lizard relocated	Moved out of harm's way
Coast horned lizard	SS-58	6/1/11	GS	1 lizard relocated	Moved out of harm's way
Southern California rufous-crowned sparrow nest with 3 eggs	SS-39	4/21/11	VC	1 nest partially uncovered by vegetation trimming	Undiscovered nest exposed by weed whacker. Cover was manually reestablished and nestlings successfully fledged.
California towhee	SS-50	5/3/11	SS	Individual caught in glue mouse trap	Biologist removed all glue and bird appeared stressed but okay.
Second Annual Monitoring Period					
Fifth Quarterly Monitoring Period (July 1, 2011 - September 30, 2011)					
Coast horned lizard	SS-58	7/15/11	Clearance survey	1 lizard relocated	Moved 40 feet east to within existing nesting bird buffer
Coast horned lizard	P1I	8/22/11	GS	1 lizard relocated	Moved 100 feet away to uncut chaparral
Coast horned lizard	P1B	8/26/11	VC	1 lizard relocated	
Malibu baccharis	SS-51	7/22/11	VC	2 plants damaged	Main stem of one plant scarred by weed whacker. Secondary stem of another plant broken by weed whacker.
Malibu baccharis	SS-51	7/27/11	GS	10 plants damaged	Damaged during use of TMGS
Malibu baccharis	SS-51	8/4/11	GS	2 plants damaged	Impacts to plants by MMGS
Malibu baccharis	SS-52	8/4/11	GS	24 plants damaged	Impacts to plants by MMGS
Malibu baccharis	SS-52	8/11/11	GS	1 plant damaged	Damaged by TMGS

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Species/ Resource	Survey Section	Date recorded	Associated project activity¹	Impact	Description
Potential special-status mariposa lily	SS-51	7/27/11	GS	1 plant destroyed	Destroyed during use of TMGS
Southern California black walnut	SS-49, SS-51, SS-52, SS-58, SS-59, P1A, P1B, P1C, P1F, P1I, P1J, P2O, P3V	July - September	VC	Trimmed	Unknown number of mature trees trimmed per Ventura County trimming guidelines
Sixth Quarterly Monitoring Period (October 1, 2011 - December 31, 2011)					
Plummer's mariposa lily	SS-59	12/01/11	VC	1 plant severed	One plant that had gone to seed was severed at its base.
Protected trees	P1A, P1B, P1D, P1E, P1F, P1G, P1H, P1I, P1J, P2K, P2R, P3X	–October - December	VC	Trimmed	Unknown number of mature trees trimmed per Ventura County trimming guidelines
Seventh Quarterly Monitoring Period (January 1, 2012 - March 31, 2012)					
Coast horned lizard	P1C	3/15/12	SS	1 lizard relocated	Moved about 75 meters upslope to the east.
Santa Susana tarplant	SS-15	1/11/12	GS	1 plant damaged	Large Santa Susana tarplant in area had stems bent but not broken or otherwise permanently damaged
Santa Susana tarplant	SS-37	1/12/12	GS	1 plant damaged	One plant was 25% crushed inadvertently. Root structure appears to be intact and impact appears minimal.
Eighth Quarterly Monitoring Period (April 1, 2012 – July 13, 2012)					
Santa Susana tarplant (1 plant)	SS-42	5/18/11	GS	Destroyed	Impact occurred at least several weeks ago and was not documented/monitored at the time. Likely impacted by work trucks or ERGS.
Malibu baccharis (2 plants)	SS-58	5/11/11	GS	Damaged	Run over with ERGS
Malibu baccharis (1 plant)	SS-49	5/16/11	GS	Damaged	Plant damaged by TMGS, will survive
Malibu baccharis (1 plant)	SS-51	5/16/11	VC	Damaged	Plant damaged with weed whacker, still alive
Malibu baccharis (5 plants)	SS-51	5/16/11	GS	Damaged	Plants damaged by mule, still alive

**RADIOLOGICAL STUDY OF THE SANTA SUSANA FIELD LABORATORY AREA IV AND
NORTHERN BUFFER ZONE**

FINAL BIOLOGICAL MONITORING REPORT

July 2010 – July 2012

Species/ Resource	Survey Section	Date recorded	Associated project activity¹	Impact	Description
Malibu baccharis (5 plants)	SS-51	5/26/11	GS	Damaged	Plants damaged by mule, still alive
Malibu baccharis (1 plant)	SS-26	5/26/11	VC	Damaged	Plant damaged by weed whacker
Malibu baccharis (7 plants)	SS-49	6/2/11	GS	Damaged/ Destroyed	4 plants slightly damaged and 3 plants uprooted by TMGS
Non-flowering mariposa lily (1 plant)	SS-39	4/7/11	GS	Damaged	1 small non-flowering lily run over with TMGS
Non-flowering mariposa lily (4 plants)	SS-59	5/3/11	VC	Damaged	Run over with ERGS
Non-flowering mariposa lily (4 plants)	SS-58	5/11/11	GS	Damaged	Run over with ERGS
Southern California black walnut (~30 trees)	SS-51, SS-52, SS- 59	April- June	VC	Trimmed	Mature trees trimmed and some trees with girths less than 3" were trimmed to ground, in accordance with Ventura County trimming guidelines
Coast horned lizard (1 lizard)	SS-59	5/2/11	VC	Relocated	Moved 400 feet away along property boundary
Coast horned lizard (3 lizards)	SS-49	5/9/11	GS	Relocated	Moved nearby to safe location
Coast horned lizard (3 lizards)	SS-58 SS-59	5/11/11	GS	Relocated	Moved < 100 ft away from ERGS activity
Coast horned lizard (3 lizards)	SS-58	5/11/11	VC	Relocated	Moved away from scheduled VC activity
Coast horned lizard (1 lizard)	SS-59	5/23/11	VC	Relocated	Moved away from vegetation removal zone
Coast horned lizard (1 lizard)	SS-59	5/24/11	VC	Relocated	Moved away from vegetation removal zone
Coast horned lizard (1 lizard)	SS-49	5/26/11	VC	Relocated	Moved 50 feet away, past Area IV fence
Coast horned lizard (1 lizard)	SS-59	5/27/11	VC	Relocated	Moved away from vegetation removal zone
Coast horned lizard (1 lizard)	SS-49	6/1/11	GS	Relocated	Moved out of harm's way
Coast horned lizard (1 lizard)	SS-58	6/1/11	GS	Relocated	Moved out of harm's way

**RADIOLOGICAL STUDY OF THE SANTA SUSANA FIELD LABORATORY AREA IV AND
NORTHERN BUFFER ZONE**

Species/ Resource	Survey Section	Date recorded	Associated project activity¹	Impact	Description
Southern California rufous-crowned sparrow nest with 3 eggs	SS-39	4/21/11	VC	Cover reduced but nestlings fledged successfully	Undiscovered nest exposed by weed whacker. Cover was successfully reestablished.
California towhee	SS-50	5/3/11	SS	Injured/stressed after caught in glue mouse trap	Biologist removed all glue and bird appeared exhausted but okay.
¹ VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, SWSS=Surface Water and Sediment Sampling					

Table 11
Monitored Activities Conducted within Riparian Habitat

Location	Description	Activities Performed ¹	Significant Impacts
First Annual Monitoring Period			
First Quarterly Monitoring Period (July 22, 2010 - October 5, 2010)			
SS-1	500' long by 3-6' wide	VC, GS (mule)	None
SS-1	200' long by 3-6' wide	VC, GS (mule)	None
SS-1	235' long by 3-6' wide	VC, GS (mule)	None
SS-12	450' long by 3-6' wide	VC, GS (mule)	None
Second Quarterly Monitoring Period (October 6, 2010 – January 6, 2011)			
SS-1	500' long by 3-6' wide	GP, SS	None
SS-1	200' long by 3-6' wide	GP, SS	None
SS-1	235' long by 3-6' wide	GP, SS	None
SS-12	450' long by 3-6' wide	VC, GS (mule)	None
SS-38	Ephemeral freshwater wetland (15' long by 15' wide)	SWSS	None
SS-43	Lined collection basin (30' long by 40' wide)	VC	None
SS-46	Lined collection basin (30' long by 40' wide)	VC	None
NBZ-E	Bedrock-lined ephemeral creek	SWSS	None
Third Quarterly Monitoring Period (January 7, 2011 – April 6, 2011)			
SS-12	450' long by 3-6' wide; open coyote brush and willow scrub	SS	None
SS-26	600' long by 3-6' wide; dense mule fat and willow scrub	VC, GP, GS	None
SS-27	550' long by 3' wide; grassland with a few shrubs along banks	VC, GP, GS	None
SS-38	250' long by 3-6' wide; bedrock-lined drainage basin in chaparral	VC, GP, GS	None

Location	Description	Activities Performed ¹	Significant Impacts
SS-43	3 soil and bedrock-lined drainage basins in chaparral and coast live oak woodland totaling 1000' long by 4' wide	VC, GP, GS	None
Fourth Quarterly Monitoring Period (April 7, 2011 – June 30, 2011)			
No activities conducted within Riparian Habitat.			
Second Annual Monitoring Period			
Fifth Quarterly Monitoring Period (July 1, 2011 - September 30, 2011)			
P1A	Ephemeral drainages	VC, GS	Vegetation selectively trimmed; vegetation clearance and gamma scanning resulted in some siltation of dry creek bottoms after several crossings – soil will be removed following completion of activities in this area. Also, heavy build-up of loose soil near but outside of creek bottom. Impacts resulted in restrictions on use of skid steer in and near ephemeral drainages.
P1B	Ephemeral drainages	VC, GS	Vegetation selectively thinned; vegetation clearance and gamma scanning activities resulted in some siltation of dry creek bottoms after several crossings – soil will be removed following completion of activities in this area.
P1C	Ephemeral drainages	VC	No Significant Impacts (Vegetation selectively thinned)
P1I	Ephemeral drainages	VC	No Significant Impacts (Vegetation selectively thinned)
Sixth Quarterly Monitoring Period (October 1, 2011 - December 31, 2011)			
SS-1	Ephemeral drainages	VC	No Significant Impacts (Vegetation selectively thinned)
P1A	Ephemeral drainages	VC, GS	No Significant Impacts (Vegetation selectively thinned, gamma scanning by MMGS)
P1B	Ephemeral drainages	VC, GS	No Significant Impacts (Vegetation selectively thinned, gamma scanning by MMGS)
P1C	Ephemeral drainages	GS	No Significant Impacts (gamma scanning by MMGS)
P1J	Ephemeral drainages	VC	No Significant Impacts (Vegetation selectively thinned)
P2R	Ephemeral drainages	GS	No Significant Impacts (gamma scanning by TMGS)
Seventh Quarterly Monitoring Period (January 1, 2012 - March 31, 2012)			
SS-1	Ephemeral drainage	GS	No Significant Impacts (gamma scanning by MMGS)
SS-12	Ephemeral drainage	GS, VC	No Significant Impacts (Vegetation selectively thinned, gamma scanning by MMGS)
SS-39	Ephemeral drainage	GS	No Significant Impacts (Vegetation selectively thinned, gamma scanning by MMGS)
NBZ-E	Active creek bed	SS	No Significant Impacts - Samples collected by hand trowel.
P1B	Ephemeral riparian habitat	SS	No Significant Impacts - Samples collected by DPT rig.
P1C	Ephemeral riparian habitat	SS, GS, VC	No Significant Impacts - Samples collected by DPT rig. Gamma Scanning by H2GS; vegetation selectively thinned by machetes.

Location	Description	Activities Performed¹	Significant Impacts
P1D	Ephemeral riparian habitat	SS	No Significant Impacts - Samples collected by DPT rig.
P1J	Ephemeral riparian habitat	SS	No Significant Impacts - Samples collected by DPT rig.
P2R	Ephemeral riparian habitat	SS	No Significant Impacts - Samples collected by hand auger.
P3V	Ephemeral riparian habitat with pools of standing water	GS	No Significant Impacts - Gamma Scanning by H2GS.
Eighth Quarterly Monitoring Period (April 1, 2012 – July 13, 2012)			
P1C	Ephemeral drainages	SS	No Significant Impacts - Samples collected by hand auger
¹ VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, SWSS=Surface Water and Sediment Sampling			

Table 12
List of Active Bird Nests Monitored in the Study Area

Common Name	Survey Section	Subarea	Date Recorded	Impacts
First Annual Monitoring Period				
First Quarterly Monitoring Period (July 22, 2010 - October 5, 2010)				
Mourning dove	SS-19	5A	9/8/2010	See Table 13
Second Quarterly Monitoring Period (October 6, 2010 – January 6, 2011)				
No active bird nests observed.				
Third Quarterly Monitoring Period (January 7, 2011 – April 6, 2011)				
Golden eagle	P3W, P1D, P1E	NBZ-E	2/9/2011	None
Bushtit	SS-35	6	2/14/2011	None
Bushtit	SS-38	6	2/18/2011	None
Bushtit	P3V	NBZ-W	2/23/2011	None
Bushtit	SS-42	7	3/4/2011	None
Common raven	P1C	NBZ-W	3/4/2011	None
Bushtit	SS-38	6	3/15/2011	None
Bushtit	SS-32	6	3/15/2011	None
Bushtit	P1C	NBZ-W	3/16/2011	None
Western scrub-jay	SS-17	5A	3/16/2011	None
Bushtit	SS-34	6	3/17/2011	None
Red-winged blackbird	SS-55	5D North	3/21/2011	None
Red-winged blackbird	SS-55	5D North	3/21/2011	None
Red-winged blackbird	SS-55	5D North	3/21/2011	None
Red-winged blackbird	SS-55	5D North	3/21/2011	None
Bushtit	SS-43	8 North	3/23/2011	None
Mourning dove	SS-43	8 North	3/25/2011	Predation of eggs after tree partially trimmed. Trimming work conducted outside of biologically cleared area.
Bushtit	SS-38	6	3/31/2011	None
Bewick's wren	SS-35	6	3/31/2011	None
Bushtit	SS-18	6	3/31/2011	None
Bushtit	SS-35	6	4/6/2011	None
Fourth Quarterly Monitoring Period (April 7, 2011 – June 30, 2011)				
Golden eagle	P3W, P1D, P1E	NBZ-E	2/9/11	None
Western scrub-jay	SS-17	5A	4/11/11	None
Bushtit	SS-39	7	4/11/11	None
Bushtit	SS-39	7	4/11/11	None
California thrasher	SS-39	7	4/12/11	None
Cliff swallow	P1C	NBZ-W	4/12/11	None
Western scrub-jay	SS-39	7	4/13/11	None
Song sparrow	SS-39	7	4/21/11	None

Common Name	Survey Section	Subarea	Date Recorded	Impacts
Rufous-crowned sparrow	SS-39	7	4/21/11	See Table 10
Wrentit	SS-39	7	4/22/11	None
Anna's hummingbird	SS-39	7	4/22/11	None
House wren	SS-59	5D South	4/26/11	None
Song sparrow	SS-59	5D South	4/26/11	None
Song sparrow	SS-59	5D South	4/26/11	None
Western scrub-jay	SS-59	5D South	4/26/11	None
Lesser goldfinch	SS-59	5D South	4/27/11	None
Wrentit	SS-59	5D South	4/27/11	None
California towhee	SS-59	5D South	4/28/11	None
California towhee	SS-59	5D South	4/28/11	None
Lazuli bunting	SS-59	5D South	5/3/11	None
Wrentit	SS-59	5D South	5/3/11	None
California towhee	SS-59	5D South	5/4/11	None
House finch	SS-58	5D South	5/4/11	None
Lesser goldfinch	SS-59	5D South	5/4/11	None
California towhee	P1C	NBZ-W	5/5/11	None
Wrentit	P1C	NBZ-W	5/5/11	See Table 13
Lesser goldfinch	SS-39	7	5/6/11	None
Bewick's wren	SS-59	5D South	5/9/11	None
Blue grosbeak	SS-59	5D South	5/9/11	None
California towhee	SS-59	5D South	5/9/11	None
Song sparrow	SS-59	5D South	5/9/11	None
Wrentit	SS-59	5D South	5/9/11	None
Song sparrow	SS-48	8 South	5/10/11	None
Bewick's wren	SS-59	5D South	5/10/11	None
Blue-gray gnatcatcher	SS-58	5D South	5/11/11	None
California towhee	SS-43	8 North	5/12/11	None
California towhee	SS-43	8 North	5/12/11	None
California towhee	SS-59	5D South	5/12/11	See Table 13
California towhee	SS-59	5D South	5/13/11	None
California towhee	SS-51	8 South	5/13/11	None
California towhee	SS-51	5D South	5/13/11	None
California towhee	SS-51	5D South	5/13/11	None
House wren	SS-52	8 South	5/13/11	None
Lesser goldfinch	SS-51	8 South	5/13/11	None
Lesser goldfinch	SS-51	8 South	5/13/11	None
Oak titmouse	SS-51	8 South	5/13/11	None
Song sparrow	SS-51	8 South	5/13/11	None
California towhee	SS-51	5D South	5/13/11	None
California towhee	SS-59	5D South	5/16/11	None
Song sparrow	SS-39	7	5/18/11	None
Lesser goldfinch	SS-39	7	5/18/11	None

Common Name	Survey Section	Subarea	Date Recorded	Impacts
California thrasher	SS-39	7	5/18/11	None
Wrentit	SS-39	7	5/18/11	See Table 13
Spotted towhee	SS-39	7	5/18/11	None
House wren	SS-51	5D South	5/18/11	None
House wren	SS-51	5D South	5/18/11	None
House wren	SS-51	8 South	5/18/11	None
Oak titmouse	SS-51	8 South	5/18/11	None
Song sparrow	SS-51	8 South	5/18/11	None
Song sparrow	SS-51	8 South	5/18/11	None
Oak titmouse	SS-51	8 South	5/18/11	None
California towhee	SS-39	7	5/19/11	None
House wren	PIC	NBZ-W	5/19/11	None
California towhee	SS-44	8 North	5/19/11	None
Cliff swallow	SS-44	8 North	5/19/11	None
Cliff swallow	SS-44	8 North	5/19/11	None
Cliff swallow	SS-44	8 North	5/19/11	None
Lesser goldfinch	SS-51	5D South	5/20/11	None
Spotted towhee	SS-51	8 South	5/20/11	None
California towhee	SS-51	5D South	5/23/11	None
Lesser goldfinch	SS-51	5D South	5/24/11	None
California towhee	SS-52	5D South	5/24/11	None
Lesser goldfinch	SS-52	8 South	5/24/11	None
Lesser goldfinch	SS-52	8 South	5/26/11	None
House finch	SS-58	5D South	5/26/11	None
California towhee	SS-59	5D South	5/27/11	See Table 13
California quail	P1E	NBZ-E	5/31/11	None
Rufous-crowned sparrow	P1E	NBZ-E	5/31/11	None
Lark sparrow	SS-51	8 South	5/31/11	None
Phainopepla	SS-51	8 South	5/31/11	None
California towhee	SS-49	8 South	6/1/11	None
Lark sparrow	SS-49	8 South	6/1/11	None
Lark sparrow	SS-49	8 South	6/1/11	None
Spotted towhee	SS-39	7	6/2/11	None
Mourning dove	SS-59	5D South	6/2/11	None
Lark sparrow	SS-49	8 South	6/2/11	None
Lazuli bunting	SS-59	5D South	6/3/11	None
Ash-throated flycatcher	P1I	NBZ-W	6/3/11	None
Common poorwill	SS-52	8 South	6/6/11	None
Lark sparrow	SS-51	8 South	6/7/11	None
Lark sparrow	SS-49	8 South	6/7/11	None
Lark sparrow	SS-49	8 South	6/7/11	None
Lark sparrow	SS-49	8 South	6/7/11	None
Lesser goldfinch	SS-49	8 South	6/7/11	None
House wren	SS-58	5D South	6/8/11	None

Common Name	Survey Section	Subarea	Date Recorded	Impacts
House finch	SS-58	5D South	6/8/11	None
Song sparrow	SS-58	5D South	6/8/11	None
Costa's hummingbird	SS-58	5D South	6/8/11	None
California towhee	SS-52	8 South	6/8/11	None
Wrentit	P1I	NBZ-W	6/9/11	None
Acorn woodpecker	SS-31	6	6/9/11	None
House wren	P1I	NBZ-W	6/10/11	None
California towhee	P1I	NBZ-W	6/10/11	None
California towhee	SS-59	5D South	6/10/11	None
California towhee	P2O	NBZ-W	6/13/11	None
Wrentit	P2K	NBZ-W	6/13/11	See Table 13
California towhee	P1F	NBZ-E	6/14/11	None
Lesser goldfinch	P1F	NBZ-E	6/14/11	None
California towhee	P1J	NBZ-E	6/14/11	None
White-throated swift	P1J	NBZ-E	6/14/11	None
Phainopepla	P1J	NBZ-E	6/14/11	None
Song sparrow	SS-55	5D North	6/15/11	None
Song sparrow	SS-55	5D North	6/15/11	None
Blue grosbeak	SS-51	5D South	6/15/11	None
Blue grosbeak	SS-56	5D North	6/16/11	None
Northern mockingbird	SS-46	8 North	6/16/11	None
Violet-green swallow	SS-42	5D North	6/20/11	None
Lazuli bunting	SS-56	5D North	6/21/11	None
California quail	P1F	NBZ-E	6/21/11	None
Wrentit	P1D	NBZ-E	6/24/11	None
Second Annual Monitoring Period				
Fifth Quarterly Monitoring Period (July 1, 2011 - September 30, 2011)				
Phainopepla	P1F	NBZ-E	7/5/11	None
California towhee	P1D	NBZ-E	7/5/11	None
Spotted towhee	SS-58	5D South	7/14/11	None
Blue grosbeak	SS-58	5D South	7/14/11	None
Spotted towhee	SS-58	5D South	7/15/11	None
Lazuli bunting	SS-58	5D South	7/15/11	None
Lark sparrow	SS-51	5D South	7/19/11	None
House finch	SS-58	5D South	7/22/11	None
Lesser goldfinch	SS-58	5D South	7/26/11	None
Lesser goldfinch	SS-58	5D South	7/27/11	None
Mourning dove	SS-51	8 South	7/27/11	None
Lesser goldfinch	SS-59	5D South	7/28/11	None
Northern mockingbird	SS-59	5D South	7/28/11	None
House finch	SS-48	8	8/2/11	None
Mourning dove	P1A	NBZ-W	8/16/11	None

Common Name	Survey Section	Subarea	Date Recorded	Impacts
Sixth Quarterly Monitoring Period (October 1, 2011 - December 31, 2011)				
No active bird nests observed.				
Seventh Quarterly Monitoring Period (January 1, 2012 - March 31, 2012)				
Golden eagle	P1C, P1D, P1F, P1J	NBZ-E, NBZ-W	3/15/12	None
Red-tailed hawk	SS-36	6	3/21/12	None
Barn owl	SS-43	8 North	3/23/12	An adult owl was flushed from the nest and did not return until the work crew left the area. The presence of at least one nestling within the cavity was verified in April 2012. Impacts are not expected to be significant.
Eighth Quarterly Monitoring Period (April 1, 2012 – July 13, 2012)				
Golden Eagle	Outside of NBZ-E boundary	NBZ-E	2/9/11	None
Red-tailed hawk	P1C	NBZ-W	3/1/12	None
Red-tailed hawk	P2M	NBZ-W	4/12/12	None
Bushtit	P1A	NBZ-W	4/17/12	None
Anna's hummingbird	P1A	NBZ-W	4/18/12	None
Lesser goldfinch	P1A	NBZ-W	4/18/12	None
Bushtit	SS-45	8 North	4/19/12	None
Barn owl	SS-43	8 North	4/27/12	None
House wren	SS-50	8 North	4/27/12	None
Song sparrow	SS-50	8 North	5/4/12	None
Bushtit	SS-43	8 North	5/9/12	None
California towhee	SS-43	8 North	5/9/12	None
California towhee	SS-43	8 North	5/9/12	None
Lesser goldfinch	SS-49	8 South	5/18/12	None
California towhee	SS-39	7	5/21/12	None
California towhee	SS-43	8 North	5/21/12	None
Phainopepla	SS-46	8 North	5/21/12	None
Spotted towhee	SS-49	8 South	5/21/12	None
California towhee	SS-39	7	5/25/12	None
California towhee	SS-39	7	5/29/12	None
Wrentit	SS-39	7	5/29/12	None
Wrentit	SS-39	7	5/29/12	None
Anna's hummingbird	SS-43	8 North	5/31/12	None
California towhee	SS-39	7	5/31/12	None
Song sparrow	SS-39	7	5/31/12	None

Common Name	Survey Section	Subarea	Date Recorded	Impacts
Wrentit	SS-39	7	5/31/12	None
Anna's hummingbird	SS-39	7	6/1/12	None
Bushtit	SS-39	7	6/1/12	None
Lesser goldfinch	SS-39	7	6/1/12	None
California towhee	SS-38	6	6/6/12	None
Lazuli bunting	SS-38	6	6/6/12	None
Hooded oriole	SS-58	5D South	6/7/12	None
House wren	SS-43	8 North	6/7/12	None
Lazuli bunting	SS-49	8 South	6/7/12	None
Lesser goldfinch	SS-58	5D South	6/7/12	None
Spotted towhee	SS-49	8 South	6/7/12	None
California quail	SS-39	7	6/11/12	None
Cliff swallow	SS-39	7	6/11/12	None
Lazuli bunting	SS-39	7	6/11/12	None
American kestrel	SS-3	5c	6/18/12	None
Hooded oriole	SS-55	5D North	6/18/12	None
Ash-throated flycatcher	SS-12	5B	6/21/12	None
California towhee	SS-12	5B	6/21/12	None
Lark sparrow	SS-12	5B	6/21/12	None
Lazuli bunting	SS-39	7	6/25/12	None
Mourning dove	SS-39	7	6/25/12	None
Northern mockingbird	SS-12	5B	6/25/12	None
Phainopepla	SS-26	6	6/25/12	None
California towhee	55-56	5D North	6/28/12	None
House finch	SS-59	5D South	6/28/12	None
Blue grosbeak	SS-16	5A	7/2/12	None
House finch	SS-17	5A	7/2/12	None
House finch	SS-17	5A	7/2/12	None
Lazuli bunting	SS-38	6	7/2/12	None
White-throated swift	SS-38	6	7/2/12	None
California towhee	SS-17	5A	7/3/12	None
Lazuli bunting	SS-14	5A	7/3/12	None
Mourning dove	SS-17	5A	7/3/12	None
California towhee	SS-59	5D South	7/5/12	None
Cliff swallow	SS-17	5A	7/10/12	None
Lesser goldfinch	SS-17	5A	7/10/12	None
Lazuli bunting	SS-17	5A	7/11/12	None

Does not include undiscovered active nests that were found after having been lost during project activities. All impacted nests are described in Tables 10 and 13.

Table 13
List of Nesting Birds Impacted by Project Activities

Species/Resource	Survey Section	Date of impact	Associated project activity ¹	Impact	Description
First Annual Monitoring Period					
First Quarterly Monitoring Period (July 22, 2010 - October 5, 2010)					
Mourning dove	SS-19	9/28/2010	VC	Possibly predated	Vegetative cover around nest reduced, possibly predated thereafter
Second Quarterly Monitoring Period (October 6, 2010 – January 6, 2011)					
No nesting birds impacted.					
Third Quarterly Monitoring Period (January 7, 2011 – April 6, 2011)					
Mourning dove	SS-43	3/25/2011	VC	Possibly predated	Vegetative cover around nest reduced, possibly predated thereafter
Fourth Quarterly Monitoring Period (April 7, 2011 – June 30, 2011)					
Southern California rufous-crowned sparrow nest with 3 eggs	SS-39	4/21/11	VC	Cover initially reduced but nestlings fledged successfully	Undiscovered nest exposed by weed whacker. Cover was successfully reestablished.
Wrentit nest with nestlings	P1C	5/5/11-5/6/11	VC	2 of 4 chicks lost	Undiscovered nest knocked over, nest replaced securely in nearby vegetation but adults had stopped feeding young when checked the following day; 2 of 4 chicks still alive when delivered to wildlife rescue facility (Ojai Raptor Center).
Wrentit nest with 4 eggs	SS-59	5/9/11	VC	All 4 eggs lost	Undiscovered nest weed whacked, all eggs broken.
Wrentit nest with 4 eggs	SS-39	5/18/11 5/19/11	VC	Nest damaged then eggs lost	Undiscovered nest was damaged/tilted by foot traffic then was discovered empty the following day.
Wrentit nest with 1 hatchling, 2 eggs (on 6/13)	P2K	6/13/11 6/14/11	VC	Cover around nest reduced, nest empty 1 day later	Cover reduced and clear-cut near undiscovered nest. Contents gone the following day.
California towhee nest with 3 eggs	SS-59	4/27/11	VC	Eggs found on ground after VC	Nest not located prior to or during VC and likely fell.

Species/Resource	Survey Section	Date of impact	Associated project activity ¹	Impact	Description
California towhee nest with 1 nestling	SS-59	6/6/11	VC	Noise stress, possible early fledging	Female was stressed due to VC activity and was staying off nest with young nestling on 5/6 and on 5/9; parents may have induced young to leave nest early after crews left but fledgling was observed on 5/10 to be in good health.
California towhee nest with at least 1 egg	SS-59	5/12/11	VC	Cover reduced, later depredated	Cover around undiscovered nest greatly reduced on 5/12. Depredated by 5/16.
Song sparrow nest with 2 eggs	SS-51	5/26/11 6/8/11	GS	Nest and contents lost	Nest likely knocked over when mule walked through unsurveyed milk thistle patch, discovered later.
Second Annual Monitoring Period					
Fifth Quarterly Monitoring Period (July 1, 2011 - September 30, 2011)					
No nesting birds impacted.					
Sixth Quarterly Monitoring Period (October 1, 2011 - December 31, 2011)					
No nesting birds impacted.					
Seventh Quarterly Monitoring Period (January 1, 2012 - March 31, 2012)					
Barn owl	SS-43	8 North	3/23/12	An adult owl was flushed from its nest	An adult owl was flushed from the nest and did not re-enter the nest cavity until the work crew left the area. The presence of at least one nestling within the cavity was verified in April 2012. Impacts are not expected to be significant.
Eighth Quarterly Monitoring Period (April 1, 2012 – July 13, 2012)					
There were no impacts to nesting birds associated with work activities during this quarter.					
¹ VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, SWSS=Surface Water and Sediment Sampling					

ISSUES ENCOUNTERED AND ADAPTIVE MANAGEMENT

Throughout these activities, there were no issues that prevented EPA from implementing the terms, conditions, avoidance and minimization measures and/or other protective measures required by USFWS in the Biological Opinion. However, EPA did implement more robust measures beginning during the fourth monitoring period to better protect nesting birds in addition to those referenced in AMM VC-1. Due to the significant potential impacts to nesting birds created by the vegetation-clearing component of the project, EPA determined that for the remainder of the 2011 nesting season and throughout the 2012 nesting season, nesting bird surveys should be conducted no more than 3 to 5 days before vegetation cutting activities begin. The reduced time lapse between surveys and activities was deemed necessary because birds can build nests and lay eggs in a few days if undisturbed by human activity (such as during a weekend break in project activity). Other project activities can also impact nesting birds by physically damaging the nest contents by crushing ground nests or damaging nests located in herbaceous annuals and low-hanging branches or shrubs. The visual, noise, and vibration disturbances may disrupt parental activity (such as the thermoregulation of eggs/hatchlings or the feeding of young) or cause parents to abandon nests entirely. Therefore, biological monitors were provided at least 24 to 48 hours notice to allow sufficient time to complete a thorough survey for nests before vegetation cutting or other activities are conducted. Wherever possible, EPA conducted clearance surveys and monitoring for all project activities that have a reasonable potential to impact nesting birds.

CONCLUSION

With the exception of the Adaptive Management measure described above regarding AMM VC-1, EPA considers all other terms and conditions provided in the Biological Opinion to enhance the protection of Federally listed and State-Listed/Sensitive species were adequate based on the project implementation.

As shown in Table 8, a total of 129 Braunton's milkvetch individuals were directly adversely impacted by project activities. However, as stated in the Biological Opinion (May 25, 2010), it was acknowledged that a considerable number of Braunton's milkvetch plants could be adversely affected by project activities. The Biological Opinion concluded that it was likely that only approximately 5 percent of the plants within the action area would be directly adversely affected. Additionally, the Biological Opinion conclusion reported that if up to two-thirds of the plants within the action area were directly affected, the site would still retain more Braunton's milkvetch plants than any other single occurrence, and adverse effects to this species would be minimized so that the long-term survival of this population would not be considerably affected (i.e., the seed bank would persist). Evaluating the impacts of project activities on the Braunton's milkvetch population based on the conclusions of the Biological Opinion, project activities impacted less than 0.4 to 0.7 percent of the estimated 18,500 to 33,500 Braunton's milkvetch individuals on the project site. This amount is well below the Biological Opinion's stated estimation that 5 percent of the plants were likely to be adversely affected. In terms of long-term survival of this population, the project activities impacted less than 1.1 to 0.6 percent of the amount of individuals that the Biological Opinion estimated could be impacted and still minimize adverse impacts to the long-term survival of the population. Therefore, project impacts to this species were far below any amount expected to be affected as reported in the Biological Opinion, as well as far below any estimated amount of impacts that would have long-term effects on the survival of this population of Braunton's milkvetch.

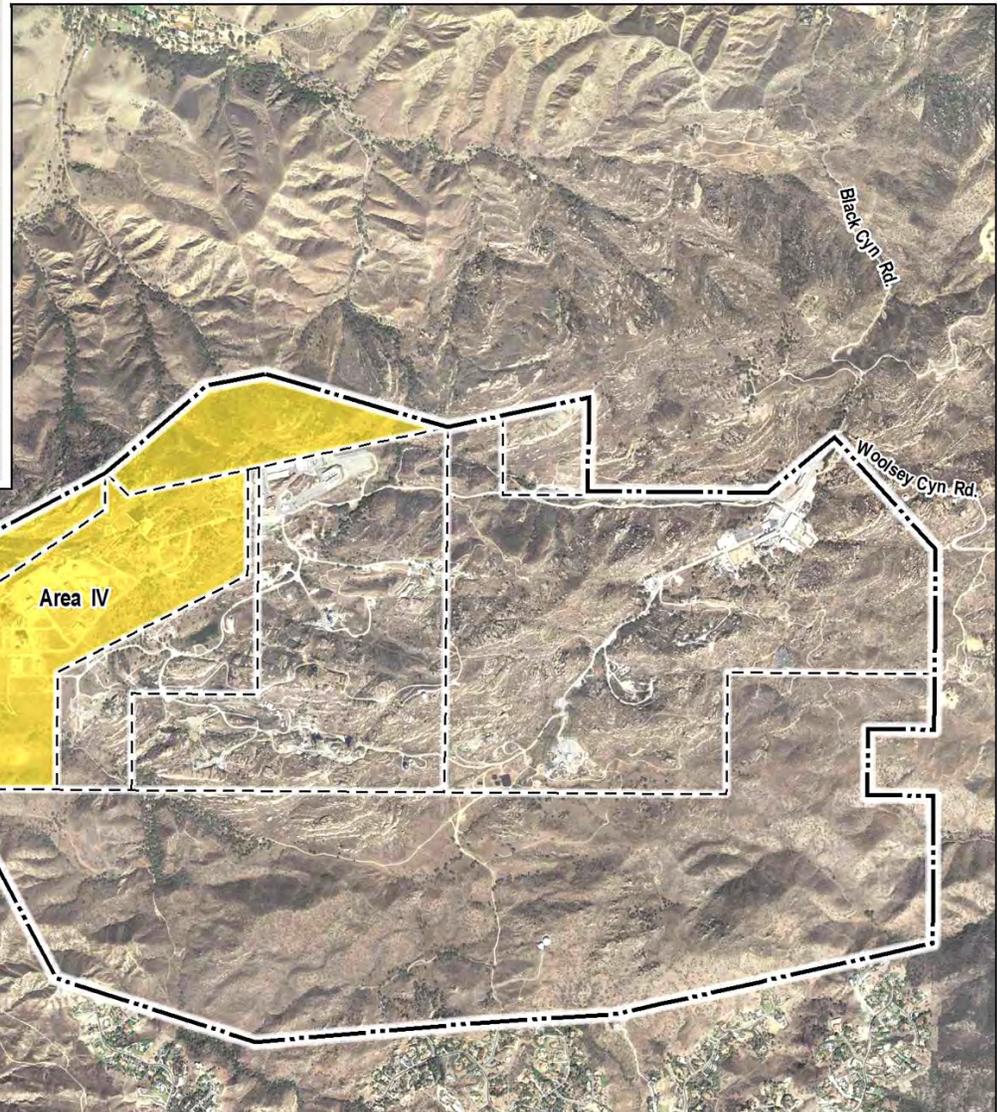
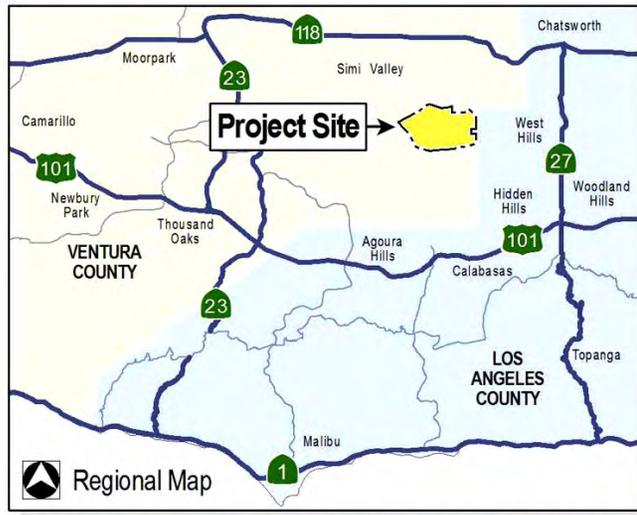
No other federally listed species were directly impacted by project activities, although it was reported that a mule was guided through a dry vernal pool habitat area. While it is unknown if any fairy shrimp cysts were affected by this action, it would be considered that the project actions only affected a small portion

of habitat of the entire range of Riverside fairy shrimp or vernal pool fairy shrimp, which is consistent with the findings of the biological opinion.

Although some direct impacts were observed to occur to non-Federally listed species, these were not described in the Biological Opinion and as such there are no numerical metrics to measure the adequacy of protection. However, due to the project activities affording these species similar protections given Federally listed species, it can be presumed that direct impacts to these species were also significantly minimized throughout the project duration.

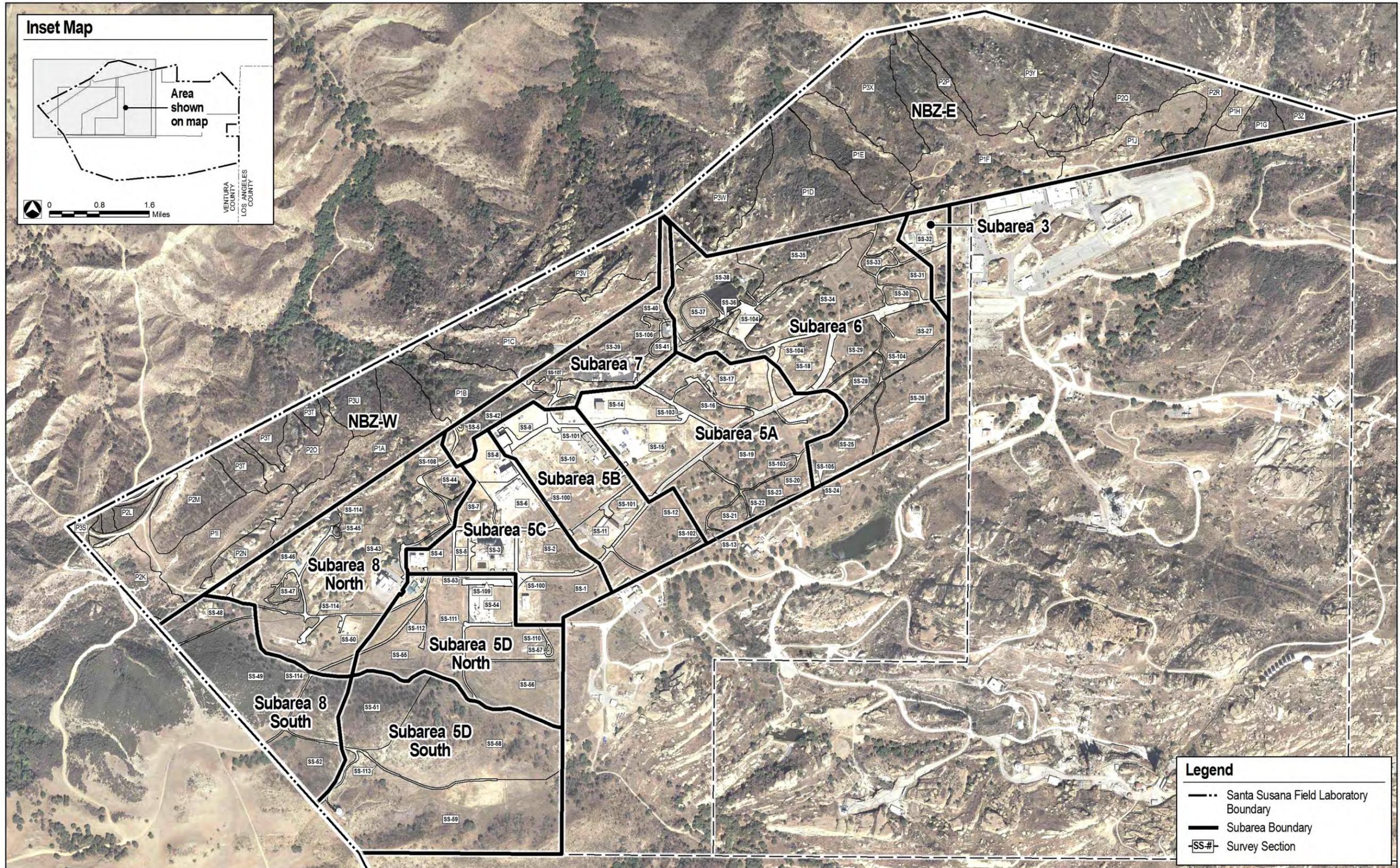
APPENDIX 1

FIGURES AND PHOTO PLATES

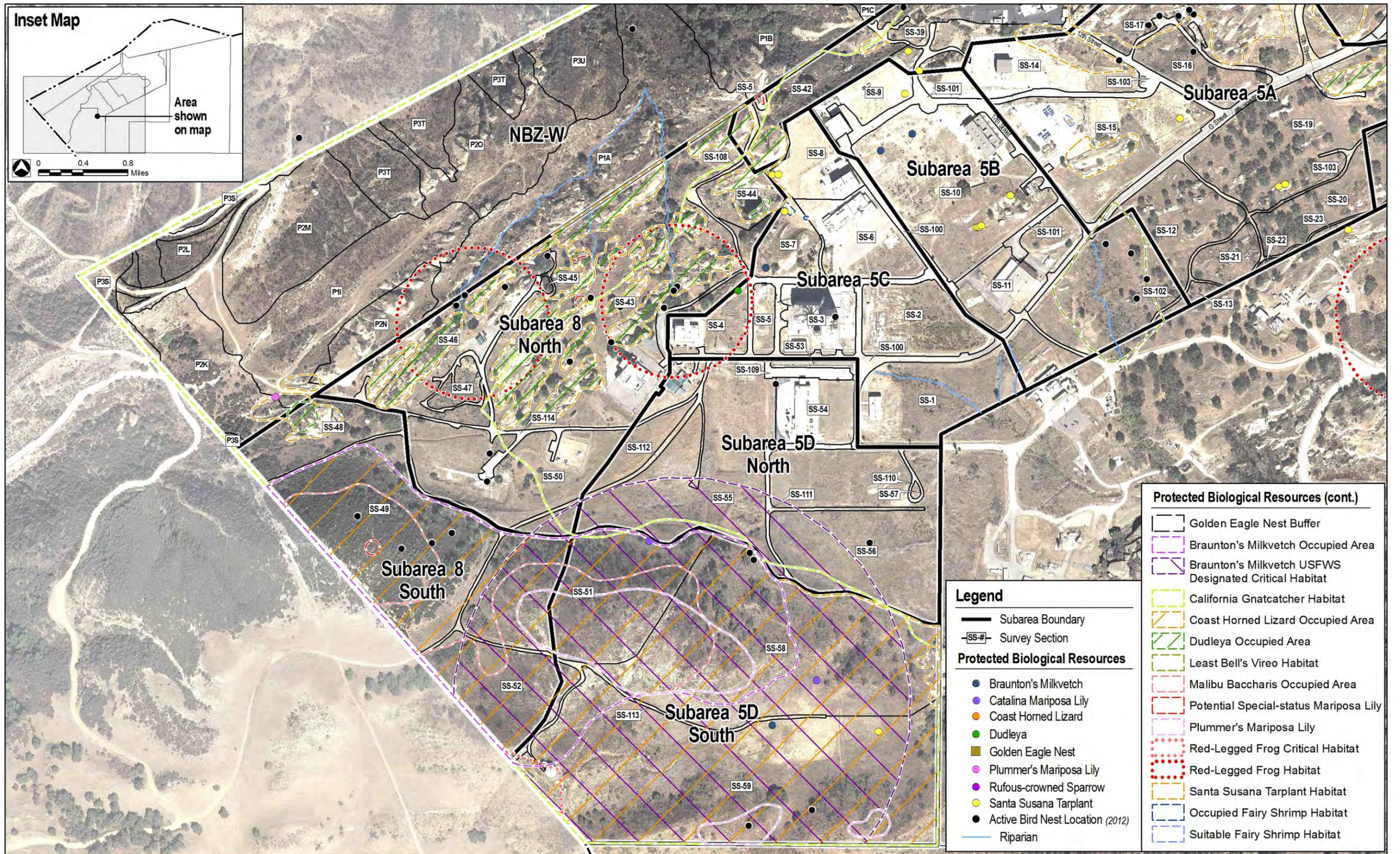


Aerial Source: CIRGIS, 2007.

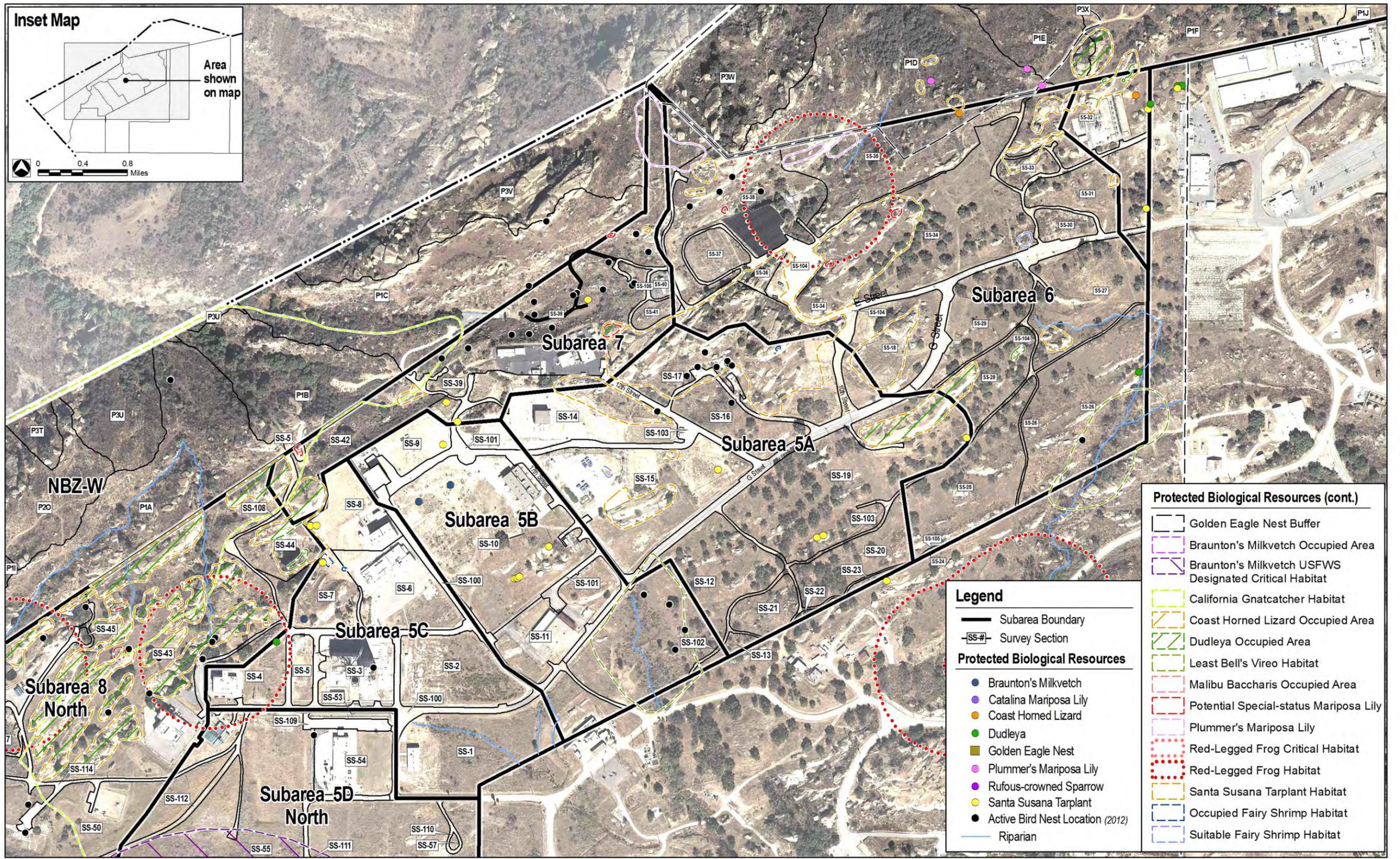




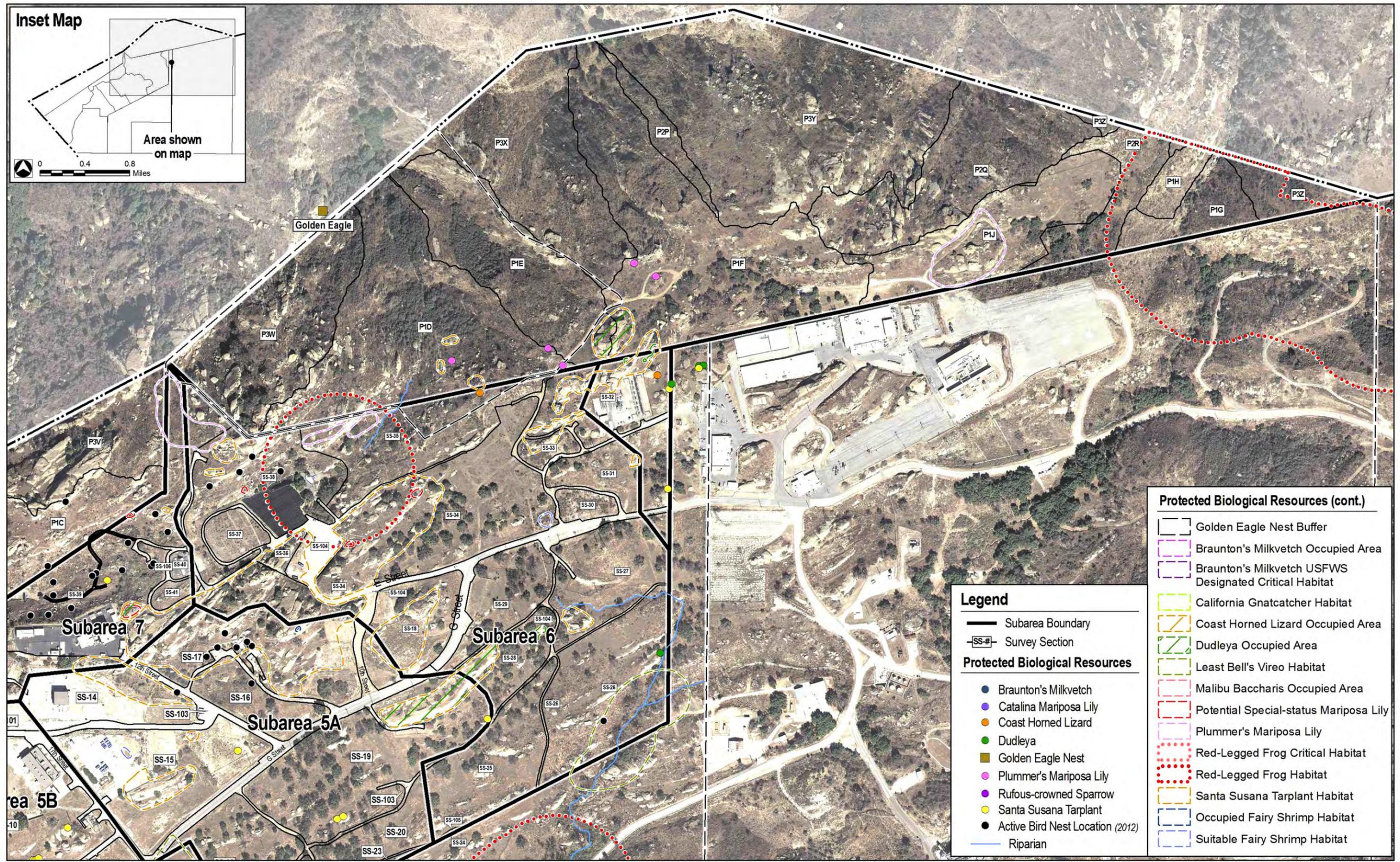
Aerial Source: CIRGIS, 2007.



Aerial Source: CIRGIS, 2007.



Aerial Source: CIRGIS, 2007.



Aerial Source: CIRGIS, 2007.



Photo 1A – Soil Sampling crew operating Direct Push Technology rig in SS-46. Photo taken May 2, 2012.



Photo 1B – Direct Push Technology rig in use in Subarea 7, operating within a roped area previously examined by a biological monitor and cleared for activities. Photo taken May 15, 2012.



Photo 1C – Soil sampling with a hand auger in Subarea 6. Photo taken April 12, 2012.



Photo 1D – Soil sampling using a hand shovel in NBZ-W. Photo taken April 17, 2012.



Photo 2A – Braunton's milkvetch (two individuals) flagged with a buffer zone located in SS-59. Photo taken June 16, 2012.



Photo 2B – Braunton's milkvetch (two individuals) protected by a barrier fence located in SS-59. Photo taken June 28, 2012.



Photo 2C – Direct Push Technology rig in use in SS-37 with Santa Susana tarplant flagged in the foreground. Photo taken April 11, 2012.



Photo 2D – Plummer's mariposa lilies (two individuals) flagged for identification in SS-59. One of these plants has been browsed by wildlife, presumably deer. Photo taken July 5, 2012.



Photo 3A – Coast horned lizard observed in SS-39. Photo taken June 1, 2012.



Photo 3B – Western spadefoot metamorph observed in SS-46 within a man-made holding pond. Photo taken May 21, 2012.



Photo 3C – Grasshopper sparrow observed in Subarea 5D North in SS-55 and SS-56. Photo taken June 7, 2012.



Photo 3D – Red-tail hawk nest occupied by resident pair, as observed from SS-39. Photo taken May 25, 2012.



Photo 4A – Anna’s hummingbird nesting in SS-39. Photo taken June 1, 2012.



Photo 4B – California towhee nest with a clutch of eggs observed in SS-17. Photo taken July 3, 2012.



Photo 4C – Lesser goldfinch nest with a clutch of eggs observed in SS-39. Photo taken June 1, 2012.



Photo 4D – Wrentit nest occupied by nestlings as observed in SS-39. Photo taken May 29, 2012.

APPENDIX 2

EIGHTH QUARTERLY BIOLOGICAL CLEARANCE SURVEY FORMS

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 4/5/12	Survey Section (SS): SS-34, SS-18, SS-29
Biologist: Scott Werner	Subarea: SA-6
Expiration: 4/13/12	Survey Type: clearance surveys for geo-probe and hand-augering
Start time: 0845	End time: 1430

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-34	Red-legged frog habitat buffer	N	Y	SS-2: biological monitor req'd
SS-34 SS-18 SS-29	Actively nesting birds and habitat for potential nesting birds	N	Y	SS-2: biological monitor req'd
SS-34 SS-18 SS-29	Santa Susana tarplant	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

Survey 1: Points 359, 360, 361, 362, 363, and 364 east of the SRE **are cleared** for soil sampling. These points are within the red-legged frog habitat buffer, and some Santa Susana tarplant is present on the rock outcrops. Biological monitor required.

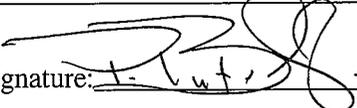
Survey 2: Points 369, 370, 371, 372, 373, 374, 375, 380, 381, 385 along G Street **are cleared** for soil sampling using the geo-probe or hand auger. For the sample points in the pavement and along the road shoulder, a biological monitor should be present during setup to avoid impacts to Santa Susana tarplant and potential nesting birds. For points west of the road, the geo-probe truck will need to travel through a tarplant area to the setup area, and a biological monitor is required to guide the truck around the tarplants to avoid impacts.

Survey 3: Points 72, 119, 79, 63, 81, 103, 86, 96, 149, 450, 128, 142, 130, and 293 in/near the SRE **are cleared** for soil sampling with geo-probe or hand auger, with a biological monitor present. Point 138 **may only be sampled with a hand auger** due to its proximity to the active red-tailed hawk nest in a cliff to the west in the NBZ-W. In addition, some of the other sample points on the slope north of the SRE may be too close to the hawk nest for the geo-probe and may require hand-augering. The biological monitor assigned to the crew (all points described here) will advise the Soil Sampling crew leader as to which points are too close to the hawk nest for the geo-probe. The hawk nest may be active into June.

(Maps attached)

Biologist Signature: 

Date: 4/5/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 4/6/12	Survey Section (SS): P2K, P1I, P2M, P2O
Biologist: Scott Werner, Jack Stone	Subarea: NBZ-W
Expiration: 4/13/12	Survey Type: clearance survey for hand-auger soil sampling
Start time: 0900	End time: 1420

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
P2K, P1I P2M, P2O	California gnatcatcher potential habitat	N	Y	SS-2: biological monitor req'd
P2K, P1I P2M, P2O	Actively nesting birds and habitat for potential nesting birds	N	Y	SS-2: biological monitor req'd
P2K, P1I P2M, P2O	Coast horned lizard occupied habitat*	N	Y	SS-2: biological monitor req'd
P2K, P1I P2M, P2O	San Diego desert woodrat occupied habitat*	N	Y	SS-2: biological monitor req'd. Avoid impacts to woodrat nests.
P1I (Point 153)	Dudleya	Y	Y	SS-2: biological monitor req'd

* species observed in 2011

NOTES AND RECOMMENDATIONS:

The following sample points were surveyed and are **cleared** for Soil Sampling (hand auger only) under the supervision of a FWS-approved biologist (John Griffith and Scott Werner) for monitoring within California gnatcatcher habitat, in approximate west-to-east order (see attached map):

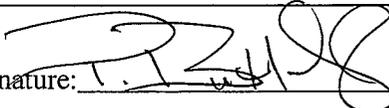
1, 150, 184, 191, 156, 166, 4, 173, 167, 153, 181, 11, 9, 185 (not labeled on map), 84.

The following sample points were surveyed but are **currently restricted** due to nesting birds (Bewick's wren) adjacent to Point 86: 187, 86, 87.

The following sample points were not visited, but are **likely restricted** due to the presence of an active red-tailed hawk nest in the adjacent cliff: 146, 159.

Biologist Signature: 

Date: 4/8/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 4/27/12	Survey Section (SS): SS-44, SS-43, SS-47, SS-50, SS-49
Biologist: Scott Werner	Subarea: 8N, 5DS
Expiration: 5/4/12	Survey Type: clearance surveys for soil sampling
Start time: 0815	End time: 1130

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-43 SS-44 SS-47	Nesting bird habitat	Y	Y	SS-2: biological monitor req'd
SS-50	Nesting birds	Y/N	Y	SS-2: biological monitor req'd
SS-49	Nesting bird habitat Braunton's milkvetch	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-8N: SS-44 Points 143-146 ok for geoprobe. No nests found.

SS-43 Points 159-165 ok for geoprobe. Barn owl nest site appears far enough away from points to be an issue.

Barn owl nest UTM

SS-50 Points 203-210, 211-214, 215-218 ok for geoprobe/hand-auger.

SS-50 Points 196-199: House wren building nest in power pole hardware near points 196-199 but they are marked as surface samples (hand-auger). Sampling can proceed but if the monitor feels that the activity is negatively affecting the bird then work should be delayed. House wren nest is at UTM 341751E, 3788808N.

SS-50 Points 192-195, 219-221 ok for geoprobe or hand-auger.

SS-47, 180-183, 172-179 ok for geoprobe or hand-auger.

SA-5DS SS-49 Brief look at dense milkvetch regrowth area in SS-49. Monitor required here for all activities including foot traffic.

Biologist Signature: 

Date: 4/27/2012

HGL Field Supervisor Signature: _____

A handwritten signature in black ink, appearing to be 'R. J. G.', written over a horizontal line.

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/4/2012 Friday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8N	SS-50	0830-1500	SS	Geoprobe, weed whackers
8N	SS-46	-	-	(survey)

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-50	Nesting birds	SS-2	None
SS-46	Western spadefoot toad tadpoles	(currently no EPA activity in this location)	None

NOTES AND RECOMMENDATIONS:

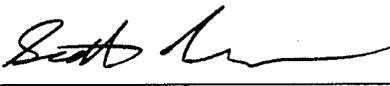
8N SS-50: Points 186, 187 completed.

8N SS-46: Confirmed western spadefoot toad tadpoles (*Spea hammondi*) (California Special Concern species) in holding pond at opposite end of parking lot from Outfall 6. Poned area is about 35' x 20' and the pond is lined with a dense cloth-like material over plastic. Identified using key in Stebbins (2003) herp guide: Tadpoles are fairly large, 50 mm long, splotchy golden brown, dorsal eyes fairly close together on top of body, body's widest point is just behind eyes, labial teeth appear to be 4/3 though difficult to identify, identification guide says typically 5/5 but can be variable. Appears to be several hundred spadefoot tadpoles in this pond, but most stay in the murky deep water. Many have tiny vestigial hindlimbs emerging. No metamorphed juveniles found. There are also pacific tree frog (*Pseudacris regilla*) tadpoles and western toad (*Bufo boreas*) tadpoles in the pond for comparison. Pond generally has not been impacted by EPA activities except for past foot traffic and veg removal in the general area upstream and downstream of pond.

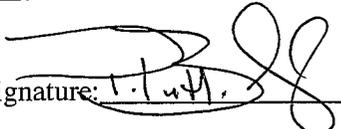
8N SS-50: Surveying ahead of crew in SS-50: Song sparrow nest near paved road to power pole (with previously described house wren nest). Song sparrow nest has 2-3 eggs, 2 ft up in mustard at UTM 341755E, 3788845N. Nest is located along overgrown two-track road, buffer established. Vehicles in this area must keep their distance (nest is 10 from pavement).

Surveyed and monitored weed whacking work areas (40'x40' each) for Points 192-195

No additional nesting birds or other protected resources located.

Biologist Signature: 

Date: 5/4/2012

HGL Field Supervisor Signature: 

Date: 6 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 5/9/12	Survey Section (SS): SS-39, SS-43, SS-50
Biologist: Scott Werner	Subarea: 7, 8N
Expiration: 5/16/12	Survey Type: clearance surveys for soil sampling
Start time: 0750	End time: 1530

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-43 SS-50 SS-39	Nesting birds, protected trees	Y	Y	SS-2: biological monitor req'd
SS-39	Red-tailed hawk nest 500-ft buffer, San Diego desert woodrat habitat, coast horned lizard habitat	N	N	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-8N (SS-50): Points 192-195. Song sparrow nest still active and staked off. Geoprobe ok but with monitoring.

SA-8N (SS-43): Points 159-162, no activity at barn owl nest, no birds flushed, can't see entire nest cave though.

SA-8N (SS-43): Points 155-158 are restricted due to a California towhee nest less than 15 feet from Point 157. Nest is in coast live oak, overhanging foliage, 10 ft up, incubating, UTM 341928E, 3789035N. Second nest 150 ft to the west of these points (won't be an issue for 155-158), 4 eggs, followed bird back to nest, 1 foot up in Phacelia, UTM 341861E, 3788964N.

SA-8N (SS-43): 147-154: some points may be restricted due to nearby Bushtit nest (feeding loud nestlings, 6 ft up in coast live oak, UTM 341928E, 3789035N). Nest may be done by the time the sampling crew gets here (hand-auger surface points).

SA-7 (SS-39): Red-tailed hawk nest in NBZ-W P1C (monitored previously) has a 500-foot buffer (and/or direct line of sight) that extends throughout most of SS-39. Buffer = monitor required and possible work restrictions if deemed too disruptive to nest occupants. Foot crews OK between 300-500 ft on a case-by-case basis with intensive monitoring. No sampling at all within 300 ft.

Nest UTM is 342370E, 3789538N. 2 nestlings currently are still all white except darker wings. Standing and alert until about 1300 after which time they lie and sleep. Geoprobe should probably operate only during the morning so that the hawks can get their afternoon nap and not be disturbed all day.

Points 215-222 ok for Geoprobe sampling with intensive monitoring that may shut work down if hawks appear too spooked (HGL indicated these are priority points). These points are just outside 500-foot buffer but are in direct line of sight of nest.

Points 266, 277-278, 282-288 on western SS-39 are beyond 500 feet and line of sight of hawk nest. No nesting birds found, so hand-auger or Geoprobe are OK.

Biologist Signature: 

Date: 5/9/12

HGL Field Supervisor Signature: _____

A handwritten signature in black ink, appearing to be 'T. Lutz', written over a horizontal line.

Date: _____

1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 5/10/12	Survey Section (SS): SS-35, SS-38, S-46
Biologist: Scott Werner	Subarea: 6
Expiration: 5/17/12	Survey Type: clearance surveys for soil sampling
Start time: 1330	End time: 1430

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-35 SS-38	Nesting bird habitat, San Diego desert woodrat habitat, coast horned lizard habitat, Plummer's mariposa lilies, protected trees, California red-legged frog habitat	Y/N	Y	SS-2: biological monitor req'd
SS-46	Western spadefoot	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-6 (SS-35, SS-38): EPASED Points 49-55. Pond has many western toad and pacific treefrog tadpoles – no spadefoot or red-legged frog. Some treefrog metamorphs. Most points have high-quality regrowth nesting bird habitat. No nests found during this brief afternoon survey.

SA-8N: brief stop at SS-46 spadefoot toad pond to show Envicom biologist Jim Anderson. One juvenile and several metamorphosing spadefoot observed, in addition to many tadpoles.

Biologist Signature: 

Date: 5/10/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 5/11/12	Survey Section (SS): P1C, SS-43, SS-46
Biologist: Scott Werner	Subarea: NBZ-W, 8N
Expiration: 5/18/12	Survey Type: clearance surveys for soil sampling
Start time: 1320	End time: 1440

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
P1C	Nesting bird habitat, San Diego desert woodrat habitat, coast horned lizard habitat, protected trees,	N	Y	SS-2: biological monitor req'd
SS-43	Barn owl nest	N	Y	SS-2: biological monitor req'd
SS-46	Western spadefoot	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

NBZ-W, P1C: EPASED Points 11, 13, 41-48, 56-57 ok to hand-auger. No nesting but monitor will be required (not all points surveyed). Vegetation still not very thick after trimming last year.

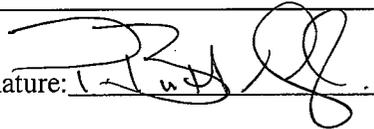
SA-8N, SS-43: Point 153 below owl nest may be sampled if crews remain silent so as not to flush nestlings/fledglings. One nestling/fledgling observed in nest cave, mostly downy but it's possible that it can fly (not a good look).

SA-8N, SS-43: Points 160-165 are, in fact, restricted since the owls are younger than we thought. The noise will reverberate too loudly through here and could result in take.

SA-8N, SS-46: Made another inspection of western spadefoot pond. 1 toadlet captured and photographed showing distinguishing features (vertical pupil, hind 'spadefoot').

Biologist Signature: 

Date: 5/11/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 5/18/12	Survey Section (SS): SS-46, SS-42, SS-50
Biologist: Scott Werner	Subarea: 7, 8N
Expiration: 5/25/12	Survey Type: clearance surveys for soil sampling
Start time: 1200	End time: 1500

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-46	Western spadefoot	N	Y	SS-2: biological monitor req'd (no further work anticipated here)
SS-42	Nesting birds	N	Y	SS-2: biological monitor req'd
SS-50	Nesting bird habitat, Santa Susana tarplant, San Diego desert woodrat habitat, coast horned lizard habitat	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-8N, SS-46: Inspection of western spadefoot pond. Water level has not changed much since 1 week ago. Still many spadefoot tadpoles but no toadlets or 'older' metamorphs observed.

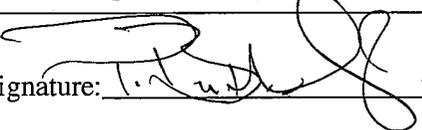
SA-7, SS-42, Points 294-296, 290-293 OK for hand-auger team. No nesting observed. Some Santa Susana tarplant near access road.

SA-8N, SS-50: Song sparrow nest near power pole and access road still active, female sitting tight.

Points 196-199, 207-210, 211-214, 215-218 OK for Geoprobe or hand-auger. Points 196-199 are surface samples so the hand-sampling team will not be a significant disturbance to nesting house wrens.

Biologist Signature: 

Date: 5/18/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

HGL Field Supervisor Signature: _____

A handwritten signature in black ink, appearing to be "J. L. ...", written over a horizontal line.

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 5/25/12	Survey Section (SS): SS-39, SS-43, SS-49
Biologist: Scott Werner	Subarea: 7
Expiration: 6/1/12	Survey Type: clearance surveys for soil sampling
Start time: 0830	End time: 1600

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39	Nesting birds, Santa Susana tarplant, San Diego desert woodrat habitat, coast horned lizard habitat	N	Y	SS-2: biological monitor req'd
SS-49	Nesting birds, Braunton's milkvetch, Malibu baccharis, Plummer's mariposa lilies, protected trees, coast horned lizard habitat	N	Y	SS-2: biological monitor req'd
SS-43	Nesting birds	N	Y	SS-2: biological monitor req'd
SS-46	Western spadefoot, nesting birds	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-7 (SS-39): Points 196-197 are restricted due to California towhee nest adjacent to both points. Nest is in Phacelia and yucca, 1 foot above ground with several nestlings. UTM 342574E, 3789559N.

The red-tailed hawk nestlings are close to fledgling (likely within 1-2 weeks), one is calling today, but care still must be exercised to avoid forcing them out of the nest before they can fly. Will conduct more surveys when points in this area are closer on the schedule.

SA-8S, SS-49: Points 33-36 OK to sample with hand-auger crew and a biological monitor. Spotted towhee nest has failed. Likely lazuli bunting nest in vicinity.

SA-8N, SS-43: Point 153 below owl nest may be sampled if crews remain silent so as not to flush nestlings/fledglings. One bird seen inside, resembles adult or older fledgling with juvenal plumage. Young are likely able to leave nest independently but may still roost there during daylight hours.

SA-8N, SS-43: Points 147-154 still restricted due to California towhee nest, bird sitting tight, contents unknown. Large rattlesnake encountered 25 feet away.

SA-8N, SS-46: Inspection of western spadefoot pond near Outfall 6. Retention pond still has 50+ spadefoot toad tadpoles and metamorphs. 1 toadlet seen. Also, 5+ treefrog tadpoles/metamorphs observed.

Biologist Signature: 

Date: 5/25/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 5/29/12	Survey Section (SS): SS-39, SS-59, SS-43
Biologist: Scott Werner	Subarea: 7
Expiration: 6/5/12	Survey Type: clearance surveys for soil sampling
Start time: 0830	End time: 1600

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39	Nesting birds, Santa Susana Tarplant	Y	Y	SS-2: biological monitor req'd
SS-59	Nesting bird habitat, mariposa lilies	N	N	No monitor needed for staking new points, additional survey needed prior to sampling
SS-43	Nesting bird habitat	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-8N (SS-43): 147-154 are still restricted due to the California towhee nest (1-2 weeks).

At Point 153, I inadvertently flushed juv. barn owl (some white still on wings). Looks fairly self-sufficient and likely won't be too spooked from nearby scheduled Geoprobe activity.

SA-7 (SS-39):

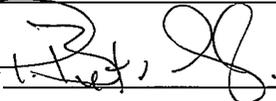
- The following points may be sampled with a hand auger and biological monitor: 200, 201, 227-232, 225, 233-241. The red-tailed hawk nestlings are in the process of fledging (1 has ventured out of the nest while 1 has remained). If it helps to have a HGL rig at the bottom of the canyon while sampling these points, let's limit it to 1 vehicle while the young hawks are still in and out of the nest during the next few days. And the nest should not be approached any closer than the points referenced above during this process.
- Possible lazuli bunting nest in the vicinity of 238 so the biologist should double-check the immediate area prior to sampling and keep an eye out for buntings. Several Santa Susana tarplants near Point 238.
- Points 210-214 (surface) are restricted due to a California towhee nest (3 weeks) and wrenit nest (1-2 weeks). CALT nest UTM 342552E, 3789515N, 2 eggs, 2ft up in yerba santa. WREN nest UTM 342555E, 3789518N (10ft from CALT nest), 2+ large nestlings, 2 ft up in yerba santa, nest is tilted slightly.

West of the outfall (SA-7: SS-39):

- Points 272-276 may be sampled with a hand auger and biological monitor now that the California towhee nestling has fledged.
- 274-276 ok for hand-auger, 277 no geoprobe: Wrenit nest with chicks (2+ weeks to fledging) between points 276 and 277 that has been marked as a no-entry zone (it is along a foot path and is susceptible to damage from foot traffic). Care must be taken when sampling nearby point 276. I recommend that the soils crew sample 274, 275, 276 in sequence (getting progressively closer to the nest) while the bio monitor evaluates any changes in the wrenit's behavior. But this species is relatively tolerant of quiet activity in the vicinity of their nests, and there is a dense shrub between the nest and point 276. (WREN nest UTM 342302E, 3789422N, 3 ft up in yerba santa, 4 naked hatchlings).

Biologist Signature: 

Date: 5/29/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 5/31/12	Survey Section (SS): SS-39, SS-43, SS-59
Biologist: Scott Werner	Subarea: 7, 5DS, 8N
Expiration: 6/7/12	Survey Type: clearance surveys for soil sampling
Start time: 1030	End time: 1200

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39	Nesting birds, Santa Susana Tarplant	Y	Y	SS-2: biological monitor req'd
SS-59	Nesting bird habitat, mariposa lilies	N	N	No monitor needed for staking new points, additional survey needed prior to sampling
SS-43	Nesting bird habitat	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-7, SS-39: Clearing points for hand-auger and geoprobe.

- Song sparrow nest 35 feet from Point 253. Feeding 2-3 nestlings. Nest is in Italian thistle and mustard, UTM 342447E, 3789461N. Hand-auger crew starting on some nearby points and female is fairly tolerant, some monitoring done by myself and Jack.
- Wren tit nest at Point 257. 2 ft up in *Ribes*, slightly tilted, 3 old-looking nestlings w most to all feathers in. 10 ft from Point 257. UTM 342417E, 3789453N.
- California towhee nest along road near Point 258 (currently off-limits already). Nest has 2-3 old-looking nestlings, in *Rhamnus ilicifolia*, UTM 342424E, 3789478N.

Summary: SA-7 Points 246-256 ok for hand-auger. 257 restricted (1 week), 258-262 restricted (1 week), 210-214 still restricted (2-3 weeks).

SA-5DS, clearing points for staking new sample points.

SS-59, Points 45-48 ok for staking but workers must avoid thistle thickets along access route in case of nesting.

Points 41-44 ok for staking, lilies from last year not located.

SA-8N, Points 147-154 (SS-43): California towhee nest has fledged. Points are ok to sample with hand-auger crew.

Anna's hummingbird nest under construction in parking lot in coast live oak near barn owl nest at outfall. ANHU nest UTM 341985E, 3789033N.

Biologist Signature: 

Date: 5/31/12

HGL Field Supervisor Signature: [Handwritten Signature]

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 6/4/12	Survey Section (SS): SS-39, SS-17, SS-21
Biologist: Scott Werner	Subarea: 7, 5A
Expiration: 6/11/12	Survey Type: clearance surveys for soil sampling and weed whacking
Start time: 0800	End time: 1200

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39 SS-17 SS-21	Nesting birds and/or habitat	Y	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-7, SS-39: Checking nests down in canyon and along RMHF slope.

- Wrentit nest has been shredded – may have fledged given age of nestlings on June 1. Point 257 ok to sample.
- Bushtit nest in coast live oak near outfall has fallen as well. Inside is empty, so assume fledge successful.
- Song sparrow nest near work crew is still active.
- Wrentit seen carrying food the west – likely to other nest at west end of SS-39.
- Lesser goldfinch at Point 263 failed from predation.
- California towhee nest near Point 214 still active with 4 eggs.
- California towhee nest at 196-197 active with 2 nestlings.
- Wrentit nest near 247 still active with mostly naked nestlings.

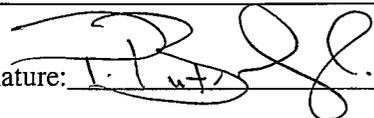
Spadefoot toad check SS-46 near outfall 6: water level down slightly, still many tadpoles present, no metamorphs seen.

Initial looks at SA-5A, SS-17. Old house finch nests in concrete wall, 1 egg present.

SS-21, Points 282-284, spotted towhee nest suspected nearby. Will have to take another look.

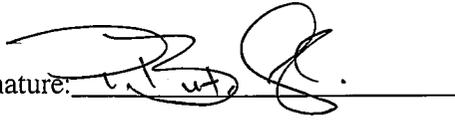
Biologist Signature: 

Date: 6/4/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

HGL Field Supervisor Signature:

A handwritten signature in black ink, consisting of several loops and a final flourish, written over a horizontal line.

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 6/8/12	Survey Section (SS): SS-55, SS-15, SS-43, P3W, P1E, P1D
Biologist: Scott Werner	Subarea: 5A, 7, 8N, NBZ-E
Expiration: 6/15/12	Survey Type: clearance surveys for soil sampling and weed whacking
Start time: 0745	End time: 1440

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-55 SS-15 SS-43	Nesting bird habitat	Y	Y	SS-2: biological monitor req'd
P3W P1E P1D	Golden eagle nest	N	N	Nest is empty. No restrictions.

NOTES AND RECOMMENDATIONS:

SA-5A, SS-15: Points 266-271, 285-286. OK for weed whacking. No nests or protected plants found.

SA-7, SS-39: Points 189-195. OK for Geoprobe. No nests or protected plants found.

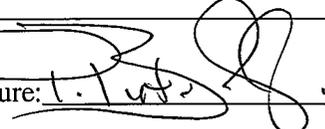
SA-8N, SS-43. Points 159-165. No nests located prior to Geoprobe on Monday.

P3W, P1E, P1D: Golden eagle nest check revealed that the family group has left, most likely fledged successfully. Last year's nest fledged on June 8 (today's date) but this year the eggs were believed to have been laid earlier in the year compared to 2011. Therefore the nest was likely finished up to several weeks ago.

Some monitoring done at midday between morning and afternoon clearance surveys (separate monitoring form).

Biologist Signature: 

Date: 6/8/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 6/11/12	Survey Section (SS): SS-39, SS-43, SS-54, SS-55
Biologist: Scott Werner	Subarea: 7, 5DN
Expiration: 6/18/12	Survey Type: clearance surveys for soil sampling
Start time: 0800	End time: 1145

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39	Nesting birds	Y	Y	SS-2: biological monitor req'd
SS-54 SS-55	Nesting bird habitat, grasshopper sparrow	Y	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

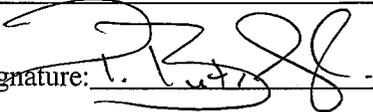
SA-7, SS-39: Points 200-201. OK for Geoprobe. California towhee nest is done. There is a cliff swallow nest 150 ft away in sandstone, possibly with nestlings (UTM 342558E, 3789582N) but should be fine with Geoprobe noise.

SA-7, SS-39: Points 211-214. Still restricted due to California towhee nest. New California quail nest along access to monitoring well at 211-214. Under low-growing yerba santa on ground, female sitting tight. UTM 342522E, 3789545N.

SA-7, SS-39: Geoprobe Points 238-245. Still too many nests nearby for geoprobe at these points. Hand-augering may be ok at some points (coordinate with monitor). Found lazuli bunting nest I had searched for last time. Nest is 100 feet from Point 238. Nest is 1 ft up in yerba santa near the yucca and water pipe with large nestlings, UTM 342514E, 3789510N.

Biologist Signature: 

Date: 6/11/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 6/15/12	Survey Section (SS): SS-39, SS-43, SS-54, SS-55
Biologist: Scott Werner	Subarea: 7, 5DN
Expiration: 6/22/12	Survey Type: clearance surveys for soil sampling
Start time: 0800	End time: 1145

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39	Nesting birds	Y	Y	SS-2: biological monitor req'd
SS-54 SS-55	Nesting bird habitat, grasshopper sparrow	Y	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SA-7, SS-39: Points 210-214 (hand-auger); Points 238-245 (geoprobe), still restricted. Anna's humming bird nest still active, 2 eggs. Adjacent bushtit nest appears to have fledged (no activity). Lazuli bunting nest near Point 238 still active, feeding nestlings. California towhee nest near 210-214 downy chicks. California quail sitting tight on nest.

SA-5DN, SS-54: Geoprobe points 232-234 okay to drill. Also Point 70 for EPA demonstration is ok to drill. Remaining points in 5DN (212-215, 216-219, 220-221, 208-211, 227-228, 222-223, 224-225, 264-266, 252-255) ok for geoprobe with a monitor.

Biologist Signature:  _____

Date: 6/15/12

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 6/18/12	Survey Section (SS): SS-39
Biologist: Scott Werner	Subarea: 7
Expiration: 7/2/12	Survey Type: clearance surveys for soil sampling
Start time: 1600	End time: 1630

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39	Nesting birds	Y	Y	SS-2: biological monitor req'd

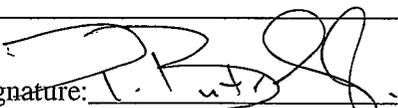
NOTES AND RECOMMENDATIONS:

SS-39: Points 210-214 (hand-auger); Points 238-245 (geoprobe). Lazuli bunting nest near Point 238 has fledged. Bushtit nest near Point 243 fledged. Nearby Anna's hummingbirds have hatchlings with female nearby, California quail nest near 210-214 still incubating, California towhee nest near 210-214, chicks still in nest, flight feathers coming in.

Geoprobe points (238-245) still restricted but some may be ok with hand-auger (coordinate with monitor). Points 210-214 should be okay to sample in less than 1 week.

Biologist Signature: 

Date: 6/18/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 6/21/12	Survey Section (SS): SS-12, SS-14
Biologist: Scott Werner	Subarea: 5B
Expiration: 6/28/12	Survey Type: clearance surveys for soil sampling
Start time: 1030	End time: 1615

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-12	Nesting birds, LBV habitat	Y	Y	SS-2: biological monitor req'd
SS-14	Nesting bird habitat	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SS-12: Least bell's vireo survey completed with negative results. Near Point 257, California towhee nest with 3 eggs, 1 ft up in small coast live oak. UTM 342564E, 3789111N. Also ash-throated flycatcher in coast live oak, 30 ft up w nestlings, UTM 342597E, 3789098N. Near Point 362, lark sparrow nest under construction 6 ft up in coast live oak, UTM 342617E, 3789064N.

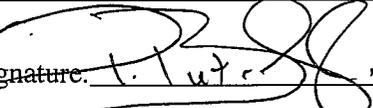
Point 257 hand-auger only.

Point 362 ok to use geoprobe but monitor lark sparrow nest.

SS-14 – as yet unnumbered point in NE corner (geoprobe). No nests or other issues. Mostly asphalt.

Biologist Signature: 

Date: 6/21/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 6/25/12	Survey Section (SS): SS-39
Biologist: Scott Werner	Subarea: 7
Expiration: 7/2/12	Survey Type: clearance surveys for soil sampling
Start time: 1200	End time: 1540

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-39	Nesting birds, Santa Susana tarplant	Y	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SS-39: Points 210-214 (hand-auger). California quail nest has fledged, eggshells in nest and female with 4+ fledglings seen 100 ft away. Anna's hummingbird nest failed, covered with ants, too soon for nestlings to have fledged.

SS-39: Points 238-245 (geoprobe). Lazuli bunting nest 130 ft NW of Point 244. Nest is 3 ft up in laurel sumac with 2 eggs, female sitting very tight, UTM 342424E, 3789495N. Mourning dove nest 200 ft from closest points, also NW of work area on slope. Assume incubation, female sitting tight, nest on raised sandstone with laurel sumac cover. UTM 342417E, 3789516N.

Geoprobe ok but start with furthest point away, point truck away from nests. May need to cancel if birds are too agitated.

Biologist Signature: 

Date: 6/25/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 6/27/12	Survey Section (SS): SS-55
Biologist: Scott Werner	Subarea: 5DN
Expiration: 7/5/12	Survey Type: clearance surveys for soil sampling
Start time: 0830	End time: 1430

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-55	Nesting bird habitat	Y	Y	SS-2: biological monitor req'd

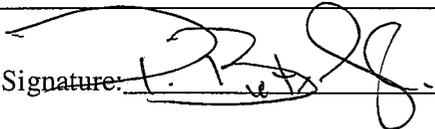
NOTES AND RECOMMENDATIONS:

SS-55: Points 252-255 (Geoprobe). No nests or protected plants. Fledgling blue grosbeaks. Survey area extends into SS-51, SS-58.

SS-55: Points 256-263 (hand-auger). No nests found nearby. Grasshopper sparrow singing to the north.

Biologist Signature: 

Date: 6/27/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 6/28/12	Survey Section (SS): SS-59, SS-56, SS-12
Biologist: Scott Werner	Subarea: 5DS, 5DN, 5B
Expiration: 7/5/12	Survey Type: clearance surveys for soil sampling
Start time: 0830	End time: 1430

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-59	Braunton's milkvetch, nesting birds, mariposa lilies, Dudleya, protected trees	Y	Y	SS-2: biological monitor req'd
SS-56	Nesting bird habitat	Y	Y	SS-2: biological monitor req'd
SS-12	Nesting birds	Y	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SS-59: Points 41-44, 45-48 (hand-auger). New Braunton's milkvetch plants growing in central 'parking' area. Previously documented plants are still growing in exclosures on N side of this area. The 4 new clumps have 1-2 plants each, totaling 6 plants. Some herbivory and trampling present apparently from horses and possibly deer. UTM's of new clumps are 342143E 3788452N; 342156E 3788473N; 342217E 3788498N; 342223E 3788486N. Plants have been flagged but not staked off. Habitat is clay loam with *Heterotheca grandiflora*, *Hirschfeldia*, *Avena*.

Dudleya lanceolata at Point 48.

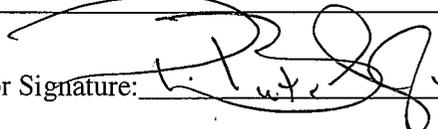
Points 41-44 are off limits at present time: House finch nest with old nestlings at 7 ft up in coast live oak at UTM 342089E, 3788356N. Blooming Plummer's mariposa lilies flagged. *Centaurea solstitialis* infestation near 41-44.

SS-56 (Geoprobe): Points 240-242, 244-247, 248-251 surveyed again when geoprobe arrived there (I had thought these were completed already). I checked in and located a California towhee nest about 150 feet from Geoprobe in the isolated elderberry, 6 ft up, contents unknown but sitting tight and assuming incubation of eggs. UTM 342215E, 3788723N. Bird doesn't mind Geoprobe noise, or my presence.

SS-12: Staked off nest buffer for California towhee nest near 357 because there is a Non-EPA mower getting close to this area.

Biologist Signature: 

Date: 6/28/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM
 ENVICOM CORPORATION

Date: 7/2/12	Survey Section (SS): SS-38, SS-17, SS-26
Biologist: Scott Werner	Subarea: 6, 5A
Expiration: 7/9/12	Survey Type: clearance surveys for soil sampling
Start time: 0815	End time: 1400

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-38	Nesting birds, Santa Susana Tarplant, mariposa lilies documented in 2010, protected trees	Y	Y	SS-2: biological monitor req'd
SS-17	Nesting birds, Santa Susana Tarplant, protected trees	Y	Y	SS-2: biological monitor req'd
SS-26	none	Y	Y	none

NOTES AND RECOMMENDATIONS:

SS-38: PGRAY 6-6, 6-7. Rufous-crowned sparrow fledgling, Santa Susana tarplant. Near point 6-7, white-throated swift nest in sandstone 80 ft from point (UTM 342690E, 3789646N), which shouldn't be a problem for sampling. However, Point 6-7 is off limits due to lazuli bunting nest 15 ft from point, 5 ft up in laurel sumac, 1-2 downy chicks, UTM 342676E, 3789635N. No mariposa lilies seen here, where they were last year.

SS-17: PGRAY 6-14. No nests. Ok for hand-auger.

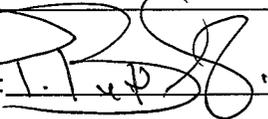
SS-17: Points 272-277.

- Two house finch nests in thick concrete wall. Nests are located on either side of 4-inch pipe that extends through wall, 4 feet above ground. Nest on W side of wall has young chicks, UTM 342679E, 3789411N. Nest on E side of wall has chicks nearly ready to fledge, UTM 342682E, 3789409N.
- New blue grosbeak nest (SS-16) in poison oak, 2.5 ft up, 2 eggs, UTM 342681E, 3789361N, 200 ft from Point 274 and likely won't be a problem.

SS-26: PGRAY 6-53. No restrictions. Old grosbeak nest in nearby mallow but no other nesting or protected plants.

Biologist Signature: 

Date: 7/2/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 7/3/12	Survey Section (SS): SS-14, SS-15, SS-17, SS-21
Biologist: Scott Werner	Subarea: 5A
Expiration: 7/10/12	Survey Type: clearance surveys for soil sampling
Start time: 0800	End time: 1400

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-14 SS-17	Nesting birds, Santa Susana Tarplant	N	Y	SS-2: biological monitor req'd
SS-15 SS-21	Nesting bird habitat	N	Y	SS-2: biological monitor req'd
SS-21	Santa Susana Tarplant	Y	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SS-14: Points 262-265. Lazuli bunting nest w/ 4 eggs 5 ft up in laurel sumac, about 100 ft NE of points. Nest UTM 342584E, 3789350N. Recommend use geoprobe at points if eggs have hatched. Will likely be some disturbance but a similar situation as the lazuli bunting nest in SA7, where it came back and got somewhat accustomed to geoprobe.

SS-15: Points 267-271, 285-286. No nests found in area but monitoring is recommended in case undiscovered nests exist. Geoprobe will be used here. Young quail nearby, male on watch.

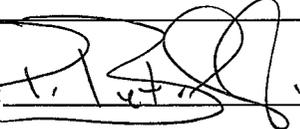
SS-17: Points 272-277 are far enough away from above-referenced lazuli nest in SS-14 to not be a problem. Both house finch nests in concrete wall are active, but the one on E side of wall should be done (fledged) by Monday 7/9. New mourning dove nest 10 feet from Point 277, one egg and one hatchling in nest 5 ft up in laurel sumac, at UTM 342676E, 3789415N. Both parents at nest. New California towhee nest 75 feet from Point 272 in parking area. Nest has 3 eggs, is 4 feet up in laurel sumac at UTM 342637E, 3789408N. No adult around but nest appears active.

SS-21: Points 282-284 may be sampled with hand auger and biological monitor. No nests found.

SS-18: Surveyed Points 278-281, 287-288. No nests found but Santa Susana tarplant between points 287 and 288. Monitor required.

Biologist Signature: 

Date: 7/3/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE CLEARANCE SURVEY FORM

ENVICOM CORPORATION

Date: 7/9/12	Survey Section (SS): SS-38, SS-14, SS-17
Biologist: Scott Werner	Subarea: 6, 5A
Expiration: 7/16/12	Survey Type: clearance surveys for soil sampling
Start time: 0830	End time: 1130

SURVEY FINDINGS

Survey Section	Protected Resources	Flagged?	Monitor needed?	Applicable Avoidance and Minimization Measures
SS-38	Nesting bird habitat, protected trees	N	Y	SS-2: biological monitor req'd
SS-14 SS-17	Nesting birds, Santa Susana Tarplant, protected trees	N	Y	SS-2: biological monitor req'd

NOTES AND RECOMMENDATIONS:

SS-38: Checked on PGRAY 6-7 and lazuli bunting nest has fledged. Point 6-7 may be sampled with a hand-auger and biological monitor.

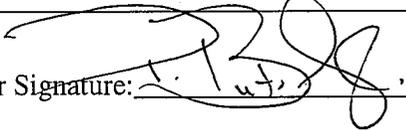
SS-14: Checked lazuli bunting nest NE of points 262-265. 3 nestlings looking 1-2 days old. Female left nest when I arrived. As previously recommended, Geoprobe will be allowed to proceed at these points.

SS-17: At points 272-277, mourning nestling is gone from nest but egg is still there. Adults are not around. House finches are still in nest, Points 275-277 remain off-limits to sampling. California towhee nest still active with 3 eggs. No new nests found. Points 272-274 may be sampled with a hand-auger.

Mower destroyed quite a bit of shrubbery and grass in SS-17 (not operated by EPA), and nearly destroyed the blue grosbeak nest there. Assuming the mower was hired by CDM, it is extremely irresponsible of CDM to send a mower into habitat with actively nesting birds (see photos). I have never seen a CDM biologist onsite.

Biologist Signature:  _____

Date: 7/9/12

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12

APPENDIX 3

**EIGHTH QUARTERLY
BIOLOGICAL MONITORING FORMS**

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 02 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-E	P1F P1J P2Q	0820-1130 1240-1520	SS	Hand auger, slide hammer, shovels, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1F P1J P2Q	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
	Coast horned lizard confirmed occupied habitat	SS-1	None

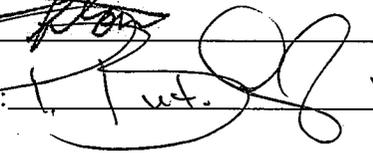
NOTES AND RECOMMENDATIONS

These areas all fall within the buffer for the currently active Golden eagle nest. No mechanized equipment is being used within the buffer, only hand operated soil-sampling tools are allowed in this area while the eagles are rearing their eaglets.

This area supports suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake and San Diego desert woodrat.

Biologist Signature: 

Date: April 2, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 4/2/12

Biologist: Greg Wilvert

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6		0815-1600	SS	Power auger, foot traffic, equipment boxes, tables

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	None.		

NOTES AND RECOMMENDATIONS

No unflagged sensitive plants, bird nests, nor sensitive habitat found
 Crew sampled soil at sample points 410, 408, 409, 407, 406
 High of 80F, wind NW 10-15 mph, cloud cover 10%

Biologist Signature: Greg Wilvert
 HGL Field Supervisor Signature: (Signature)

Date: 4/3/12
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 04/02/12

Biologist: J. Anderson

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W		830 - 1300	SS	Hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
NBZ-W	Active red-tailed hawk nest	500-foot buffer, monitoring work at selected soil sample points within buffer	None
NBZ-W	Santa Susana tarplant	SS-2	None

NOTES AND RECOMMENDATIONS

Soil sample points #25, #26, #27, #29 were sampled today.

All four soil sample points are within the 500-foot buffer established around an active red-tailed hawk nest, which is located on a ledge on a sandstone cliff in the NBZ. Sample points within the buffer that are within direct line-of-sight of the nest cannot be sampled until nesting is complete. Sample points within the buffer that are not in line-of-sight, and that are also reasonably far from the nest, can be sampled provided a monitor is present to observe the nest and determine if the project activities are adverse affecting nesting.

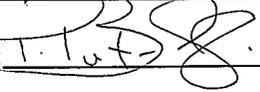
Soil sample points 25, 26, 27, 29 are within the 500-foot buffer but are out-of-line-of-sight of the nest (ranging from 250 ft to 400 ft from the nest). It was possible for teams to conduct all sampling and decontamination etc. at these points while remaining out of line-of-sight of the nest. Access routes were chosen carefully to minimize disturbance, and noise levels were kept to a minimum. Hawk behavior was monitored to ensure project activities did not disrupt nesting. The female hawk is incubating and has proven to be sensitive to human presence within the buffer, particularly within 200 feet of the nest. The female left the nest three times during work activities monitored from 8:30 to 13:00, leaving for 8 minutes, 13 minutes, and 38 minutes. There did not appear to be a correlation between the female leaving the nest, or the female staying off the nest, and the project activities.

10/27/2010

Scott Werner

Biologist Signature: 

Date: 4-2-12

HGL Field Supervisor Signature: 

Date: 5.10.12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 03 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-E	PIF	0820-1150 1305-1620	SS	Radiation and volatile organic compound detection equipment, shovels, hand auger, slide hammer, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

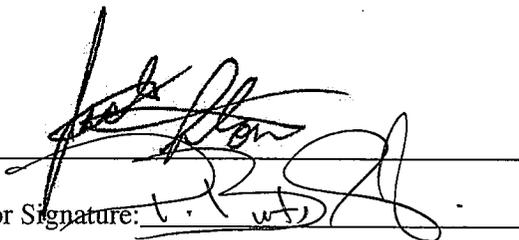
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
PIF	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
	Coast horned lizard confirmed occupied habitat	SS-1	None

NOTES AND RECOMMENDATIONS

These areas all fall within the buffer for the currently active Golden eagle nest. No mechanized equipment is being used within the buffer, only hand operated soil-sampling tools are allowed in this area while the eagles are rearing their eaglets.

This area supports suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake and San Diego desert woodrat.

Biologist Signature: _____



Date: April 3, 2012

HGL Field Supervisor Signature: _____



Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 4/3/12

Biologist: Greg Wilvert

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6		0930 - 1610	SS	Power auger, foot traffic, equipment boxes, tables

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	None.		

NOTES AND RECOMMENDATIONS

No unflagged sensitive species, bird nests, nor sensitive habitat found
 Crew sampled soil at sampling points 402, 405, 404, 401, 400
 High of 80F, wind NW 10-25 mph, cloud cover 10%

Biologist Signature: *Greg Wilvert*
 HGL Field Supervisor Signature: *[Signature]*

Date: 4/4/12
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 04 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-E	P1E P3X	0825-1135	SS	Radiation and volatile organic compound detection equipment, shovels, hand auger, slide hammer, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1E, P3X	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
	Coast horned lizard confirmed occupied habitat	SS-1	None

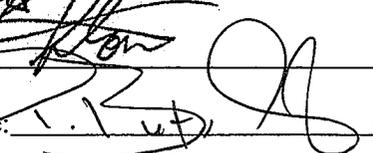
NOTES AND RECOMMENDATIONS

These areas all fall within the buffer for the currently active Golden eagle nest. No mechanized equipment is being used within the buffer, only hand operated soil-sampling tools are allowed in this area while the eagles are rearing their eaglets.

This area supports suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake and San Diego desert woodrat.

Biologist Signature: 

Date: April 4, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 4/4/12

Biologist: Greg Wilvert

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6		0830 - 1620	SS	Power auger, foot traffic, equipment boxes, tables

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	none		

NOTES AND RECOMMENDATIONS

No unflagged sensitive plants or bird nests found.
 Crew sampled soil at sampling points 414, 415, 416, 417, 418
 High of 75F, wind NW 10-15 MPH, cloud cover 10%

Biologist Signature: *Greg Wilvert*
 HGL Field Supervisor Signature: *[Signature]*

Date: 4/5/12
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 05 April
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P1C	0820-1225	SS	Radiation and volatile organic compound detection equipment, shovels, hand auger, slide hammer, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1C	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS-1	None
	Confirmed occupied vernal pool brachiopod (fairy shrimp) habitat	SS-1	None
	Area contains ephemeral riparian habitat	SS-1	None
	Dudleya	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

This area supports suitable for the Coastal California gnatcatcher, which is listed as threatened under the Endangered Species Act of 1973.

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: April 5, 2012
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 4/5/12

Biologist: Greg Wilvert

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6		0820 - 1600	SS	Power auger, foot traffic, equipment boxes, tables

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	None.		

NOTES AND RECOMMENDATIONS

No unflagged sensitive plants, bird nests, nor sensitive habitat found
 Crew sampled soil at sample points 419, 420, 421, 363, 359
 High of 72F, wind NW 10-15 MPH, cloud cover 0%

Biologist Signature: Greg Wilvert
 HGL Field Supervisor Signature: [Signature]

Date: 4/5/12
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 06 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-29	0810-0905	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection meters, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

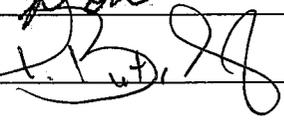
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-29	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature:  _____

Date: April 6, 2012 _____

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 09 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-34, 35, 36,104	0830-1225 1335-1530	SS	Hand auger, slide hammer, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

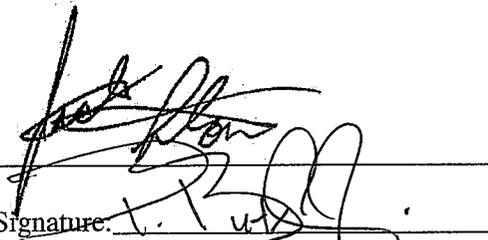
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-34, 35, 36,104	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

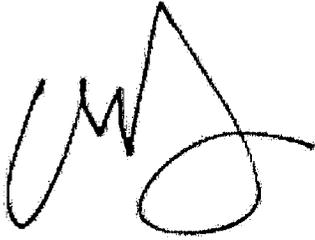
Biologist Signature: _____



Date: April 9, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12



Biologist Signature: _____

Date: 4/9/12 _____

HGL Field Supervisor Signature: _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 10 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-18	0820-1245	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-37	1405-1615	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

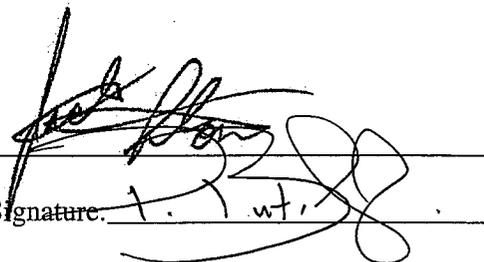
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-18	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
SS-37	Nesting birds*	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None

NOTES AND RECOMMENDATIONS

*Active Red-tailed hawk nest nearby, female sitting on nest today, soil sampling points not in direct line of sight to nest, hen was not flushed off of nest by loud Geoprobe DPT rig.

Biologist Signature: _____



Date: April 10, 2012

HGL Field Supervisor Signature: _____



Date: 1 Aug 12

4/10/2012

John Griffith



Biologist Signature: _____

Date: 4/10/12 _____

HGL Field Supervisor Signature: T. Tuttle _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 11 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-37	0805-1155	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-38	1310-1440 1445-1555	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

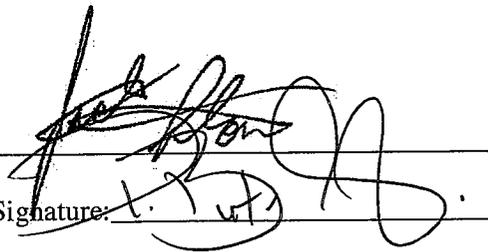
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-37, 38	Nesting birds*	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

*Active Red-tailed hawk nest nearby, female sitting on nest today, soil sampling points not in direct line of sight to nest, hen was not flushed off of nest by loud Geoprobe DPT rig.
Second set of soil sampling points in SS-38 near Outfall 4 lies within designated California Red-legged frog habitat, this species was not found but Pacific tree frogs were observed today.

Biologist Signature: _____



Date: July 13, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 11 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-37	0805-1155	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-38	1310-1440 1445-1555	SS	“

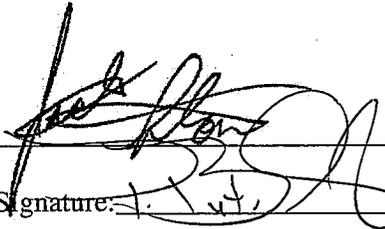
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-37, 38	Nesting birds*	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

*Active Red-tailed hawk nest nearby, female sitting on nest today, soil sampling points not in direct line of sight to nest, hen was not flushed off of nest by loud Geoprobe DPT rig.
Second set of soil sampling points in SS-38 near Outfall 4 lies within designated California Red-legged frog habitat, this species was not found but Pacific tree frogs were observed today.

Biologist Signature: 

Date: April 11, 2012

HGL Field Supervisor Signature: 

Date: 1 April 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 11 April
2012

Biologist: John Griffith

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W		0830-1600	SS	Soil core sampler, shovel

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
1-4	none		
2-168	none		
3-154	Flagged Dudleya	avoided	none
1-163	none		
2-176	none		
3-145	Near wrenit nest	Avoided and kept quiet	
NBZ-W (all points listed above and 148)	Coastal California Gnatcatcher Habitat	USFWS-approved gnatcatcher monitor present during all activities; avoided and cleared in advance of activities	none

NOTES AND RECOMMENDATIONS

4/11/2012

John Griffith



Biologist Signature: _____

Date: 4/11/12 _____

HGL Field Supervisor Signature: J. Griffith _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 12 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-39	0830-1215	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-38	1330-1430 1435-1600	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39, 38	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

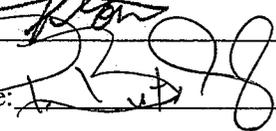
NOTES AND RECOMMENDATIONS

Areas SS-38 and 39 support suitable habitat for California Special Concern Species including Coast horned lizard and San Diego desert woodrat.

They are near several active nests including a Red-tailed hawk nest, a Cliff swallow nest, Bushtit nest, Anna's hummingbird nest and others.

Biologist Signature:  _____

Date: April 12, 2012 _____

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 4/12/2012 Thursday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P2K, P1I P2M, P2O	0830-1530	SS	Surface sampling: shovel, foot traffic

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P2K, P1I P2M, P2O	Potential California Gnatcatcher habitat	SS-2	None
P2K, P1I P2M, P2O	Occupied horned lizard habitat	SS-2	None
P2K, P1I P2M, P2O	Mariposa lilies	SS-2	None
P2K, P1I P2M, P2O	San Diego desert woodrat habitat	SS-2	None
P2K, P1I P2M, P2O	Nesting bird habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

Soils Points 144, 152, 11, 172, 158 were sampled today by LuDean Robbins Goldman's crew.

Concurrent clearance survey conducted while monitoring.

Mariposa lilies appear to be *Calochortus clavatus* but are not yet flowering. Several were flagged in parking area covered in last year's mulch below Outfall #6.

No nesting bird activity.

Biologist Signature: _____

Date: 4/25/2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 13 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-18	0820-0930	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

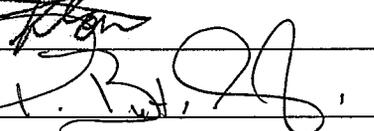
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-18	Nesting bird habitat	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Soil sampling team set up their equipment in the field today and waited for precipitation to cease. Eventually work was cancelled for the day and no soil samples were collected.

Biologist Signature: _____

Date: April 13, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 4/13/2012 Friday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P1A	0830-1130	SS	Surface sampling: shovel, foot traffic

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1A	Potential California Gnatcatcher habitat Occupied horned lizard habitat Mariposa lilies San Diego desert woodrat habitat Nesting bird habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

Soils Points 180 and 183 were sampled today by LuDean Robbins-Goldman's crew.

Conducted clearance surveys as I monitored.

Mariposa lilies appear to be *Calochortus clavatus* but are not yet flowering. Several were flagged in parking area covered in last year's mulch below Outfall #6.

No nesting bird activity.

Biologist Signature: 

Date: 4/25/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 16 April
2012

Biologist: John Griffith

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W		0900-1500	SS	Soil core sampler, shovel

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
13	Flagged Dudleya and flagged/unflagged tarweed	Note and avoid	none
163	none		
173	Possible nesting birds in dense vegetation	Pre-cleared area (no nests present)	none
NBZ-W (all points listed above; 159)	Coastal California Gnatcatcher Habitat	USFWS-approved gnatcatcher monitor present during all activities; avoided; kept to trails and clearings	none

NOTES AND RECOMMENDATIONS

Points 13, 159, 163, and 173 sampled.

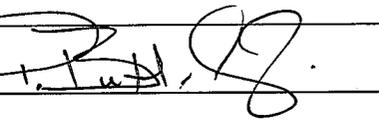
4/16/2012

John Griffith

Biologist Signature:



HGL Field Supervisor Signature:



Date: 4/16/12

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 17 April
2012

Biologist: John Griffith

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	See below	0900-1500	SS	Soil core sampler, shovel

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
162	Possible nesting birds	Avoided; stayed on trails and in clearings	no
166	Possible nesting birds	Avoided; stayed on trails and in clearings	no
156	Wood rat nest	Avoided	no
161	none		
147	Red tail hawk nest on cliff; also white-throated swift and cliff swallow nests	Kept quiet	no
NBZ-W	Coastal California gnatcatcher habitat	USFWS-approved gnatcatcher monitor present during all activities	none

NOTES AND RECOMMENDATIONS

Points 147, 156, 161, 162, and 166 sampled.

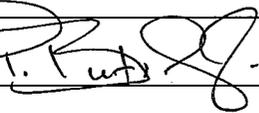
4/17/2012

John Griffith



Biologist Signature: _____

Date: 4/17/2012 _____

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 4/17/2012 Tuesday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
SA-6	SS-38	0830-0840 1515-1530	SS	Surface sampling: shovel, foot traffic
NBZ-W	P1A P1B	0900-1500	SS	Surface and subsurface sampling: shovel, hand auger, foot traffic

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1A P1B	Potential California Gnatcatcher habitat	SS-2	None
P1A P1B	Occupied horned lizard habitat	SS-2	None
P1A P1B	Mariposa lilies	SS-2	None
P1A P1B	San Diego desert woodrat habitat	SS-2	None
P1A P1B SS-38	Nesting birds	SS-2	None

NOTES AND RECOMMENDATIONS:

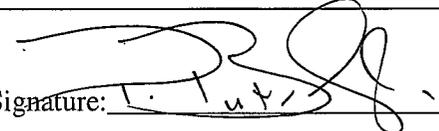
Subarea 6: soil sampling on north side of SRE by Ian Stone's crew, zone includes points 281, 300, 351 through 356. Briefly inspected area before first sample taken. No sensitivities noted. Many points within work area and crew is set up in same area for the entire day.

NBZ-W: Soils Points 14, 88, 90, 172, 158 were sampled today by Matt Birney's crew. Bushtits building nest 25 ft east of Point 14 in *Ceanothus crassifolius*. Birds didn't appear to be bothered by sampling activity. Nest UTM 341947E, 3789397E

Concurrent clearance surveys conducted while monitoring in NBZ-W.

Biologist Signature: 

Date: 4/25/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 18 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-38	0812-1145	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-37	1310-1635	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

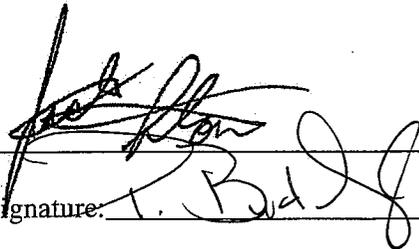
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-38, 37	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Known active Red-tailed hawk nest nearby.

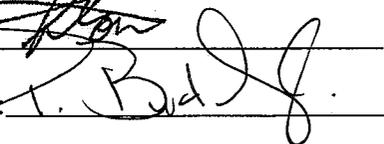
Area is near Outfall 4, which lies within designated California Red-legged frog habitat, this species was not found but Pacific tree frogs and Western toad tadpoles were observed today.

Biologist Signature: _____



Date: April 18, 2012

HGL Field Supervisor Signature: _____



Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 18 April
2012

Biologist: John Griffith

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W		0900-1500	SS	Soil core sampler, shovel

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
81	Potential nesting birds	Avoided; stayed on trails and in clearings	no
189	Spotted towhee and rufous-crowned sparrow nesting nearby	Avoided and kept quiet	no
189	Flagged mariposa lily	avoided	no
160	Red tailed hawk nest on cliff	Kept quiet	no
NBZ-W	Coastal California Gnatcatcher Habitat	USFWS-approved gnatcatcher monitor present during all activities	none

NOTES AND RECOMMENDATIONS

Points 81, 189 and 160 sampled.

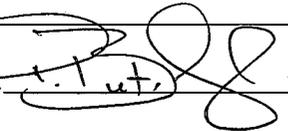
4/18/2012

John Griffith

Biologist Signature:



HGL Field Supervisor Signature:



Date: 4/18/12

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 4/18/2012 Wednesday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P2N P1A	0830-1500	SS	Surface and subsurface sampling: shovel, hand auger, foot traffic

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
NBZ-W	Potential California Gnatcatcher habitat	SS-2	None
NBZ-W	Mariposa lilies	SS-2	None
NBZ-W	Nesting bird habitat	SS-2	None
NBZ-W	Dudleya (<i>D. lanceolata</i>)	SS-2	None
NBZ-W	Santa Susana tarplant	SS-2	None

NOTES AND RECOMMENDATIONS:

NBZ-W: Soils Points 8, 82, 83 were sampled today by Matt Birney's crew. Points are located in grassland and oak woodland along NBZ-W/8N boundary.

Anna's hummingbird building nest 25 ft up in coast live oak, 20 horizontal feet from Point 82. UTM 341724E, 3789052N. Bird appear unconcerned with our presence. Lesser goldfinch apparently building nest in oak nearly directly above Point 82 (very little building activity until just as we're wrapping up sample). UTM of this nest is 341713E, 3789038N

Concurrent clearance surveys conducted while monitoring.

Biologist Signature:  _____

Date: 4/25/2012

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 19 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-38	0800-1235 1350-1655	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-38	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

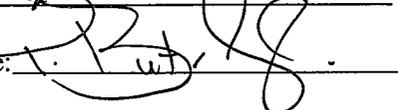
NOTES AND RECOMMENDATIONS

Known active Red-tailed hawk nest nearby. Pair of hatchlings visible in nest

Area is near Outfall 4, which lies within designated California Red-legged frog habitat, this species was not observed.

Biologist Signature:  _____

Date: April 19, 2012

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 19 April
2012

Biologist: John Griffith

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W		0830-1500	SS	Soil core sampler, shovel

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
184	none		
179	none		
193	none		
178	Gopher snake	avoided	no
150	Flagged Dudleya and tar plant	avoided	no
NBZ-W	Coastal California Gnatcatcher Habitat	USFWS-approved gnatcatcher monitor present during all activities	none

NOTES AND RECOMMENDATIONS

Points 150, 178, 179, 184, 193 sampled.

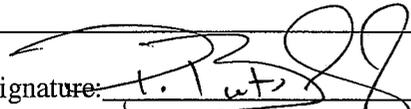
4/19/2012

John Griffith



Biologist Signature: _____

Date: 4/19/12 _____

HGL Field Supervisor Signature:  _____

Date: 1 August _____

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 4/19/2012 Thursday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P1A P1B	0830-1500	SS	Surface and subsurface sampling: shovel, hand auger, foot traffic

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1A, P1B	Potential California Gnatcatcher habitat	SS-2	None
P1A, P1B	Mariposa lilies	SS-2	None
P1A, P1B	Nesting bird habitat	SS-2	None
P1A, P1B	Dudleya (<i>D. lanceolata</i>)	SS-2	None
P1A, P1B	Santa Susana tarplant	SS-2	None
P1A, P1B	Legless lizard habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

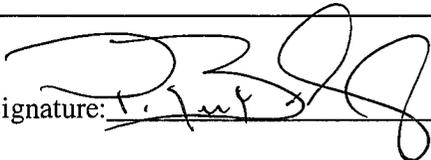
NBZ-W: Soils Points 12, 86, 87, 17 were sampled today by Matt Birney's crew. Points are located in trimmed chaparral and oak woodland below Outfall 6 and in the canyon west (but not downstream) of Outfall 3.

Bushtit nest in parking area of Outfall 6, feeding young (SS-45). Nest is 8 feet up in coast live oak. Birds not concerned with human presence here. UTM of nest is 341833N, 3789102N. Likely rufous-crowned sparrow nest in general area N of Outfall 6.

Concurrent clearance surveys conducted while monitoring.

Biologist Signature: 

Date: 4/25/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 20 April
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-38	0820-0920	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
NBZ-E	P1D	0925-1010	SS	Hand auger, slide hammer, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
6	SS-29	1020-1100	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-35	1105-1155	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-38	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
P1D	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
	Coast horned lizard confirmed occupied habitat	SS-1	None

NOTES AND RECOMMENDATIONS

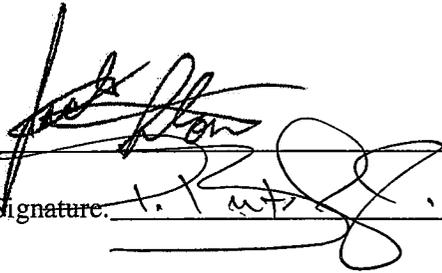
Subarea P1D supports suitable habitat for California special concern species Coast horned lizard (confirmed), Coast patch-nosed snake, Silvery legless lizard and San Diego desert woodrat and is designated as potential Red-legged frog habitat..

There is an active Golden eagle nest located nearby whose nest buffer extends into this area.

10/27/2010

Scott Werner

Biologist Signature: _____

A handwritten signature in black ink, appearing to be 'Scott Werner', written over a horizontal line.

Date: April 20, 2012

HGL Field Supervisor Signature: _____

A handwritten signature in black ink, appearing to be 'T. Werner', written over a horizontal line.

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 4/20/2012 Thursday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-E	P3W P1D P1E P1F	1000-1030	n/a	(golden eagle nest check)
NBZ-W	P1B	1030-1310	SS	hand-auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P3W P1D P1E	golden eagle nest	n/a	None
P1F	coast horned lizard	n/a	None
P1A, P1B	Potential California Gnatcatcher habitat	SS-2	None
P1A, P1B	Mariposa lilies	SS-2	None
P1A, P1B	Nesting bird habitat	SS-2	None
P1A, P1B	Dudleya (<i>D. lanceolata</i>)	SS-2	None
P1A, P1B	Santa Susana tarplant	SS-2	None
P1A, P1B	Legless lizard habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

NBZ-E. Golden eagle nest check. Activity low, eaglets on nest. Viewing from P1F. Coast horned lizard seen at UTM 343156E, 3789859N.

NBZ-W: Soils Point 18, 89 were sampled today by Matt Birney's crew. Points are located in trimmed chaparral and oak woodland below Outfall 6 and in the canyon west (but not downstream) of Outfall 3.

Concurrent clearance surveys conducted while monitoring.

Biologist Signature: 

Date: 4/25/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 20 April
2012

Biologist: John Griffith

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W		0930-1500	SS	Soil core sampler, shovel

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
170	Near red tail hawk nest in cliff	Kept quiet	no
170	Flagged Dudleya	avoided	no
170	Probable quail nest site	avoided	no
16	Swainson's thrush nest site	avoided	no
171	Dense veg / poss nesting birds	avoided	no
NBZ-W (all points listed above); 202	Coastal California Gnatcatcher Habitat	USFWS-approved gnatcatcher monitor present during all activities; avoided – stayed on trails and in clearings	none

NOTES AND RECOMMENDATIONS

Points 16, 170, 171, and 202 sampled.

4/20/2012

John Griffith



Biologist Signature: _____

Date: 4/20/12 _____

HGL Field Supervisor Signature: L. R. v. f. _____

Date: 1 Aug 12 _____

4/23/2012

John Griffith

A large, stylized handwritten signature in black ink, consisting of several loops and a long horizontal stroke.

Biologist Signature: _____

Date: 4/23/12 _____

HGL Field Supervisor Signature: _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 4/30/2012 Monday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8N	SS-44	0715-0930 1110-1530	SS	Geoprobe

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

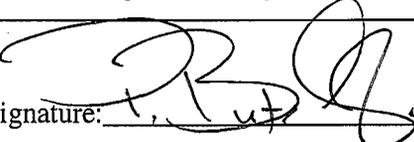
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-44	Nesting bird habitat San Diego desert woodrat habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

Monitoring geoprobe work in 8N, SS-44, Points 143-146. Some minor weed-whacking of herbaceous veg and some small shrubs to clear a work area. No bird nests found.

Biologist Signature: 

Date: 4/30/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5-1-12

Biologist: DAVID N. LEE

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8-N	SS-46	1005 to 1515	SS	Drill Rig, Pickups

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-46	NESTING BIRD HABITAT	SS-1	NONE
SS-46	DADLEYA	GS-1	NONE

NOTES AND RECOMMENDATIONS

Drill crew worked in same area all day - stationary - no resources impacted.

^{EM} Possible ^{to} where nest found near work site - inactive (see photo) (w/ SS)

Biologist Signature: *David N. Lee*
 HGL Field Supervisor Signature: *[Signature]*

Date: 5-1-12
 Date: 5-1-12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/2/12

Biologist: David N. Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
S-N	SS-46	0800 -	SS	Drill Rig, Pick ups

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-46	NESTING BIRD HABITAT	SS-1	NONE
SS-46	DUNLETA	GS-1	NONE

NOTES AND RECOMMENDATIONS

Drill crew worked at same site all day. Considerable bird activity in vicinity. Found one active House Finch nest 100' from work site, (NW) lower branches of oak. 8 eggs or young; almost complete. Adults observed flying to nest w/ nest materials.

Biologist Signature: [Signature]

Date: 5-2-12

HGL Field Supervisor Signature: [Signature]

Date: 5.2.12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/3/2012 Thursday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8N	SS-47 SS-50	0900-1530	SS	Geoprobe

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-47 SS-50	Nesting bird habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

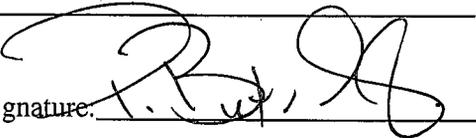
8N SS-47: Soils Points 180-183 completed.

8N SS-50: Points 184, 185 completed.

No additional nesting birds or other protected resources located.

Biologist Signature: 

Date: 5/3/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5-7-12

Biologist: David N. Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
B-N	SS-46	0700 to 1530	SS	DRILL TRUCK, PICK UPS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-46	NESTING BIRDS	SS-1	NONE
SS-46	NESTING BIRD HABITAT	SS-1	NONE

NOTES AND RECOMMENDATIONS

MONITORED ACTING HQ WR 45050 NORTH
IN VICINITY OF CROWD

DRILL CREW WORKED IN SAME AREA ALL DAY.

Biologist Signature: [Signature]

Date: 5-7-12

HGL Field Supervisor Signature: [Signature]

Date: 5.15.12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5-8-12

Biologist: PAUL N. LEE

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
P-N	SS-46	0700-1530	SS	Geo PROBE, Pickups

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-46	Nesting Birds	SS-1	None
SS-46	Nesting Bird Habitat	SS-1	None

NOTES AND RECOMMENDATIONS

Crew worked same AREA most of day (8-219, 8-220, 8-221)

0 new nests found

0 disturbance to existing nests

Cleared: 8-200, 8-201, 8-202, 8-203 and "ACCESS ROUTE"

Biologist Signature: *[Signature]*

Date: 5-8-12

HGL Field Supervisor Signature: *[Signature]*

Date: 5.15.12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 5-9-12

Biologist: David W. Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored	Equipment Used
B-N	SS-46	0700-1600	SS	GPS PROBE, PICKUPS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMMPs Implemented	Residual Impacts
SS-46	NESTING SITES	SS-1	Ø
SS-46	NESTING BIRD HABITAT	SS-1	Ø

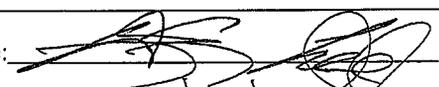
NOTES AND RECOMMENDATIONS

Crow worked sites P-200, P-201, P-202, P-203.

In vicinity of the WR nest, but no disturbance noted.

Cleared sites P-204 to P-214 but still need to determine access route.

Found one inactive cat nest 15' SE of P-210 in laurel sumac. See photo.

Biologist Signature: 

HGL Field Supervisor Signature: 

Date: 5-8-12

Date: 5.15.12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5-10-12

Biologist: DAVID N. LEE

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored	Equipment Used
<u>P-N</u>	<u>55-46</u>	<u>0700~ 1800</u>	<u>SS</u>	<u>GPS PROBE PICKUPS</u>

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
<u>RS-46</u>	<u>NESTING BIRD HABITAT</u>	<u>SS-1</u>	<u>0</u>

NOTES AND RECOMMENDATIONS

MONITORED SS ACTIVITY AT SITES
8-208 TO 8-214.

0 ACTIVE NESTS FOUND; HOWEVER LOT
OF BIRD ACTIVITY IN THE AREA

Biologist Signature: [Signature]

HGL Field Supervisor Signature: [Signature]

Date: 5-10-12

Date: 5.15.12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/11/2012 Friday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-39	0830-1150	SS	Geoprobe

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds, red-tailed hawk nest	SS-2	None

NOTES AND RECOMMENDATIONS:

SA-6 SS-39: Monitoring Geoprobe just outside of red-tailed hawk 500-buffer but within line of sight. Drilling Points 221-222. Sound easily echoes off canyon walls into nest where nestlings are starting to get non-white feathers on their breast and heads. Prior to drilling at 0900 an adult arrived with a rabbit and our setting up does not appear to bother the hawks much if at all.

0930 first drill: nestlings definitely alerted by noise. I've asked Geoprobe crew to avoid the lengthy 1-2 minute drilling and instead do pulses of 10-20 seconds each, interrupted by 1-2 minutes of idling. Nestlings walk around the nest a little but do not look panicked – tough to tell what the threshold of trying to leave nest may be. By 1000 nestlings seem more relaxed and used to noise. 1 adult hawk has been standing guard on nearby cliff since we arrived.

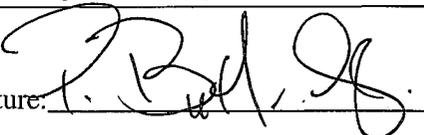
1040 crew moves to Point 222. Nestlings do not react to drill much at all now. Female arrived with more food, and appears more concerned that the nestlings do (they are busy eating).

1140 crew is done for the day and hawks are doing fine. Next visit is Wednesday by which time they will be stronger.

Clearance surveys during afternoon (separate report).

Biologist Signature: 

Date: 5/11/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 14 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-E	P1D	0750-1320 1425-1700	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

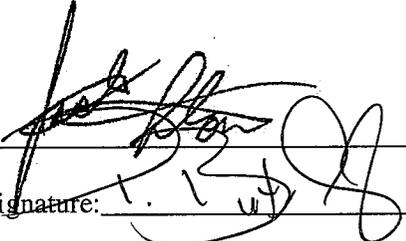
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1D	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

This area supports suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake, Silver legless lizard and San Diego desert woodrat and is designated as potential Red-legged frog habitat.

There is an active Golden eagle nest located nearby whose nest buffer extends into this area.

Biologist Signature: 

Date: May 14, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5-14-12

Biologist: David Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7		0700-1800	SS	GEO PROBE, PICKUPS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	NESTING BIRD HABITAT	SS-1	Ø

NOTES AND RECOMMENDATIONS

MONITORED SAMPLING AT SITES:
7-287
7-288
7-284
Ø Active NESTS FOUND.
Ø NESTS NOT OBSERVED.
LOTS OF BIRD ACTIVITY IN AREA.

Biologist Signature: _____

Date: _____

David Lee

5-14-12

HGL Field Supervisor Signature: _____

Date: _____

J. Tuttle

5.17.12

Santa Susana Field Laboratory Area IV And NBZ, Radiological Study
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BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 15 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-E	P1D	0815-1225	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	P1C	1230-1325	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1D, C	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

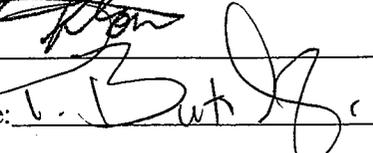
Area P1C supports ephemeral riparian habitat, confirmed occupied vernal pool brachiopod (fairy shrimp) habitat and is designated as potential Coastal California Gnatcatcher, a species listed as threatened under the Endangered Species Act of 1973, habitat.

Both areas P1C and D contain suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake, Silvery legless lizard and San Diego desert woodrat.

There is an active Golden eagle nest located nearby whose nest buffer extends into this area.

Biologist Signature: 

Date: May 15, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5-15-12

Biologist: David N. Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7		0700 - 1800	SS	Geoprobe Pickups

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

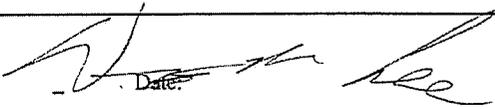
Survey Section	Protected Resources Encountered	AMMP's Implemented	Residual Impacts
	NESTING BIRD HABITAT	SS-1	✓

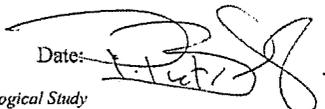
NOTES AND RECOMMENDATIONS

MONITORED SAMPLING AT SITES:
 7-282 7-283
 7-285
 7-286

✓ Active nests found, but considerable bird activity in vicinity

✓ OUTWASHES TO RTNA NEST @ RESERVE

Biologist Signature:  Date: 5-15-12

HGL Field Supervisor Signature:  Date: 5.17.12

Santa Susana Field Laboratory Area IV And NBZ Radiological Study
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BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 16 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P1C	0805-1130	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

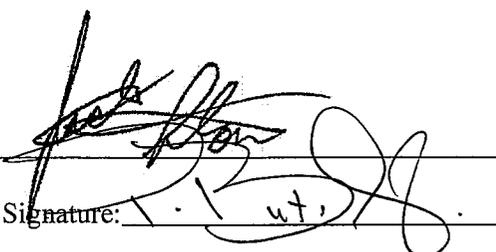
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1C	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Area P1C supports ephemeral riparian habitat, confirmed occupied vernal pool brachiopod (fairy shrimp) habitat and is designated as potential Coastal California Gnatcatcher, a species listed as threatened under the Endangered Species Act of 1973, habitat and also contains suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake, Silvery legless lizard and San Diego desert woodrat.

Biologist Signature: 

HGL Field Supervisor Signature: 

Date: May 16, 2012

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/16/12

Biologist: DAVID N. LEE

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7		0700-1800	SS	GPS PRABO, PICK UPS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	NESTING BIRDS (CRAPTORS)	SS-1	0
	NESTING BIRD HABITAT	SS-1	0

NOTES AND RECOMMENDATIONS

MONITORED SOIL SAMPLING AT THESE SITES:
 7-215
 7-216
 7-217

0 DISTURBANCE OBSERVED AT ACTIVE RTHA WEST 5000 FT AWAY. NOUETS OBSERVED DISTANCE AHEAD.

Biologist Signature: _____ Date: 5/16/12

HGL Field Supervisor Signature: _____ Date: 5.17.12

Santa Susana Field Laboratory Area IV And NBZ Radiological Study
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BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 17 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P1C	0755-1200 1325-1730	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

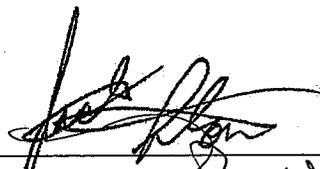
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1C	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

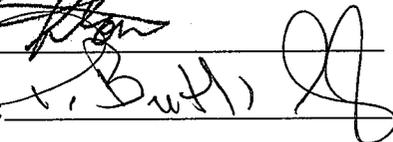
Area P1C supports ephemeral riparian habitat, confirmed occupied vernal pool brachiopod (fairy shrimp) habitat and is designated as potential Coastal California Gnatcatcher, a species listed as threatened under the Endangered Species Act of 1973, habitat and also contains suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake, Silvery legless lizard and San Diego desert woodrat.

Biologist Signature: _____



Date: May 17, 2012

HGL Field Supervisor Signature: _____



Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5-17-12

Biologist: David N. Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7		0700-1800	SS	GPS PROBE + PICKUPS

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	NESTING BIRD HABITAT (RAPTORS)	SS-1	OK
	NESTING BIRDS (RAPTOR)	SS-1	OK

NOTES AND RECOMMENDATIONS

MONITORED SOIL SAMPLING ACTIVITIES AT THESE SITES:
 1. 7-218 3.7-220
 2. 7-219 4.7-266

FIRST 3 SITES IN PROXIMITY TO RTHA NEST (ACTIVE)

NO SIGNS OF DISTURBANCE TO RTHA CHICKS OR ADULTS.

Biologist Signature: _____ Date: *[Signature]* 5/17/12

HGL Field Supervisor Signature: _____ Date: *[Signature]* 5.17.12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 18 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P1C	0800-1205	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

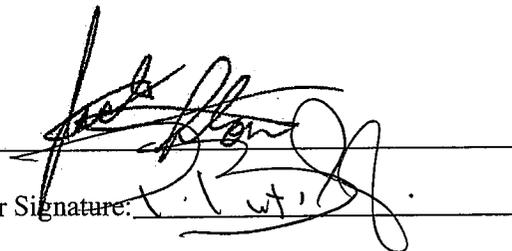
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1C	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Confirmed occupied Coast horned lizard habitat	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Area P1C supports ephemeral riparian habitat, confirmed occupied vernal pool brachiopod (fairy shrimp) habitat and is designated as potential Coastal California Gnatcatcher, a species listed as threatened under the Endangered Species Act of 1973, habitat and also contains suitable habitat for California Special Concern Species, Coast horned lizard, Coast patch-nosed snake, Silvery legless lizard and San Diego desert woodrat.

Biologist Signature: _____



Date: May 18, 2012

HGL Field Supervisor Signature: _____

Date: 11 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 5/18/2012 Friday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8S	SS-49	0800-1200	SS	Shovel (surface sampling)

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-49	Nesting birds, Braunton's milkvetch, Malibu baccharis, Plummer's mariposa lilies, protected trees, coast horned lizard habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

SA-8S, SS-49: Concurrently surveying and monitoring for surface sample Points 25-28, 29-32, 41-44. Braunton's milkvetch abundant around Points 29-32 and access. No nests discovered at either of the 3 sampling locations. Guided crew through milkvetch and nesting bird habitat to each area. Crew originally wanted to drive to top of hill but there is too much potential for take of endangered plants and nesting birds.

Mariposa lilies emerging near Points 41-44 at UTM 341719E, 3788701N. Lesser goldfinch nest under construction at Points 25-28. 8 feet up in small coast live oak, UTM 341581E, 3788764N.

Clearance surveys during afternoon (separate report).

Biologist Signature: 

Date: 5/18/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 21 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

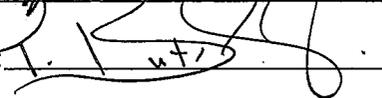
Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-42	0845-1220 1345-1600	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-42	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 
HGL Field Supervisor Signature: 

Date: May 21, 2012
Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 5/21/12

Biologist: DAVID HEE

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
<u>P-N</u>		<u>0800-1600</u>	<u>SS</u>	<u>Pickup - HAND TOOK</u>

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	<u>NESTING BIRDS</u>	<u>SS-1</u>	<u>Ø</u>
	<u>" " HABITAT</u>	<u>SS-1</u>	<u>Ø</u>

NOTES AND RECOMMENDATIONS

MONITORED SURFACE SAMPLE CROW AT
ZHONG SITES:
○ P-180 TO P-181
○ P-188 TO P-189

NO BIRDS OBSERVED AT NEARBY HGLR
ACTIVE NEST, SEEN ADULTS SEEN FEEDING
AT NEST

Biologist Signature: [Signature]

HGL Field Supervisor Signature: [Signature]

Date: 5/21/12

Date: 5.23.12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 22 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-42	0820-1215 1325-1600	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

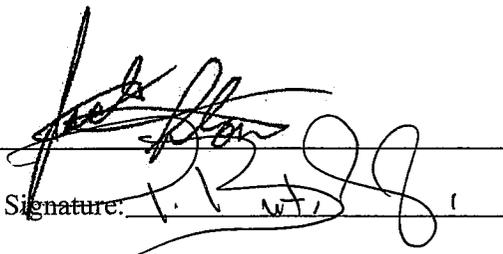
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-42	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: _____



Date: May 22, 2012

HGL Field Supervisor Signature: _____

Date: _____

1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/22/17

Biologist: Dario Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
<u>8</u>		<u>0800 -</u>	<u>SS.</u>	<u>HAND TOOLS</u>
<u>7</u>		<u>1500</u>		

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	<u>NESTING BIRD (RAMPS)</u>	<u>SS-1</u>	<u>Ø</u>
	<u>NESTING BIRD HABITAT</u>	<u>SS-1</u>	<u>Ø</u>
	<u>DUALITYA</u>	<u>SS-1</u>	<u>Ø</u>

NOTES AND RECOMMENDATIONS

MONITORED CROW AT THE FOLLOWING SITES
(SURFACE SAMPLING)
 • 8-215 to 8-218
 • 8-166 to 8-171
 • 7-207 to 7-209

LOCATED 1 M. DO Egg near site 8-166. No nest.
NO DISTURBANCE NOTED AT RT HA NEST; 2 chicks present.

Biologist Signature: [Signature]
 HGL Field Supervisor Signature: [Signature]

Date: 5-22-17
 Date: 5-23-17

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 23 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-42	0800-1225 1340-1635	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-42	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 

Date: May 23, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 5-23-12

Biologist: David Lee

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
<u>85</u>		<u>0800-1500</u>	<u>SS</u>	<u>HAND TOOLS</u>

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	<u>NATIVE BIRD NESTS</u>	<u>SS-1</u>	<u>0</u>
	<u>BRAUNTON'S MILKVETCH</u>	<u>SS-1</u>	<u>0</u>

NOTES AND RECOMMENDATIONS

MONITORED SOIL SAMPLING (HAND AUGER)
AT THESE SITES:
8-37 to 8-40. SWAMP CROW IN ON ROOT,
ADJACENT ANY NATIVE BIRDS AND
BY MILKVETCH.

TWO NESTS STILL ACTIVE NEAR SIDE 8-36.

NO OTHER ACTIVE NESTS LOCATED

Biologist Signature: [Signature]
 HGL Field Supervisor Signature: [Signature]

Date: 5-25-12
 Date: 5-23-12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 24 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8N	SS-43	0835-1205 1330-1625	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-43	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Area contains designated as potential Coastal California Gnatcatcher and Red-legged frog habitat as well as ephemeral riparian habitat.

Biologist Signature: _____



Date: May 24, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 25 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0835-1155	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

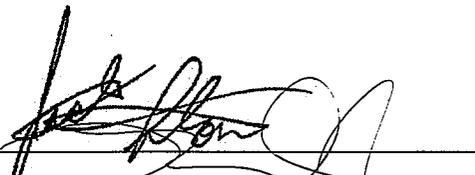
MONITORING RESULTS

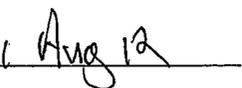
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Active Golden eagle and Red-tailed hawk nests are near this area.

Area also supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: May 25, 2012
 Date: 

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 29 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8S	SS-49	0845-1245 1400-1630	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-49	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Bruanton's milk vetch	SS-1	Minimal*

NOTES AND RECOMMENDATIONS

*2 Bruanton's milk vetch plants stepped on but NOT damaged by soil sampling team. The plants were flagged near the top but the long, low, horizontal branches were not noticed by one of the team members. I flagged the larger low branches on selected plants near the sampling area.

Biologist Signature: 

Date: May 29, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 5/29/12

Biologist: Greg Wilvert

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	38, 39	0820 - 1500	SS	Hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
38	California towhee nest	SS-2; monitored activities	none
39	None		

NOTES AND RECOMMENDATIONS

Crew sampled soil at sampling points 198, 199, 226, 202, 206

High of 85F, wind W 0-5 MPH, cloud cover 0%

0820 – 1050 California towhee nest near sampling points 198, 199. Monitored to see if crew's work caused bird to become agitated. No such effect seen. California quail pair ~20 meters away from 199. appeared agitated. Crew took 10 min break until female left, presumable to sit on nest.

1045 Scott Werner noted wrenit nest near points 214 and 212.

No unflagged sensitive plants found

Biologist Signature: Greg Wilvert

Date: 5/29/12

HGL Field Supervisor Signature: T. B. [Signature]

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 30 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8S	SS-49	0815-1235 1350-1600	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

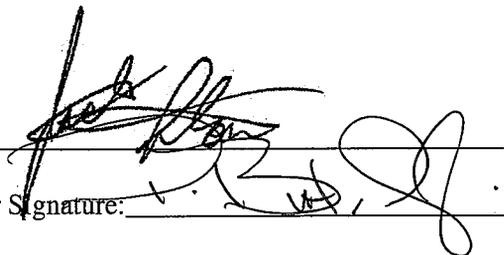
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-49	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Bruanton's milk vetch	SS-1	None
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Active Golden eagle and Red-tailed hawk nests are near this area.

Area also supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature: _____



Date: May 30, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/30/12

Biologist: Greg Wilvert

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	39	0820 - 1600	SS	Hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
39	Wrentit nest near sampling point 276	SS2 - monitored	none

NOTES AND RECOMMENDATIONS

Crew sampled soil at sampling points 272, 273, 274, 275, 276

High of 86F, wind NW 5-10 MPH, cloud cover 0%

0820 – 1600 Crew sampled points 272-276 in sequence as per Scott Werner's instruction to avoid impacting wrentit nest. No impact seen.

No unflagged sensitive plants found

Biologist Signature: 

Date: 5/30/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 31 May
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0825-1245 1400-1625	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

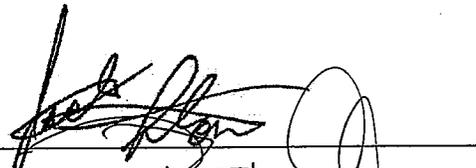
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

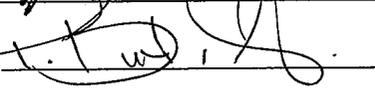
NOTES AND RECOMMENDATIONS

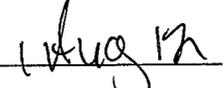
Active Golden eagle and Red-tailed hawk nests are near this area. 2 chicks have recently fledged from the hawk nest.

Area also supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature: 

Date: May 31, 2012

HGL Field Supervisor Signature: 

Date: 

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 5/31/12

Biologist: Greg Wilvert

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	39	0845 - 1600	SS	Hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

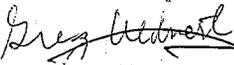
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
	none		

NOTES AND RECOMMENDATIONS

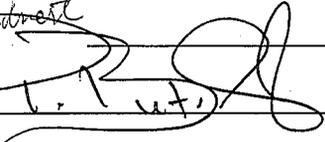
Crew sampled soil at sampling points 229, 230, 227, 228

High of 90F, wind NW 5-10 MPH, cloud cover 0%

No sensitive plants found

Biologist Signature: 

Date: 5/31/12

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 01 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5C	SS-4	0810-1010	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
8N	SS-43	1020-1210 1325-1440	SS	"

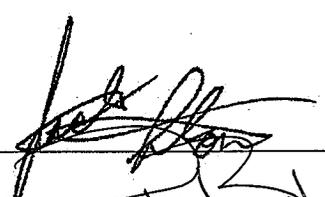
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-4, 43	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

SS-43 contains designated potential habitat for Coastal California Gnatcatcher and Red-legged frog, both species listed as threatened under the Endangered Species Act of 1973.

Biologist Signature:  _____

Date: June 1, 2012

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 6/1/2012 Friday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0815-0930 1150-1230	SS	Hand-auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	nesting birds, Santa Susana tarplant, coast horned lizard	SS-2	None

NOTES AND RECOMMENDATIONS:

SA-7, SS-39: Hand-auger sampling Points 262, .

- New lesser goldfinch nest 10 feet upslope from Point 263. 4 ft up in Venegasia, flushed female off of 4 eggs. UTM 342394E, 3789452N.
- Wrenit nest at Point 257 still active.
- Anna's hummingbird nest in coast live oak near Point 242. 2 eggs., UTM 342480E, 3789506N.
- Wrenit nest near Points 212-214 has been ripped down (natural causes), possibly failed.
- Bushtit nest near Anna's hummingbird nest (same tree), nestlings, 12ft up, UTM 342475E, 3789503N.
- California towhee nest in Rhamnus fledged.
- Lesser goldfinch nest that Jim Anderson described has been torn down – possibly same female as nest described above.

Points 189-195 cleared for hand-auger.

Points 258-262 cleared for hand auger.

5DN: Points 208-263 cleared for marking points (staking).

5A: All points cleared for establishing stakes at points.

Biologist Signature:  _____

Date: 6/1/2012

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 04 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0820-1210 1320-1650	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

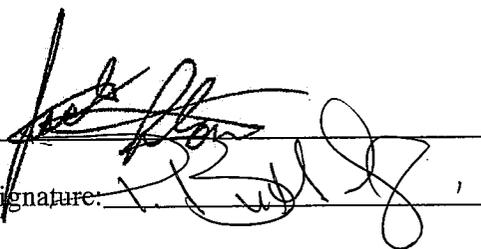
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Active Golden eagle and Red-tailed hawk nests are near this area.
Area also supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature: _____



Date: June 4, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 05 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0820-1200 1320-1620	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Active Golden eagle and Red-tailed hawk nests are near this area.
Area also supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature: _____

Date: June 5, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 06 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0815-1210 1320-1700	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

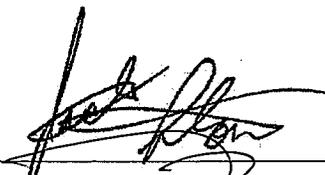
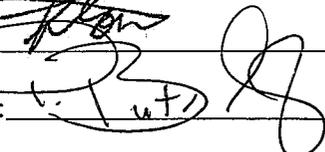
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Active Golden eagle and Red-tailed hawk nests are near this area.

Area also supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature:  _____
HGL Field Supervisor Signature:  _____

Date: June 6, 2012

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 6/6/2012 Wednesday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0800	n/a	(Brief nest check)
6	SS-38	0900-1050	GPS survey	GPS units, foot traffic
8N	SS-46 SS-47	1100-1215	GPS survey	GPS units, foot traffic
5DN	SS-56	1400-1600	SS	Weed whacking

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-38 SS-39 SS-46 SS-47 SS-56	nesting birds	GEN-2	None

NOTES AND RECOMMENDATIONS:

SA-7, SS-39: Points 196-197 clear to sample – California towhee nest has fledged. California towhee nest at 210-214 still active. Red-tailed hawk fledglings out of nest.

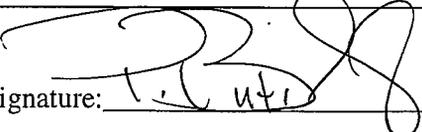
SA-6, SS-38: California towhee nest along chain-link fence, phacelia, 1 older chick, UTM 342629E, 3789618N. Not affected by GPS survey. Lazuli bunting nest at edge of SRE in yerba santa with 3 eggs, 10 ft from Point 369. UTM 342722E, 3789636N.

SA-8N, SS-43. Phainopepla nest still active, 3 eggs. Not affected by survey crew.

SS-50 retrieving stakes from old song sparrow nest buffer, nest was tilted and still had 2 eggs, possible human intrusion but not EPA. One stake was clearly kicked over.

Biologist Signature: 

Date: 6/6/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 07 June
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0835-1145	SS	Hand auger, shovels, radiation and volatile organic compound detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
7	SS-43	1315-1510	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

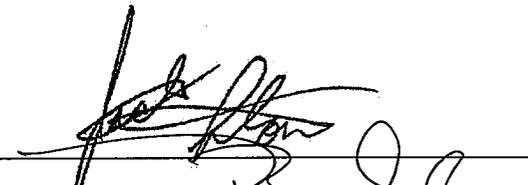
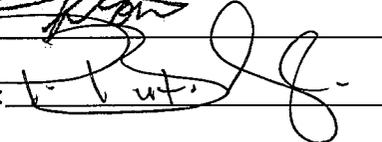
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39, 43	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-43 contains designated as potential Coastal California Gnatcatcher and Red-legged frog habitat as well as ephemeral riparian habitat.

Active Golden eagle and Red-tailed hawk nests are near area SS-39.

Area also supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: June 7, 2012
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 6/7/2012 Thursday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P3S P2K P2L	1040-1220	GPS survey	GPS units, foot traffic
8S	SS-49	1400-1450	GPS survey	GPS units, foot traffic
5DN	SS-55	1500-1545	SS	Weed whackers

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P3S P2K P2L	California gnatcatcher habitat. General nesting bird habitat, mariposa lilies, coast horned lizard occupied habitat, San Diego desert woodrat occupied habitat	GEN-2	None
SS-49	Braunton's milkvetch, Malibu baccharis, general nesting bird habitat, mariposa lilies, coast horned lizard occupied habitat	GEN-2	None

NOTES AND RECOMMENDATIONS:

Monitoring GPS survey crew.

NBZ-W. One sampled point was above red-tailed hawk nest (already fledged). 1 juv and 2 adult red-tailed hawks seen in area.

8S, SS-49: Near Points 33-36, lazuli bunting nest 1 ft up in poison oak w 3 eggs, UTM 341704E, 3788741N.

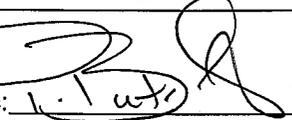
Points 37-40, flushed spotted towhee off nest at 341638E, 3788721N in sugar bush on ground.

5/5/2011

Scott Werner

Biologist Signature: 

Date: 6/8/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 6/8/2012 Friday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
NBZ-W	P1A P1B PIC	0945-1400	GPS survey	GPS units, foot traffic

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
P1A P1B PIC	California gnatcatcher habitat. General nesting bird habitat, mariposa lilies	GEN-2	None

NOTES AND RECOMMENDATIONS:

Monitoring GPS survey crew in NBZ-W. No nests located but some signs of nesting observed near some points.

Check on wrentit nest in western SS-39 – still intact with large nestlings.

Biologist Signature: 

Date: 6/8/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 11 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
8N	SS-43	0815-1210 1320-1555	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

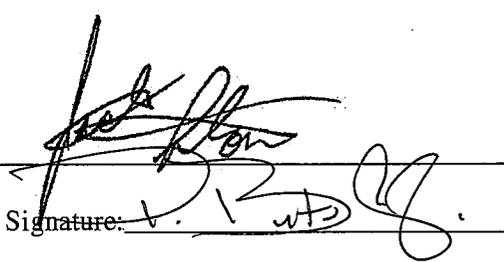
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

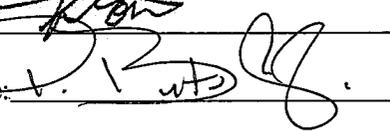
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-43	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

There are active bird nests in this area including a Barn owl nest with hatchlings and a Anna's hummingbird nest under construction.

Biologist Signature: 

Date: June 11, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 12 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-Area		Time	Activities Monitored*	Equipment Used
8N	SS-43	0815-1040	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
"	SS-50	1045-1235	"	"
7	SS-106	1345-1645	"	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

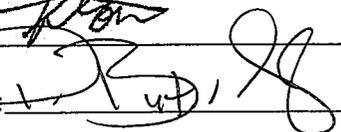
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-43, 50, 106	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

SS-106 is near several active nests including a Red-tailed hawk nest and a Cliff swallow nest. The adult swallows flushed from the nest during the brief periods of active drilling but always returned to the nest when drilling ceased.

Biologist Signature:  _____

Date: June 12, 2012 _____

HGL Field Supervisor Signature:  _____

Date: 1 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 13 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-106	0820-1005	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
"	SS39	1010-1035	"	"
"	"	1035-1100	VC	Gas powered weed whacker (small)
"	"	1100-1230 1335-	"	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-106, 39	Nesting birds	SS-1, VC-1	None
	Protected trees	SS-1 VC-2	None
	Plummer's mariposa lily	SS-1, VC-2	None
	Santa Susana tarplant	SS-1, VC-10	None
	Dudleya	SS-1, VC-9	None

NOTES AND RECOMMENDATIONS

Area supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

Biologist Signature: _____

Date: June 13, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 14 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0820-1050	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
5D North	SS-56	1055-1245 1400-	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

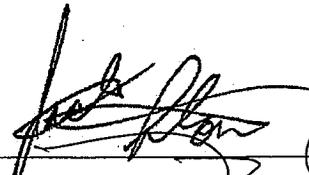
MONITORING RESULTS

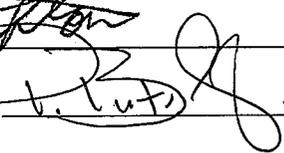
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
SS-56	Nesting birds*	SS-1	None
	Protected trees*	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-39 supports suitable habitat for California Special Concern Species, Coast horned lizard and San Diego desert woodrat.

*SS-56 is a flat area adjacent to abandoned buildings with vegetation comprised primarily of non-native grasses and multiple species of thistles including Yellow star thistle. Nesting birds and protected trees are located near but not in the soil sampling work area.

Biologist Signature: 

HGL Field Supervisor Signature: 

Date: June 14, 2012

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 15 June
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-56	0820-1155	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-56	Nesting birds*	SS-1	None
	Protected trees*	SS-1	None

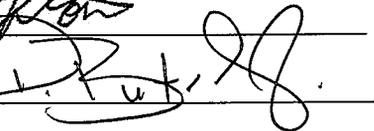
NOTES AND RECOMMENDATIONS

*SS-56 is a flat area adjacent to abandoned buildings with vegetation comprised primarily of non-native grasses and multiple species of thistles including Yellow star thistle.

Nesting birds and protected trees are located near but not in the soil sampling work area.

Biologist Signature: _____





HGL Field Supervisor Signature: _____

Date: June 15, 2012

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 6/18/2012 Monday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5DN	SS-109	0800-1130	SS	Surface and subsurface sampling: geoprobe
5B	SS-12	1335-1410 1550-1630	SS	Surface and subsurface sampling: hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-109 SS-12	Nesting bird habitat	SS-2	None

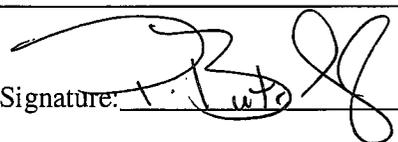
NOTES AND RECOMMENDATIONS:

5DN, SS-109 (geoprobe): EPA demonstration this morning on pavement at Point 70 (resample).
 Points 228-231: hooded orioles building in palm tree (actually SS-55), 50 feet from points, UTM 342130E, 3788932N.
 Grasshopper sparrow singing in southern SS-55.

Located American kestrel nest in crane building, located in small substructure on SE side of building, 60 feet up near the top, entering and feeding nestlings. UTM approx.342209E, 3789019N (SS-3).
 Clearance surveys described in separate report.

Biologist Signature: 

Date: 6/18/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 19 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-109	0815-1210	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-55	1320-	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

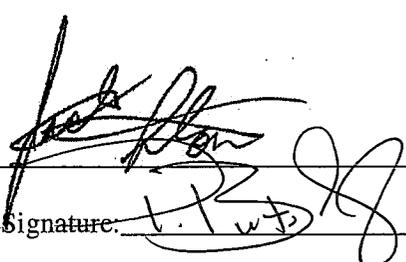
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-109, 55	Nesting birds	SS-1	None

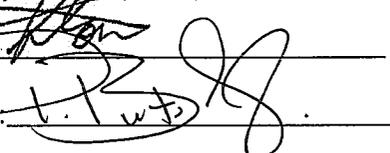
NOTES AND RECOMMENDATIONS

SS-109 is a deteriorated blacktop/asphalt parking lot adjacent to building 055. There is a nearby non-native palm tree that contains a partially constructed Hooded oriole nest but the adult birds were not observed today.

SS-55 is a previously disturbed flat dirt area adjacent to SS-109 that contains primarily non-native grasses and weeds.

Biologist Signature: 

Date: June 19, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 20 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-55	0810-1220 1325-	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

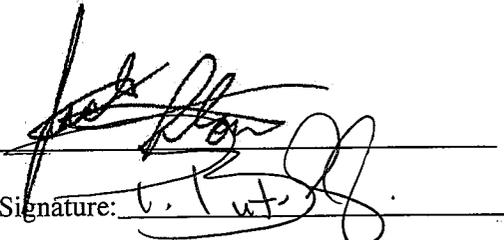
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-55	Nesting birds	SS-1	None

NOTES AND RECOMMENDATIONS

SS-55 is a previously disturbed flat dirt area adjacent to buildings 055 and 155 in SS-109 that contains primarily non-native grasses and weeds.

Biologist Signature: _____



Date: June 20, 2012

HGL Field Supervisor Signature: _____



Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 21 June
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-55	0820-1230 1340-1600	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-55	Nesting birds	SS-1	None

NOTES AND RECOMMENDATIONS

SS-55 is a previously disturbed flat dirt area adjacent to buildings 055 and 155 in SS-109 that contains primarily non-native grasses and weeds.

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: June 21, 2012
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 22 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-55	0815-1230 1345-1535	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

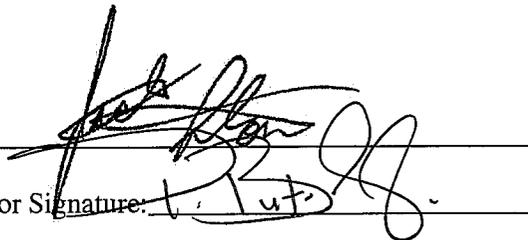
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-55	Nesting birds	SS-1	None

NOTES AND RECOMMENDATIONS

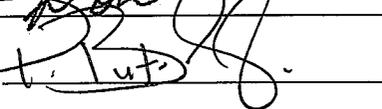
SS-55 is a previously disturbed flat dirt area adjacent to buildings 055 and 155 in SS-109 that contains primarily non-native grasses and weeds.

Biologist Signature: _____



Date: June 22, 2012

HGL Field Supervisor Signature: _____



Date: _____

1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 25 June
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5B	SS-101	0830-1235	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
5D North	SS-55	1405-1555	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

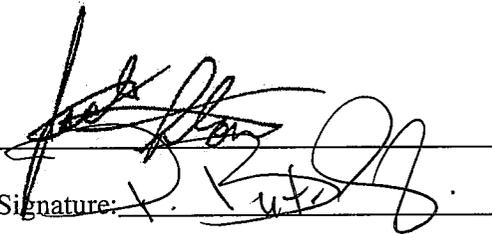
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-101	Nesting birds	SS-1	None
SS-55	Nesting birds	SS-1	None
	Protected trees	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-101 is adjacent to area designated as potential Least Bell's vireo habitat.

Biologist Signature: _____



Date: June 25, 2012

HGL Field Supervisor Signature: _____

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 6/25/2012 Monday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-26	0830-1130	SS	Surface and subsurface sampling: hand auger
5B	SS-12	1335-1410 1550-1630	SS	Surface and subsurface sampling: hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-26 SS-12	Nesting birds, LBV habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

SA-6, SS-26 (hand-auger): Point 422 hand-auger in LBV area now that LBV survey is complete. Clearing as I monitor. Advised crew to stay close to sample point and not crash through brush due to nesting potential.

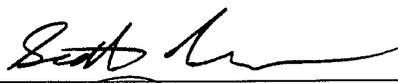
- Phainopepla nest in large dead coast live oak w nestlings. 10 ft above ground at UTM 343164E, 3789333N. Nest is 80 ft from sample point. Birds are aware of crew but are tolerating their presence (sitting on nest, delivering food, etc.).
- Single Plummer's mariposa lily along foot trail at UTM 343140E, 3789307N.

SA-5B, SS-12 (hand-auger): Point 357, California towhee nest nearby still active.

Point 362 (hand auger). Northern mockingbird building in coast live oak, 30 ft up. UTM 342604E, 3789039N. But no restrictions since this nest is not active yet.

Clearance surveys described in separate report.

Biologist Signature: _____



Date: 6/25/2012

HGL Field Supervisor Signature: _____



Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 26 June
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

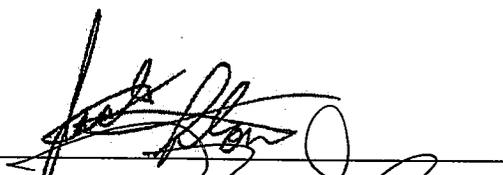
Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0815-1100	SS	Shovels, radiation & chemical detection meters, coolers, plastic bags for samples
7	SS-39	1135-1220 1340-1700	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

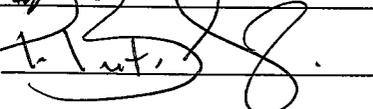
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 

Date: June 26, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 27 Jun
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

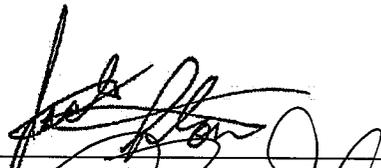
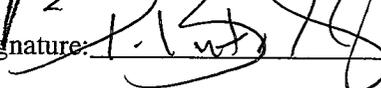
Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0815-1130 1350-1505	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: June 27, 2012
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 6/27/2012 Wednesday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-38	0800-1020 1415-1440	SS	Geoprobe
5DN	SS-55	1030-1115 1240-1410	SS	Surface and subsurface sampling: hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-38	Nesting birds, Santa Susana tarplant	SS-2	None
SS-55	Nesting bird habitat	SS-2	None

NOTES AND RECOMMENDATIONS:

SA-7, SS-38: Points 242-243. I showed Jack Stone lazuli bunting and mourning dove nests so that he can monitor for the rest of the day. Lazuli bunting nest has 1 egg, 1 nestling. Bird left briefly during first several bouts of drilling but came back with food after noise subsided 10 mins later. Took photos of Anna's hummingbird nest that previously failed.

SA-5DN, SS-55: Points 217-218. Hand-augering with no issues.

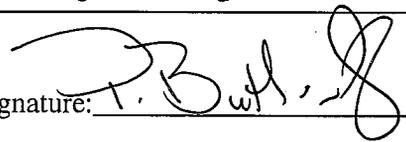
Clearance surveys described in separate report.

Biologist Signature: _____



Date: 6/27/2012

HGL Field Supervisor Signature: _____



Date: _____

1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 28 June
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

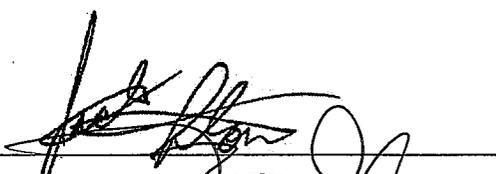
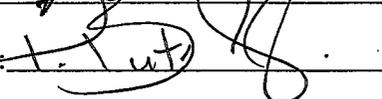
Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
7	SS-39	0825-1000	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
5D North	SS-56	1005-1210 1325-1620	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-39	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None
SS-56	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: June 28, 2012
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 29 June
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

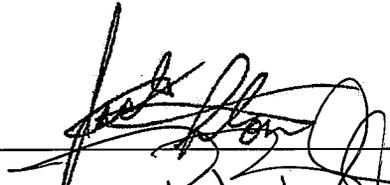
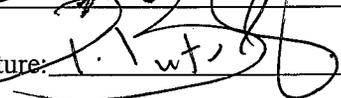
Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-	0815-1250	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

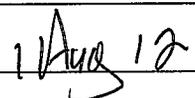
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-56	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: June 29, 2012
 Date: 

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 02 July
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-56	0830-1215	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-54	1445-1610	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-56, 54	Nesting birds	SS-1	None
	Protected trees	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: July 2, 2012
 Date: 1 August

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 03 July
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

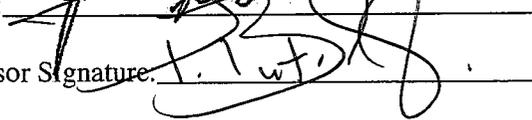
Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-54, 111	0815-1100	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-55	1105-1235 1350-1530	SS	"

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-54, 55 & 111	Nesting birds	SS-1	None
	Protected trees	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: July 3, 2012
 Date: 1 August

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 05 July
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D North	SS-55	0820-1055	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples
	SS-55, 112	1105-1230 1340-1400	SS	"
5D South	SS-59	1410-1550	SS	Hand auger, shovels, radiation & chemical detection meters,

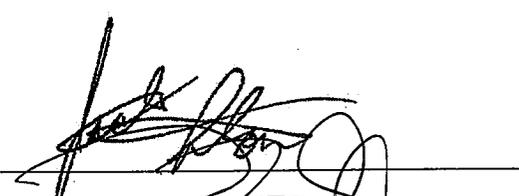
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-55, 112	Nesting birds	SS-1	None
	Protected trees	SS-1	None
SS-59	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Braunton's milk-vetch	SS-1	None
	Malibu baccharis	SS-1	None
	Coast horned lizard confirmed occupied habitat	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-59 contains suitable habitat for California species of special concern, Coast horned lizard, Coast patch-nosed snake and San Diego desert woodrat.

Biologist Signature: 

Date: July 5, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 7/5/2012 Thursday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5A	SS-17	0820-0840	n/a	(brief nest check prior to monitoring elsewhere)
5DS	SS-59	1045-1110	SS	Surface and subsurface sampling: hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-17 (clearance survey)	Nesting birds	SS-2	None
SS-59	Braunton's milkvetch Plummer's mariposa lily Nesting birds Protected trees Occupied coast horned lizard habitat	SS-2	None
SS-16 SS-17	Santa Susana tarplant Previously documented Plummer's mariposa lilies Protected trees	SS-2	None

NOTES AND RECOMMENDATIONS:

SS-17: brief check on nests. Mourning dove sitting on nest, California towhee now incubating.

SS-59: hand-auger crew sampling Points 45-48. New California towhee nest in coast live oak overhanging points. Nest is 10 feet up with young nestlings. UTM 342172E, 3788375N. Adult does not seem to mind nearby people and has gone to and from nest without incident. At Points 41-44, some mariposa lilies appear to have been browsed by deer. As crew moves on to these points I pick up Jack Stone for monitoring so that I can leave site.

Biologist Signature: 

Date: 7/5/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 06 July
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5D South	SS-59	0825-1110	SS	Hand auger, shovels

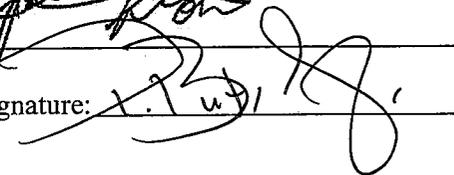
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-59	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Plummer's mariposa lily	SS-1	None
	Braunton's milk-vetch	SS-1	None
	Malibu baccharis	SS-1	None
	Coast horned lizard confirmed occupied habitat	SS-1	None

NOTES AND RECOMMENDATIONS

Area SS-59 contains suitable habitat for California species of special concern, Coast horned lizard, Coast patch-nosed snake and San Diego desert woodrat.

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: July 6, 2012
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 09 July
2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5A	SS-15	0825-1225	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

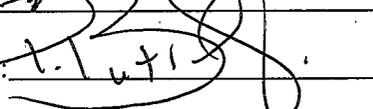
Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-15	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Sampling points today are in a previously developed area, a large concrete pad/foundation and asphalt road.

Biologist Signature: 

Date: July 9, 2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 10 July
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5A	SS-16	0835-0850	SS	Digging bar
	SS-15	0855-1220 1325-1520	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

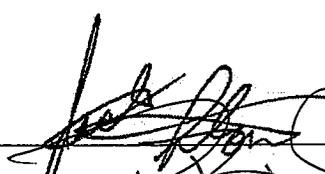
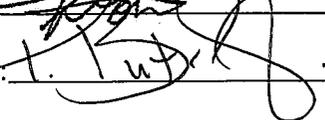
* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-16, 15	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Sampling points today are in a previously developed area, a large concrete pad/foundation and asphalt road.

Biologist Signature: 
 HGL Field Supervisor Signature: 

Date: July 10, 2012
 Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 7/10/2012 Tuesday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
6	SS-38	0800-1015	SS	Surface and subsurface sampling: hand auger
5DS	SS-59	1045-1110	SS	Surface and subsurface sampling: hand auger
5A	SS-14 SS-16 SS-17	1130-1530	SS	Surface and subsurface sampling: hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-16 SS-17 SS-38	Santa Susana tarplant Previously documented Plummer's mariposa lilies Protected trees	SS-2	None
SS-16 SS-17 SS-59	Nesting birds	SS-2	None
SS-59	Braunton's milkvetch Occupied coast horned lizard habitat Protected trees	SS-2	None

NOTES AND RECOMMENDATIONS:

SS-38: hand-auger crew sampling PGRAY 6-7. No nesting or mariposa lilies detected near work area.

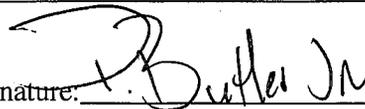
SS-59: hand-auger crew resampling Point 48. California towhee slightly disturbed by presence of crew. I advised to keep noise level down, but total time at point was less than 30 minutes. Crews avoided new Braunton's milkvetch plants in parking area.

SS-17: Crew is only doing Point 272 today. Discovered lesser goldfinch nest in work area after crew began work, but incubating female doesn't seem to care and sits tight the entire time (Photo 9476). Nest is 5 horizontal feet from Point 272, 10 ft up in laurel sumac, UTM 342662E, 3789407N. Also found new cliff swallow nest beyond work area 10 ft up in a sandstone overhang at UTM 342647E, 3789427N, apparent incubation (I flushed adult). California towhee and house finch nests still active.

With the new lesser goldfinch nest discovered, no points in SS-14 may be done with Geoprobe.

Biologist Signature: 

Date: 7/10/2012

HGL Field Supervisor Signature: 

Date: 1 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM

ENVICOM CORPORATION

Date: 7/11/2012 Wednesday

Biologist: Scott Werner

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5A	SS-14 SS-16 SS-17	0830-1530	SS	Surface and subsurface sampling: Geoprobe (SS-14), hand auger

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-14 SS-16 SS-17	Nesting birds	SS-2	None
SS-14 SS-16 SS-17	Santa Susana tarplant	SS-2	None
SS-16 SS-17	Protected trees	SS-2	None

NOTES AND RECOMMENDATIONS:

I'm focusing on hand auger crew in SS-17 (Points 273, 274, 277) while Jack monitors geoprobe at SS-14 (Points 263-265).

House finch nest in concrete wall is fledging this morning. Keeping hand-auger crew away from east side of wall, where fledglings are flitting about with parents. Sampling at point 273 near lesser goldfinch nest took place during afternoon when the female would want to sit tight on nest due to the heat anyway. California towhee is on nest all day and is not being affected by work crew. Blue grosbeak nest still active with 2 hatchlings.

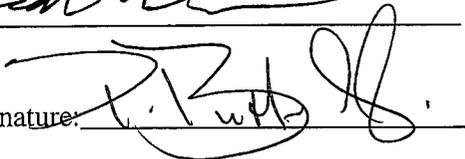
New lazuli bunting nest 50 ft S of California towhee nest near access road. 3 chicks getting downy feathers and eyes beginning to open. Nest is 3 ft up in laurel sumac and poison oak at UTM 342623E, 3789396N. Flagged stakes left up with "nesting bird" and date in case additional Boeie activity takes place here in the next 2 weeks.

Biologist Signature: _____



Date: 7/11/2012

HGL Field Supervisor Signature: _____



Date: _____

7 Aug 12

BIOLOGICAL RESOURCE MONITORING FORM
 ENVICOM CORPORATION

Date: 11 July
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5A	SS-15, 16	0830-1210 1325-1430	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-15, 16	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature:  _____

Date: July 11, 2012 _____

HGL Field Supervisor Signature:  _____

Date: 11 Aug 12 _____

BIOLOGICAL RESOURCE MONITORING FORM
ENVICOM CORPORATION

Date: 12 July
 2012

Biologist: Jack Stone

ACTIVITIES MONITORED

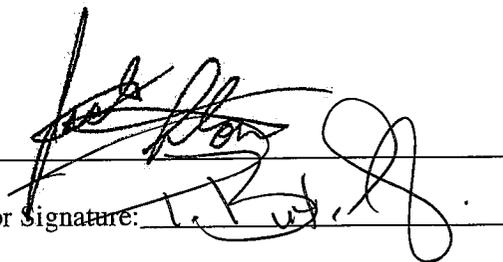
Sub-area	Survey Section	Time	Activities Monitored*	Equipment Used
5A	SS-18	0815-0840	VC	Weedwhacker
		0840-1155 1315-1500	SS	Geoprobe Direct Push Technology (DPT) rig, radiation and chemical detection equipment, Pelican equipment boxes, coolers, tables, chairs, garbage cans, plastic pails, glass jars and plastic bags for samples

* VC = Vegetation Clearing, GS = Gamma Scanning, GP = Geophysical Survey, SS = Soil Sampling, MWS = Monitor Well Sampling, SWSS = Surface Water and Sediment Sampling

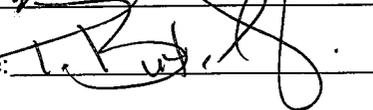
MONITORING RESULTS

Survey Section	Protected Resources Encountered	AMM's Implemented	Residual Impacts
SS-18	Nesting birds	SS-1	None
	Protected trees	SS-1	None
	Santa Susana tarplant	SS-1	None
	Dudleya	SS-1	None

NOTES AND RECOMMENDATIONS

Biologist Signature: 

Date: July 12, 2012

HGL Field Supervisor Signature: 

Date: 11 Aug 12

APPENDIX 4

**Least Bell's Vireo Protocol Survey of the
EPA Radiological Study Area at the
Santa Susana Field Laboratory, 2012**

**Least Bell's Vireo Protocol Survey of the
EPA Radiological Study Area at the
Santa Susana Field Laboratory, 2012**



Prepared by:

Scott M. Werner
Werner Biological Consulting
616 Lark Street
Ojai, CA 93023

Prepared for:

Travis Cullen
Envicom Corporation
28328 Agoura Road
Agoura Hills, CA 91301

July 2012

Executive Summary

This report presents the results of a protocol survey for the federally and state endangered least Bell's vireo (*Vireo bellii pusillus*). The survey was conducted on approximately 14 acres of riparian and adjacent upland habitat on the Santa Susana Field Laboratory, Ventura County, in support of the U.S. Environmental Protection Agency's Radiological Characterization of Area IV and the Northern Buffer Zone, as required by U.S. Fish and Wildlife Service Biological Opinion 8-8-10-F-12 (USFWS 2010).

No least Bell's vireos were detected. Brown-headed cowbirds (*Molothrus ater*), a frequent nest parasite of the least Bell's vireo, were observed during the survey, and six special-status bird species listed on the California Department of Fish and Game (CDFG) *Special Animals List* (CDFG 2011) were detected.

Introduction

The least Bell's vireo (vireo) is a small gray migratory songbird whose historical range extended from Baja California, Mexico, to the northern Sacramento Valley of California, and from the California coastal ranges east to Death Valley. Riparian habitat losses and increases in brown-headed cowbird populations starting in the 1930s eventually caused the vireo to become essentially extinct north of the Transverse Ranges of southern California (Grinnell and Miller 1944, Gaines 1974, Goldwasser et al. 1980, Garrett and Dunn 1981, USFWS 1986). The least Bell's vireo was listed as endangered by the California Fish and Game Commission in 1980 and listed as endangered by the U.S. Fish and Wildlife Service (USFWS) in 1986. Critical habitat was designated in 1994 covering approximately 38,000 acres in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties (USFWS 1994). Although still absent from major portions of its historical range, the vireo has responded well to conservation management actions. In a 5-year status review, USFWS (2006) determined that the number of occupied vireo territories had increased ten-fold (291 to 2,968) since the 1986 listing.

The least Bell's vireo is one of four recognized subspecies of Bell's vireo in the United States (AOU 1998). Least Bell's vireos are obligate riparian breeders, nesting along streamcourses typically dominated by willows (*Salix* spp.), cottonwoods (*Populus* spp.), oaks (*Quercus* spp.), and/or mule fat (*Baccharis salicifolia*). The key structural components of suitable breeding habitat are a dense layer of vegetation within 3-6 ft of the ground and a canopy layer (USFWS 1994). Vireos spend the winter in southern Baja California, Mexico, and arrive on breeding grounds in California in March or April (USFWS 1998). Nests are typically built of leaves, bark, willow catkins, and spider webs in a fork of a tree or shrub within 3 feet of the ground (Franzreb 1989). A clutch of 3-4 eggs is incubated by both parents for 14 days, and nestlings leave the nest at about 12-14 days, after which time they are cared for by the parents for another 2 weeks or more. Vireos may make multiple nesting attempts after nest failure but typically produce no more than one successful clutch during a season (Franzreb 1989). Most vireos leave the breeding grounds for Mexico by late September or earlier (Franzreb 1989).

In 2010 the U.S. Environmental Protection Agency (EPA) began conducting a radiological characterization of a portion of the Santa Susana Field Laboratory (SSFL), located in the Simi Hills of eastern Ventura County, California (HGL and Envicom 2011). The two areas at SSFL being characterized are Area IV, a 290-acre administrative section where the U.S. Department of Energy and its contractors once operated several nuclear reactors and associated fuel facilities and laboratories, and the Northern Buffer Zone (NBZ), a 182-acre area with no history of development that lies adjacent to Area IV. Potential least Bell's vireo habitat areas were described by HGL and Envicom (2010a, 2010b). No designated critical habitat for the vireo occurs in the EPA study area (USFWS 1994). The U.S. Fish and Wildlife Service issued Biological Opinion 8-8-10-F-12 (USFWS 2010), which restricted EPA activities within potential least Bell's vireo habitat during the nesting season of March 15 to September 30, unless a Section 10(a)(1)(A) permitted biologist conducted a protocol-level survey for the vireo and absence was determined.

In eastern Ventura County and western Los Angeles County, least Bell's vireos are listed in the CNDDDB as recently occurring along Arroyo Simi, Arroyo Santa Rosa/Arroyo Conejo, Santa Clara River near Piru and Santa Clarita, and Sepulveda Basin Wildlife Area (CDFG 2012). The purpose of this survey was to determine presence or absence of the vireo within the EPA study area (Area IV and the NBZ) on SSFL.

Methods

Two areas within the EPA study area that had been previously identified as potential least Bell's vireo habitat were passively surveyed for least Bell's vireo by Scott Werner (biologist), Principal Biologist of Werner Biological Consulting. Mr. Werner holds a U.S. Fish and Wildlife Service Recovery Permit # 179013-1 issued under Section 10(a)1(A) of the Endangered Species Act, authorizing take (locating and monitoring nests) of the Least Bell's Vireo, although the survey methodology did not require implementation of the permit (no take of the vireo occurred or was expected to occur). Mr. Werner was one of the primary biological monitors working on the EPA Radiological Study from 2010 to 2012 and was familiar with the EPA activities and biological surveys that had previously been conducted in the habitat areas.

Survey methodology followed the protocol described in *Least Bell's Vireo Survey Guidelines* (USFWS 2001). Eight surveys were conducted 10 to 11 days apart from April 10 to June 21 (Table 1). Surveys were conducted between dawn and 11:00 am under fair weather conditions. The biologist slowly walked the edges and the interior of the woodland, recording all avian species by sight and sound (Table 2) and making frequent stops to listen for vireos. A pair of Leica 10x42 binoculars was used for visual identification of avian species. James Anderson, biologist at Envicom Corporation, accompanied Mr. Werner during six of the eight surveys.

Habitat Area 1

An intermittent stream and an associated buffer in Subarea 5B was initially described as potential least Bell's vireo habitat in the Biological Assessment for the EPA Radiological Study (HGL and Envicom 2010a) and is shown in Figure 1. Because this patch bordered a larger, more suitable habitat patch to the south, the biologist delineated Habitat Area 1 as the above-described patch on Area IV (Subarea 5B), and approximately 600 linear feet of riparian vegetation on Area III (Figure 2). The survey area totaled approximately 8 acres, which included the riparian corridor and surrounding upland vegetation. The patch within Area IV was a sparsely vegetated intermittent channel dominated by coyote brush (*Baccharis pilularis*), with associated arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), mule fat (*Baccharis salicifolia*), coast live oak (*Quercus agrifolia*), and non-native grasses and forbs (Figure 3). This patch had been trimmed during EPA activities in 2010 (HGL and Envicom 2010b). The patch within Area III consisted of a more extensive thicket of willows with a dry streambed (Figure 4). This second patch was outside of the EPA trimming footprint.

Habitat Area 2

Habitat Area 2 was described by HGL and Envicom (2011) and was located mainly within Area IV (Subarea 6), extending peripherally into Area III (Figure 5). The survey area totaled approximately 6 acres, which included the riparian corridor and surrounding upland vegetation. This area was located in a small canyon surrounded by sandstone outcrops. The canopy layer consisted of willows and coast live oak snags apparently burned in the 2005 Topanga Fire (HGL and Envicom 2010a) above a dense understory of mule fat, poison oak (*Toxicodendron diversilobum*), yerba santa (*Eriodictyon crassifolium*), and non-native Italian thistle (*Carduus pycnocephalus*) (Figure 6). The streambed at this site contained standing water on 10 April and 20 April, 2012, but was dry thereafter. Most of Habitat Area 2 had already been lightly trimmed during EPA activities in 2011 (HGL and Envicom 2011). The southern,

downstream, portion of Habitat Area 2 was part of a relatively extensive stand of mule fat located upstream of a perennial wetland within Area III (Figures 5, 7).

Results

Least Bell's Vireo

No least Bell's vireos were detected.

Brown-headed Cowbird

Only three brown-headed cowbirds were observed during the survey. Single female cowbirds were observed in Habitat Area 2 on 20 April and 30 April. A male cowbird was observed in this area on 11 June. These low numbers and the lack of parasitism observed during nesting bird surveys associated with the EPA project (HGL and Envicom 2011) suggest that cowbird parasitism rates may be low within Area IV.

Special-status Species

Two California Department of Fish and Game (CDFG) Watchlist species (CDFG 2011) were observed during the survey: Cooper's hawk (*Accipiter cooperii*) and rufous-crowned sparrow (*Aimophila ruficeps*), which was presumably the *A. r. canescens* subspecies due to its geographic location. An inactive nest strongly resembling that of a Cooper's hawk was located in a coast live oak in Habitat Area 1 on 30 April. An adult Cooper's hawk was keeping near the nest site on that day, but follow-up visits confirmed that the nest remained inactive. Four USFWS Bird Species of Conservation Concern (CDFG 2011) were observed during the survey: Allen's hummingbird (*Selasphorus sasin*), Nuttall's woodpecker (*Picoides nuttallii*), oak titmouse (*Baeolophus inornatus*), and Lawrence's goldfinch (*Spinus lawrencei*), and an oak titmouse nest was observed in Habitat Area 1 on 20 April. Four species on the American Bird Conservancy's U.S. Watch List of Bird of Conservation Concern (CDFG 2011) were observed: Costa's hummingbird (*Calypte costae*), Nuttall's woodpecker, oak titmouse, and Lawrence's goldfinch.

Conclusion

A protocol survey for least Bell's vireo in approximately 14 acres previously identified as potential vireo habitat was conducted from 10 April to 21 June, 2012, with negative results. The least Bell's vireo is considered absent from Area IV and the NBZ in the context of the EPA Radiological Study.

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Tables and Figures

Table 1. Summary of Least Bell's Vireo survey dates, times, and conditions.

Survey #	Date	Time		Temp. (°F)		Clouds (%)		Wind (mph)	
		Start	Stop	Start	Stop	Start	Stop	Start	Stop
1	10-Apr	0805	1030	60	73	0	0	5	5
2	20-Apr	0745	1000	70	78	0	0	0	0
3	30-Apr	0930	1100	60	70	60	5	0	0
4	10-May	0800	1020	65	75	90	10	0	5
5	21-May	0815	1010	75	82	0	0	0	5
6	31-May	0800	1008	70	78	0	0	0	0
7	11-Jun	0820	1018	65	75	100	0	2	5
8	21-Jun	0800	1020	60	70	100	90	0	0

Table 2. List of avian species observed during the 8 survey visits. Bold type indicates a special-status species, as listed in CDFG's *Special Animals List* (CDFG 2011).

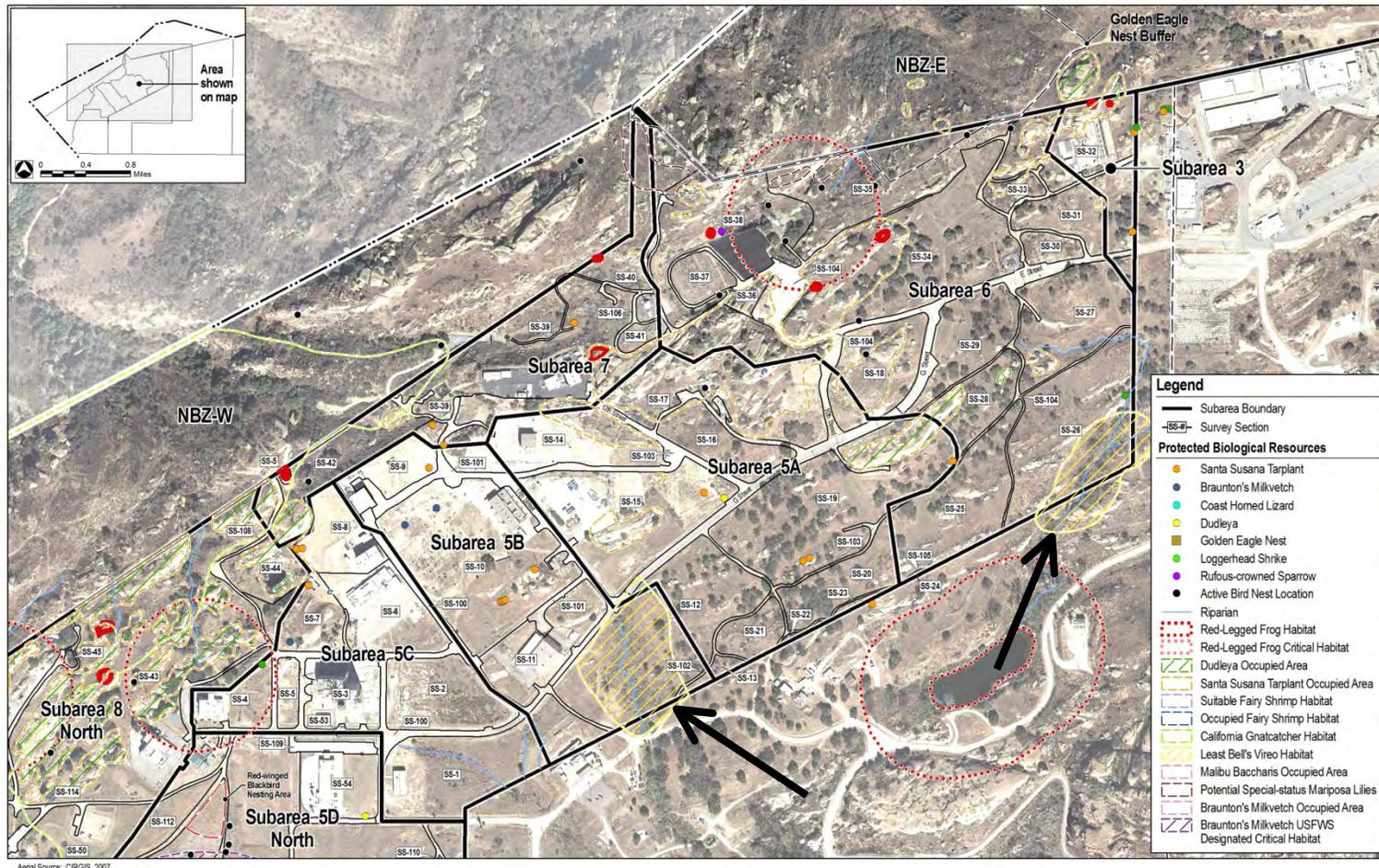
Common Name	Scientific Name
California quail	<i>Callipepla californica</i>
Great blue heron	<i>Ardea herodias</i>
Turkey vulture	<i>Cathartes aura</i>
Cooper's hawk¹	<i>Accipiter cooperii</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
Killdeer	<i>Charadrius vociferus</i>
Rock pigeon	<i>Columba livia</i>
Mourning dove	<i>Zenaida macroura</i>
White-throated swift	<i>Aeronautes saxatalis</i>
Anna's hummingbird	<i>Calypte anna</i>
Costa's hummingbird²	<i>Calypte costae</i>
Allen's hummingbird³	<i>Selasphorus sasin</i>
Acorn woodpecker	<i>Melanerpes formicivorus</i>
Nuttall's woodpecker^{2,3}	<i>Picoides nuttallii</i>
Western wood-pewee	<i>Contopus sordidulus</i>
Black phoebe	<i>Sayornis nigricans</i>
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Western kingbird	<i>Tyrannus verticalis</i>
Warbling vireo	<i>Vireo gilvus</i>
Western scrub-jay	<i>Aphelocoma californica</i>
American crow	<i>Corvus brachyrhynchos</i>
Common raven	<i>Corvus corax</i>
Violet-green swallow	<i>Tachycineta thalassina</i>
Cliff swallow	<i>Petrochelidon pyrrhonota</i>
Oak titmouse^{2,3}	<i>Baeolophus inornatus</i>
Bushtit	<i>Psaltriparus minimus</i>
White-breasted nuthatch	<i>Sitta carolinensis</i>
Rock wren	<i>Salpinctes obsoletus</i>
Canyon wren	<i>Catherpes mexicanus</i>
Bewick's wren	<i>Thryomanes bewickii</i>
House wren	<i>Troglodytes aedon</i>
Ruby-crowned Kinglet	<i>Regulus calendula</i>
Wrentit	<i>Chamaea fasciata</i>
California thrasher	<i>Toxostoma redivivum</i>

Common Name	Scientific Name
European starling	<i>Sturnus vulgaris</i>
Phainopepla	<i>Phainopepla nitens</i>
Orange-crowned warbler	<i>Oreothlypis celata</i>
Common yellowthroat	<i>Geothlypis trichas</i>
Townsend's warbler	<i>Setophaga townsendi</i>
Wilson's warbler	<i>Cardellina pusilla</i>
Spotted towhee	<i>Pipilo maculatus</i>
California towhee	<i>Melospiza crissalis</i>
Rufous-crowned sparrow¹	<i>Aimophila ruficeps</i>
Lark sparrow	<i>Chondestes grammacus</i>
Song sparrow	<i>Melospiza melodia</i>
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>
Blue grosbeak	<i>Passerina caerulea</i>
Lazuli bunting	<i>Passerina amoena</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Hooded oriole	<i>Icterus cucullatus</i>
House finch	<i>Carpodacus mexicanus</i>
Lesser goldfinch	<i>Spinus psaltria</i>
Lawrence's goldfinch^{2,3}	<i>Spinus lawrencei</i>

¹ CDFG: Watchlist Species

² American Bird Conservancy: United States Watch List of Birds of Conservation Concern

³ USFWS: Bird Species of Conservation Concern



SANTA SUSANA FIELD LAB AREA IV RADIOLOGICAL STUDY - 4TH QUARTERLY AND 1ST ANNUAL BIOLOGICAL MONITORING REPORT

Special-Status Biological Resources Observed During Clearance Surveys / Monitoring - Map 2 of 3

ENVICOM CORPORATION

0 200 400 Feet

5

Figure 1. Two least Bell's vireo habitat areas surveyed in 2012 (yellow hashed polygons with black arrows) on Area IV of Santa Susana Field Laboratory. Source: HGL and Envicom (2011).



Figure 2. Aerial photo of least Bell's vireo Habitat Area #1 in Area IV (Subarea 5B) and Area III.



Figure 3. Least Bell's vireo Habitat Area #1 in Area IV (Subarea 5B).



Figure 4. Least Bell's vireo Habitat Area #1 in Area III.



Figure 5. Aerial photo of least Bell's vireo Habitat Area #2 in Area IV (Subarea 6) and Area III.



Figure 6. Least Bell's vireo Habitat Area #2 in Area IV (Subarea 6).



Figure 7. Least Bell's vireo Habitat Area #2 looking south toward Area III.

APPENDIX 5

**2012 CALIFORNIA GNATCATCHER
HABITAT ASSESSMENT & PROTOCOL SURVEY**

**2012 CALIFORNIA GNATCATCHER
HABITAT ASSESSMENT & PROTOCOL SURVEY
OF
POTENTIAL HABITAT WITHIN
SANTA SUSANA FIELD LABORATORY
AREA IV AND THE NORTHERN
BUFFER ZONE**



GRIFFITH WILDLIFE BIOLOGY

**2012 CALIFORNIA GNATCATCHER
HABITAT ASSESSMENT & PROTOCOL SURVEY
OF
POTENTIAL HABITAT WITHIN
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AREA IV AND THE NORTHERN BUFFER ZONE**

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Final Letter Report 4 July 2012

EXECUTIVE SUMMARY

The Santa Susana Field Laboratory in southeastern Ventura County, California, contains coastal sage scrub habitat of the type preferred by the federally threatened Coastal California gnatcatcher (*Polioptila californica ssp. californica*). As indicated in Figure 1 of the Biological Opinion for the Santa Susana Field Laboratory Area IV Radiological Survey issued by the United States Fish and Wildlife Service, approximately 151 acres in Area IV and the contiguous undeveloped Northern Buffer Zone (NBZ) to the north and west were identified as potentially suitable habitat for the gnatcatcher. A habitat reconnaissance survey was subsequently conducted in 2010 within areas initially identified as suitable habitat. During this reconnaissance, direct field observation determined that less than 100 of the 151 acres were suitable gnatcatcher habitat. In accordance with the Biological Opinion, presence-absence gnatcatcher protocol surveys were performed each year of project activities (2010, 2011, and 2012) within the 100 acres of identified suitable habitat, consisting of six individual surveys conducted at least one week apart during each annual nesting period from March 15 to June 30. Each annual protocol survey was performed using identical methodology. This report documents the findings of the protocol survey conducted in 2012. A cumulative list of all birds incidentally observed during all three annual protocol surveys as well as the initial reconnaissance survey was compiled and is presented below as Table 2.

No California gnatcatchers or California gnatcatcher nests were detected during the 2010, 2011, or 2012 gnatcatcher protocol surveys. In addition to the six requisite protocol surveys, J.T. Griffith spent nine (9) days on site in 2012 (April 11 through 18) within the survey area and within the protocol survey period as a biological monitor; the absence of gnatcatchers was further verified during these field days.

Sixty-four (64) species of birds were incidentally observed; none were state or federal endangered, threatened, or candidate species. Four species of regional concern (described as declining but no legal protections in place) and one federally protected species were noted as follows:

- Four California Species of Special Concern birds
 - Northern harrier (*Circus cyaneus*)
 - Cooper's hawk (*Accipiter cooperii*)
 - Horned lark (*Eremophila alpestris*) (if it was the California horned lark *E. a. actia*)
 - Rufous-crowned sparrow (*Aimophila ruficeps*) (if it was the southern California rufous-crowned sparrow *A. r. canescens*)
- One Federally Protected Species
 - Golden eagle (*Aquila chrysaetos*)

INTRODUCTION

The Santa Susana Field Laboratory is located in southeastern Ventura County, California (Figure 1). A 151-acre area within Area IV and the undeveloped NBZ to the west and north was identified by the United States Fish and Wildlife Service (USFWS) in the Biological Opinion for the Santa Susana Field Laboratory Area IV Radiological Study Project as containing sage scrub habitat potentially suitable for the federally threatened coastal California gnatcatcher (*Polioptila californica ssp. californica*) (Figure 2). In 2010, 2011, and 2012, Griffith Wildlife Biology (GWB) was retained by Envicom Corporation to conduct a habitat reconnaissance survey to determine what portions within these 151 acres contained gnatcatcher-quality coastal sage scrub and ecotonal grassland-coastal sage and chamise chaparral-coastal sage habitat, then conduct focused gnatcatcher presence-absence protocol surveys within the identified gnatcatcher habitat (GWB 2010, GWB 2011). In addition, a cumulative list of all birds incidentally observed during the reconnaissance and protocol surveys was compiled.

California Gnatcatcher (*Polioptila californica*)

The California gnatcatcher (*Polioptila californica*) is a small, gray and black songbird that inhabits scrub plant communities from coastal southern California to the tip of the Baja California Peninsula. Three subspecies are recognized. The northernmost nominate race, the coastal California gnatcatcher (*Polioptila californica californica*), is a resident of coastal sage scrub and adjacent ecotonal habitats from southern Ventura County southward to northwestern Baja California, Mexico near El Rosario at approximately 30 degrees North latitude. It is generally found at elevations below 500 meters (Atwood and Bontrager 2001). The species was originally described as distinct in 1881 but was subsequently lumped with the black-tailed gnatcatcher (*Polioptila melanura*) until Atwood (1988) concluded that it was specifically distinct based on differences in ecology, behavior, and distribution. This finding was adopted by the American Ornithologist's Union (AOU 1989). The subspecies was listed as threatened by the USFWS in March 1993 due to habitat loss and fragmentation occurring in conjunction with urban and agricultural development and brood parasitism by the brown-headed cowbird (*Molothrus ater*) (58 FR 16742). Loss of historical habitat is estimated to be 70 to 90% (Michael Brandman Associates 1991, USFWS 1997). Critical habitat composed of 13 units encompassing 207,890 ha or 513,707 acres (12% Federal, 5% local and State, 83% private) was designated by the USFWS in 2000 (Krofta 2000). The life history, management, and research priorities for the California gnatcatcher are presented in Atwood and Bontrager (2001).



Male gnatcatcher on nest.



Gnatcatcher eggs.

The coastal California gnatcatcher occurs almost exclusively in coastal sage scrub (CSS) (Woods 1928, Atwood and Bontrager 2001), although they are sometimes found in adjacent chaparral, riparian, grassland, or disturbed habitats with which CSS is ecotonal (USFWS 1997, Campbell et al. 1998). CSS is a distinctive vegetation type with several subassociations including Venturan, Riversidian, and Diegan in Southern California (Atwood 1993), the southern limit of which coincides with the southern limit of the range of *P. c. californica* and several other birds, plants, terrestrial insects, land mammals, reptiles, and scorpions at about 30 degrees north latitude in Baja California (Atwood 1991). CSS is composed of relatively small (<2m) mostly summer-deciduous shrubs and succulent plants, including California sagebrush (*Artemisia californica*), various species of sage (*Salvia spp*), flat-topped buckwheat (*Eriogonum fasciculatum*), sunflower (*Encelia californica*), prickly pear and cholla cactus (*Opuntia spp*) and various species of goldenbush (*Haplopappus spp*), often interspersed with larger shrubs such as Mexican elderberry (*Sambucus mexicana*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*) and lemonade berry (*Rhus integrifolia*) (O'Leary 1990, Holland 1986). The plant composition of gnatcatcher territories may vary widely, but California sagebrush is the dominant or co-dominant shrub (by percent cover) in 85% or more of territories (Griffith and Griffith 1997, Atwood and Bontrager 2001).

CSS dominated by black sage (*Salvia mellifera*), white sage (*Salvia apiana*), and lemonadeberry (*Rhus integrifolia*) supports few or no gnatcatchers, especially in coastal areas (Atwood and Bontrager 2001). The use of adjacent and mixed/ecotonal habitats (chaparral, grassland, riparian, and disturbed) by gnatcatchers is well documented and may be critical for dispersal, foraging, and shelter, especially during drought or inclement weather (USFWS 1997, Griffith and Griffith 1997).

CSS habitat has been in noted decline since the 1940s and is now considered the most endangered habitat type in the continental United States due to past and planned urbanization and agricultural activities (Grinnell and Miller 1944, Westman 1981 and 1987, Michael Brandman Associates 1991). Only about 20% of the remaining CSS habitat in southern California occurs on public lands, of which more than 60% (approximately 52,500 acres) is on military reservations, according to the California Department of Fish and Game (CDFG 1993).

The breeding season of the California gnatcatcher extends from about 15 February, when the breeding plumage black cap of the male becomes apparent, through 30 August, when the cap disappears (although in some cases, remnants of the cap are discernable well into fall) (Atwood and Bontrager 2001). By mid to late summer, unmarked hatch-year gnatcatchers are not reliably distinguishable in the field from adults by differences in plumage, vocalization, or behavior. Hatch-year gnatcatchers typically form pair bonds and defend territories by October, some as early as July (Atwood and Bontrager 2001).

The peak of gnatcatcher nesting activity is mid-March to mid-May at Marine Corps Base Camp Pendleton (Griffith and Griffith 1997) and elsewhere (Atwood and Bontrager 2001). Annual changes in the timing of breeding plumage and first nests (plus or minus 14 days or so) may be related to precipitation and temperature (Atwood and Bontrager 2001).

Both adults participate in nest building. Incubation of 3 to 5 eggs requires 14 days. The young fledge at 12 to 16 days of age and are capable of independence within 3 to 4 weeks, although they may remain associated with the family group for several months. Before nesting, breeding pairs are vocal and relatively easy to detect. During incubation, pairs are often less vocal, more secretive, and more difficult to detect. Adults feeding nestlings and fledglings, family groups, and juveniles are vocal, visible, and relatively easy to detect.

Gnatcatchers are extremely fecund. Pairs may attempt 10 nests and raise 3 broods during a single breeding season (Atwood and Bontrager 2001). At Camp Pendleton in 1993-1994, about 70% of nests were successful, producing 3.5 young per nest; 84% to 98% of pairs were successful (produced at least 1 fledgling); and 13% to 17% of pairs attempted double-brooding (Griffith and Griffith 1997). Other sites report nest success rates of 32% to 74%, 1.6 to 4.4 young per pair, and double-brooding rates of 15% to 52% (Atwood and Bontrager 2001). Gnatcatchers are known to have higher success rates, more young per nest, and increased survivorship in large, higher quality habitat adjacent to riparian habitat, as opposed to in small, poor-quality, islands of habitat (Atwood et al. 1998, GWB 2008).

Cowbird brood parasitism impacts gnatcatcher productivity, especially in areas near cowbird foraging areas (dairies) and near host-rich and cowbird-preferred riparian habitat (Braden 1992, Bontrager et al. 1995, Griffith and Griffith 2000). Only 2% of gnatcatcher eggs hatch after a parasitism event (Braden et al. 1997). No gnatcatcher fledglings are known from parasitized nests. Gnatcatchers may be scarce or absent from some areas containing suitable habitat due to persistent and prolonged cowbird parasitism (Atwood 1993), but since the peak of gnatcatcher nesting occurs before the major dispersal of cowbirds from wintering flocks to breeding habitat in mid April, and because cowbirds prefer host-rich riparian habitat over coastal sage scrub, cowbird parasitism does not appear to be driving the species to extinction (Griffith and Griffith 1993 and 2001, Braden et al. 1997). In Riverside County, Braden et al. (1997) and Griffith and Griffith (1993) reported parasitism rates increasing from 0 to 47% (n=107) and 71% (n=7), respectively, before and after cowbird dispersal from wintering flocks into coastal sage scrub habitat in April and May.



Gnatcatcher habitat.



Gnatcatcher nest with cowbird egg.

California gnatcatchers have benefited from cowbird control, sometimes as a result of trapping performed on behalf of the endangered Least Bell's vireo (*Vireo bellii ssp. pusillus*) (USFWS 1998, Griffith and Griffith 2000). In Orange County, California, gnatcatcher nest parasitism rates of 59% (n=17) before cowbird trapping were reduced to less than 1% (n>200) after trapping was initiated (for the vireo) (Miner et al. 1998). Atwood (1990) recorded a 20% parasitism rate (n=5) among the gnatcatcher at Camp Pendleton in 1980. Cowbird control has been performed annually at Camp Pendleton since 1983 (40 traps base-wide since 1988) (GWB 2004). No parasitism of the California gnatcatcher has been observed on base since 1980 (n>200) (Tutton 1991, Griffith and Griffith 1997, Atwood et al. 1999, GWB 2004, GWB 2006).

Gnatcatchers suffer winter mortality associated with prolonged periods of rainfall and cold (Mock 1998, Atwood and Bontrager 2001). After such periods, gnatcatcher populations can be reduced by as much as 54% (ERCE 1990, Atwood et al. 1998, Erickson and Miner 1998). As a result of their fecundity and potential for high weather-related mortality, gnatcatcher numbers can fluctuate significantly between years even in stable habitat (Atwood and Bontrager 2001).

STUDY AREA

The study area consists of CSS and ecotonal sage scrub blended with chamise and or grassland habitats within the 151-acre reconnaissance area (gnatcatcher habitat subjected to focused protocol surveys totaled less than 100 acres) (Figure 2). The best habitat occurred on the east-facing slopes in the western portion of the survey area. Essentially, all areas containing one or more components of sage scrub including but not limited to California sagebrush (*Artemisia californica*), various other sages (*Salvia spp*), and buckwheat (*Eriogonum spp*), and that were not pure oak woodland or chamise chaparral or recently burned areas vegetated solely with grass and annuals or recently brushed areas, were surveyed. Over much of the study area brush was trimmed (during the non-breeding season) in 2010-2011 to allow for gamma scanning and soil sampling. Because sage scrub is adapted to re-sprouting after fires, and because the ground and roots were not disturbed, this clearing activity will have only short-term effect; probably within about 3 to 5 years the habitat will once again be capable of supporting gnatcatchers.

METHODS

The surveys were conducted between 4 April and 16 May per the survey protocol (USFWS 1997). In brief the protocol requires: 6 replicate surveys at least one week apart from 15 March to 30 June, from dawn to 1200 hours, during fair weather and good survey conditions. A recording of the gnatcatcher song was played to solicit responses and verify absence. The start/stop data for time, temperature, cloud cover, and wind speed for each replicate survey are listed in Table 1.

In addition to the protocol surveys, J.T. Griffith spent nine (9) field days (typically 0700 hours to 1500 hours) as a biological monitor in the study area during the protocol survey period (GWB field notes).

A comprehensive list of incidentally observed bird species was compiled during the focused bird surveys. Reporting is per AOU taxonomic order.

All surveys were performed by J. T. Griffith under the authority of USFWS Endangered Species Permit # TE-758175 and a Memorandum of Understanding between Griffith Wildlife Biology and the California Department of Fish and Game. At all times on site, Mr. Griffith was escorted by M. Birney or L. Spinoza of HGL.

RESULTS

Focus Species No California gnatcatcher individuals or pairs or nests were detected during the 2010-2012 protocol surveys or 2012 biological monitoring.

Cumulative Bird List Sixty-four (64) bird species were detected during the reconnaissance and protocol surveys (Table 2).

Birds of Regional Concern (declining but no legal protections in place) Four California Species of Special Concern (CSC: CDFG 2003) birds: Northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), horned lark (*Eremophila alpestris*) (if it was the California horned lark *E. a. actia*), and rufous-crowned sparrow (*Aimophila ruficeps*) (if it was the southern California rufous-crowned sparrow *A. r. canescens*); one Federally Protected Species: Golden eagle (*Aquila chrysaetos*) (Table 2).

DISCUSSION AND CONCLUSIONS

The Santa Susana Field Laboratory site contains coastal sage scrub and ecotonal sage scrub habitats suitable for the California gnatcatcher. Six replicate protocol surveys were performed between 4 April and 16 May 2012, and an additional nine (9) field days were spent in the study area during the protocol survey period. The surveys were exhaustive and comprehensive and concluded that the California gnatcatcher is considered absent from the survey area in the 2012 breeding season. It is additionally noted that the species was also considered absent during the two previous breeding seasons based on protocol surveys conducted in 2010 and 2011.

RECOMMENDATIONS

1. To the extent feasible, limit direct and indirect impacts to the CSS and ecotonal sage scrub habitats on site.
2. Repeat gnatcatcher presence-absence protocol surveys in future years if habitat impacts are expected.

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Figure 1. Santa Susana Field Laboratory, Ventura County, California, project location.

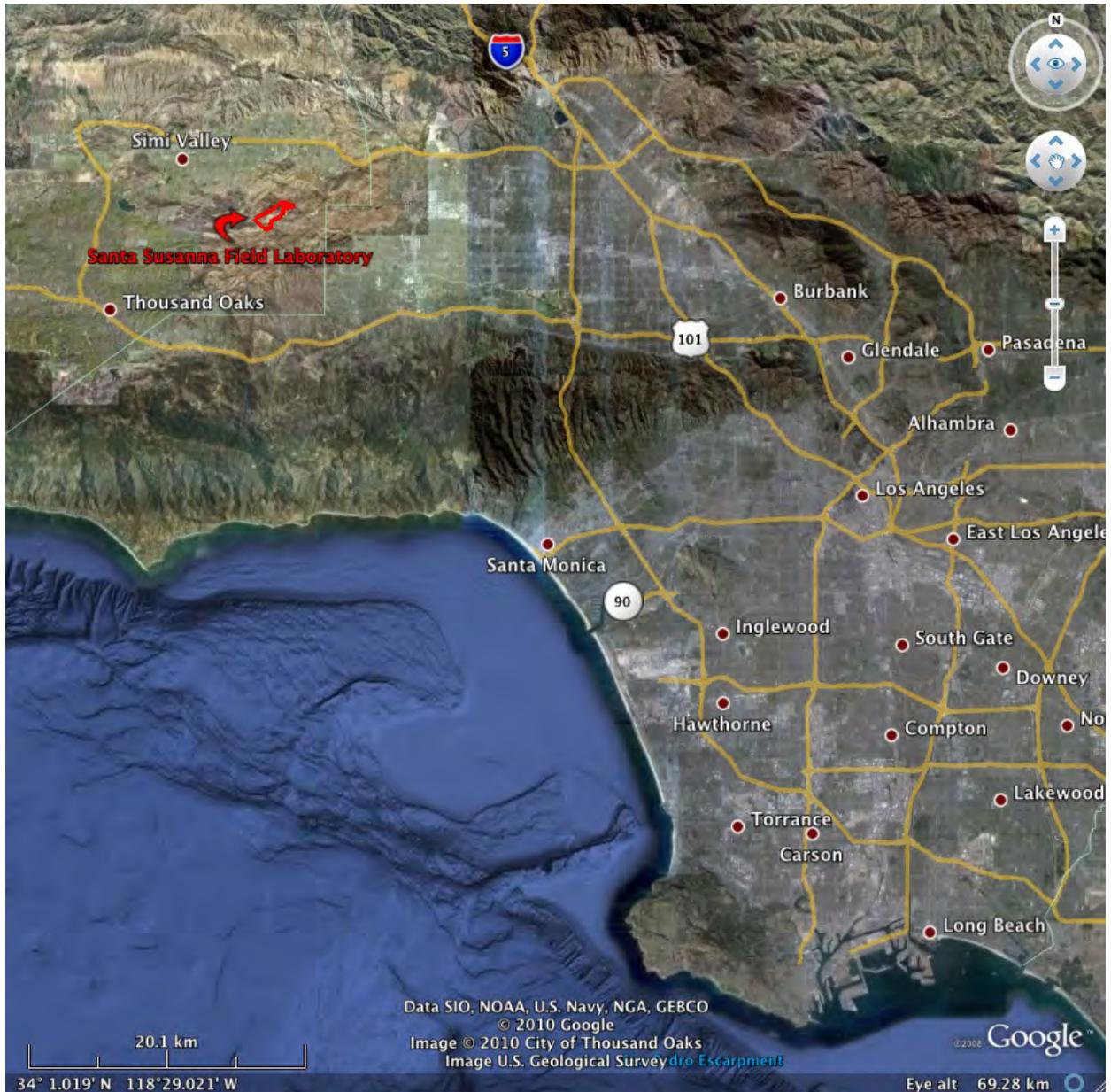
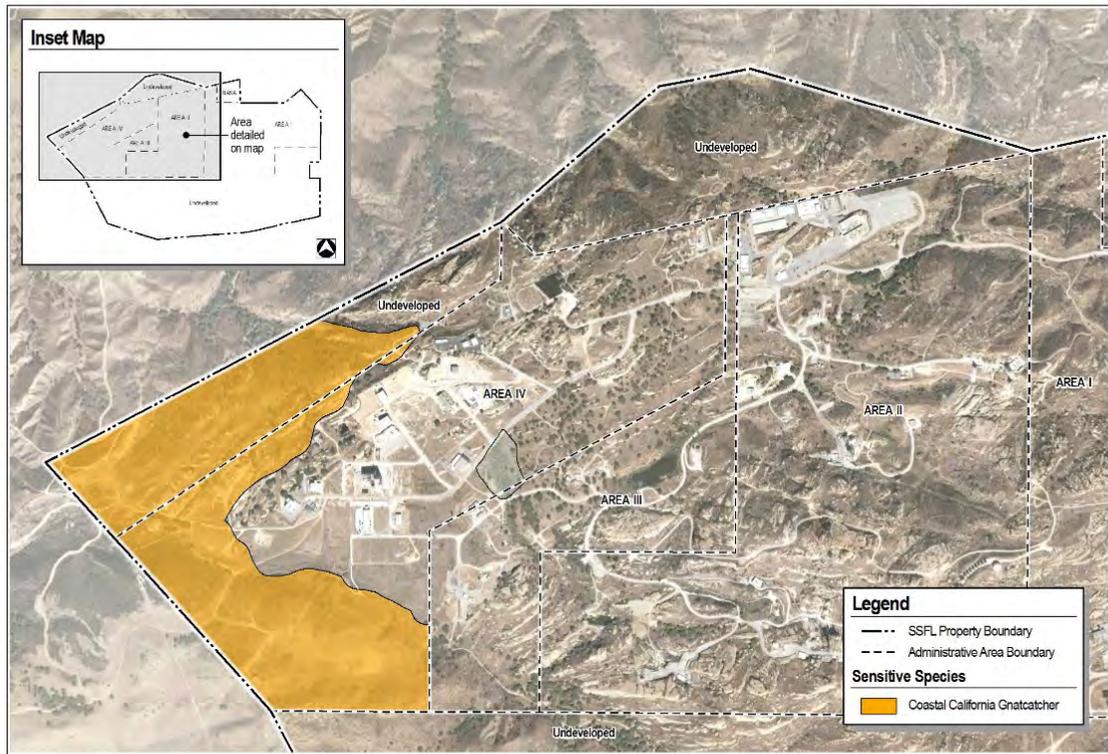


Figure 2. Santa Susana Field Laboratory potential habitat for the coastal California gnatcatcher.



SANTA SUSANA FIELD LABORATORY AREA IV RADIOLOGICAL STUDY - BIOLOGICAL ASSESSMENT

Potential Habitat for Coastal California Gnatcatcher

ENVICOM CORPORATION

0 570 1,140 Feet



Source: Envicom Corporation

Table 1. Dates, times, and conditions of California gnatcatcher protocol surveys at Santa Susana Field Laboratory, Ventura County, California, in 2012.

Date	Time		Temperature		Cloud Cover		Wind avg mph	
	Start	Stop	Start	Stop	Start	Stop	Start	Stop
4-Apr	730	930	55	66	60	20	2-Jan	0-1
11-Apr	730	1000	48	57	100	100	0	1
18-Apr	715	1030	63	78	0	0	0	1
25-Apr	730	1030	55	64	0	0	2	0-2
9-May	730	1030	62	72	0	0	0	1
16-May	700	1000	60	76	0	0	0	0-1

All surveys conducted by John T. Griffith (ES #TE-758175).

Survey Protocol Requirements:

California Gnatcatcher 6 surveys at least one week apart from 15 March to 30 June.

Survey location:

Santa Susanna Field Laboratory
 Ventura County, CA
 USGS 7.5 minute Qu (Calabasas)

Temperature Units:

Fahrenheit

Table 2. Cumulative list of avian species incidentally observed during habitat reconnaissance and focused protocol surveys at Santa Susana Field Laboratory, Ventura County, California, in 2012.

Turkey vulture		Rock wren	
Northern harrier	CSC2	Bewick's wren	
Cooper's hawk	CSC 3	House wren	
Red-tailed hawk		Canyon wren	
American kestrel		Blue-gray gnatcatcher	
Golden eagle	FP	Wrentit	
California quail		Northern mockingbird	
California gull		California thrasher	CSC A
Rock dove		Phainopepla	
Mourning dove		European starling	
Greater roadrunner		Orange-crowned warbler	
White-throated swift		Yellow-rumped warbler	
Black-chinned hummingbird		Black-headed grosbeak	
Anna's hummingbird		Blue grosbeak	
Allen's hummingbird		Lazuli bunting	
Acorn woodpecker		Spotted towhee	
Nuttall's woodpecker		California towhee	
Northern flicker		Rufous-crowned sparrow	
Western wood pewee		Song sparrow	
Pacific slope flycatcher		White-crowned sparrow	
Black phoebe		Savannah sparrow	
Say's phoebe		Lark sparrow	
Ash-throated flycatcher		Red-winged blackbird	
Cassin's kingbird		Western meadowlark	
Horned lark	CSC A	Brown-headed cowbird	
Tree swallow		Hooded oriole	
Cliff swallow		House finch	
Barn swallow		Lesser goldfinch	
Scrub jay		Lawrence's goldfinch	
American crow		American goldfinch	
Common raven		House sparrow	
Oak titmouse			
Common bushtit			

64 species

No State or Federal Endangered, Threatened, or Candidate Species

4 California Species of Special Concern (CSC, CA Dept. of Fish & Game 2003)

1 Federally Protected (FP) species

Note: horned lark and rufous-crowned sparrow observed are likely the listed subspecies per date, location, and appearance, but identification is not definitive.

