

## **APPENDIX A**

### **Baseline Biological Resources Evaluation El Monte County Park**

**BASELINE BIOLOGICAL RESOURCES  
EVALUATION  
EL MONTE COUNTY PARK**

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# Executive Summary

ICF Jones & Stokes conducted a baseline biodiversity study of the County of San Diego's El Monte County Park (Park) to provide the Department of Parks and Recreation with biological data to develop a Resource Management Plan (RMP) including Area Specific Management Directives (ASMDs). To provide a baseline evaluation of biological resources, the following studies were conducted by ICF Jones & Stokes: (1) vegetation community mapping; (2) rare plant surveys; (3) pitfall trap arrays to sample amphibians, reptiles, and small mammals; (4) avian point counts; (5) nocturnal bird surveys; (6) small mammal trapping; (7) acoustic sampling and roost surveys for bats; (8) a track and sign survey for medium-to-large mammals; and (9) a camera station survey for medium-to-large mammals.

This report summarizes all survey methodologies and data collected during the 2008 survey period (February through September). This report also includes recommendations for adaptive management, including management and monitoring of vegetation communities and sensitive plants and habitats, control of invasive non-native plants, and management and monitoring of sensitive wildlife species, including species covered by the South County Multiple Species Conservation Program (MSCP) Subarea Plan.

The Park includes approximately 87.8<sup>1</sup> acres of native oak woodland and coastal sage scrub habitats as well as developed Park areas all of which are within the South County MSCP. The undeveloped portion of the Park is mapped as Pre-approved Mitigation Area (PAMA) and is considered an MSCP Preserve.

The current surveys documented five land cover types and 232 species that were detected throughout the Park. Our surveys detected 137 plant species, 52 bird species, 20 mammal species (13 bats, three small mammals, and four medium and large bodied mammals), seven herptiles (one amphibian and six reptiles), and 15 invertebrate species. This list includes 18 sensitive species of which three wildlife species are MSCP-covered species.

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<sup>1</sup> The assessor's parcel data list the Park to be 87.7 acres; however, calculations generated from the GIS data show the Park as 87.8. Therefore, this report references the property as 87.8 acres.

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# Chapter 1

## Introduction

Baseline biological resources surveys were conducted within the County of San Diego's (County) El Monte County Park (Park). The purpose of these surveys was to identify and map existing resources and to provide the Department of Parks and Recreation with information as the basis for development of a Resource Management Plan (RMP) including Area Specific Management Directives (ASMDs). These ASMDs will provide the management framework for monitoring and managing the Park's resources.

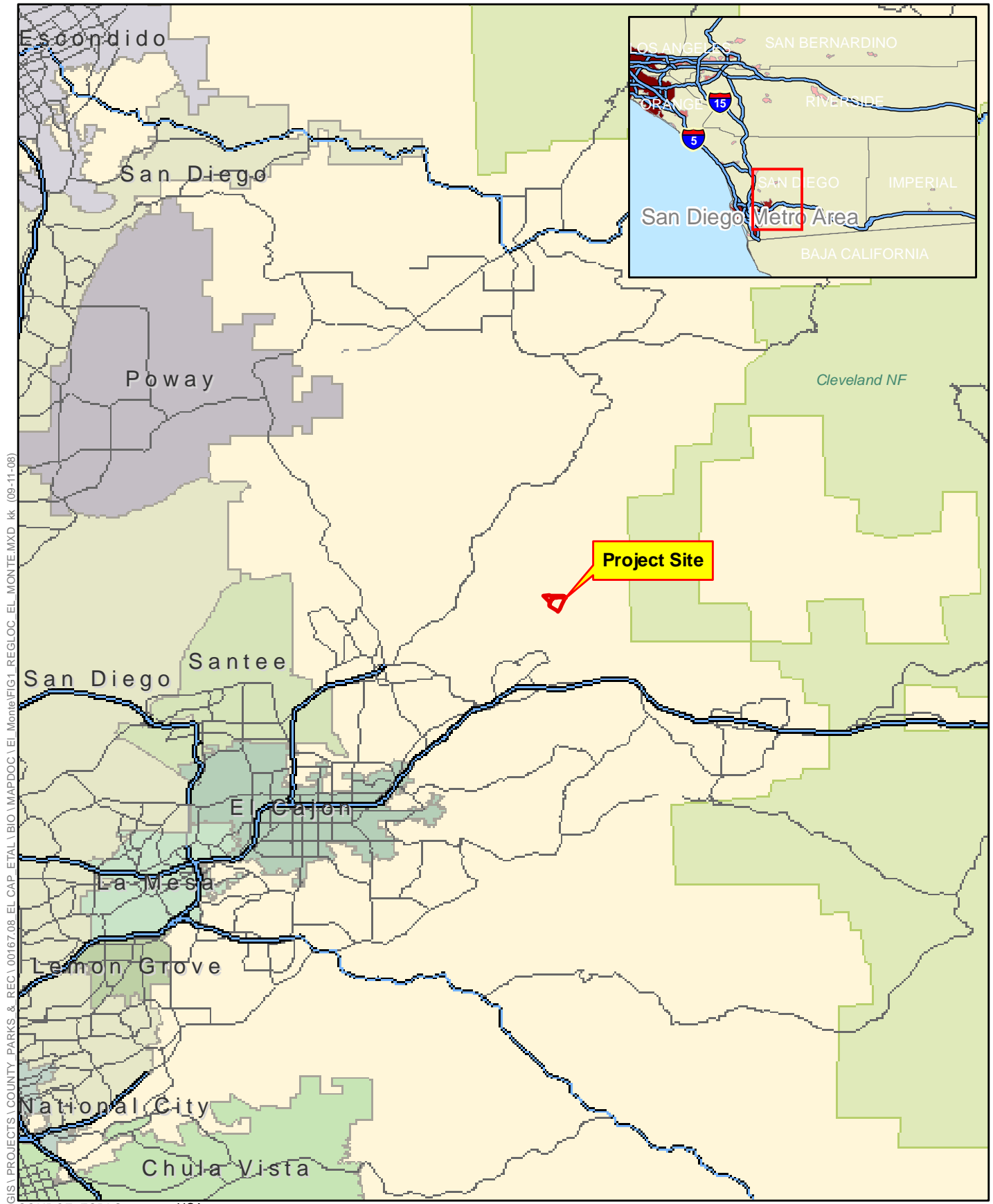
The Park is located approximately 3.5 miles north of Lakeside and north of the unincorporated township of Blossom Valley. The 87.8<sup>1</sup> acre Park is located in the upper San Diego River watershed, approximately two (2) miles east of the El Capitan Reservoir (Figures 1 and 2). The Park is situated on the outer floodplain of the upper San Diego River and rises to steep north and south-facing slopes to the south with occasional large granitic boulders and exposed bedrock. It is surrounded by El Capitan Mountain and the El Capitan Reservoir to the east, portions of El Capitan Preserve to the north and west, and sparse residential development associated with the communities of Blossom Valley to the south and Lakeside to the southwest. El Monte Road bisects the Park and provides direct access through a gate to the fenced and developed portion of the Park. The remainder of the Park is undeveloped. Elevations within the Park range from approximately 900 feet (ft) (274 meters (m)) above mean sea level (AMSL) in the disturbed habitat near the river to nearly 1,600 ft (487 m) AMSL along the ridge tops.

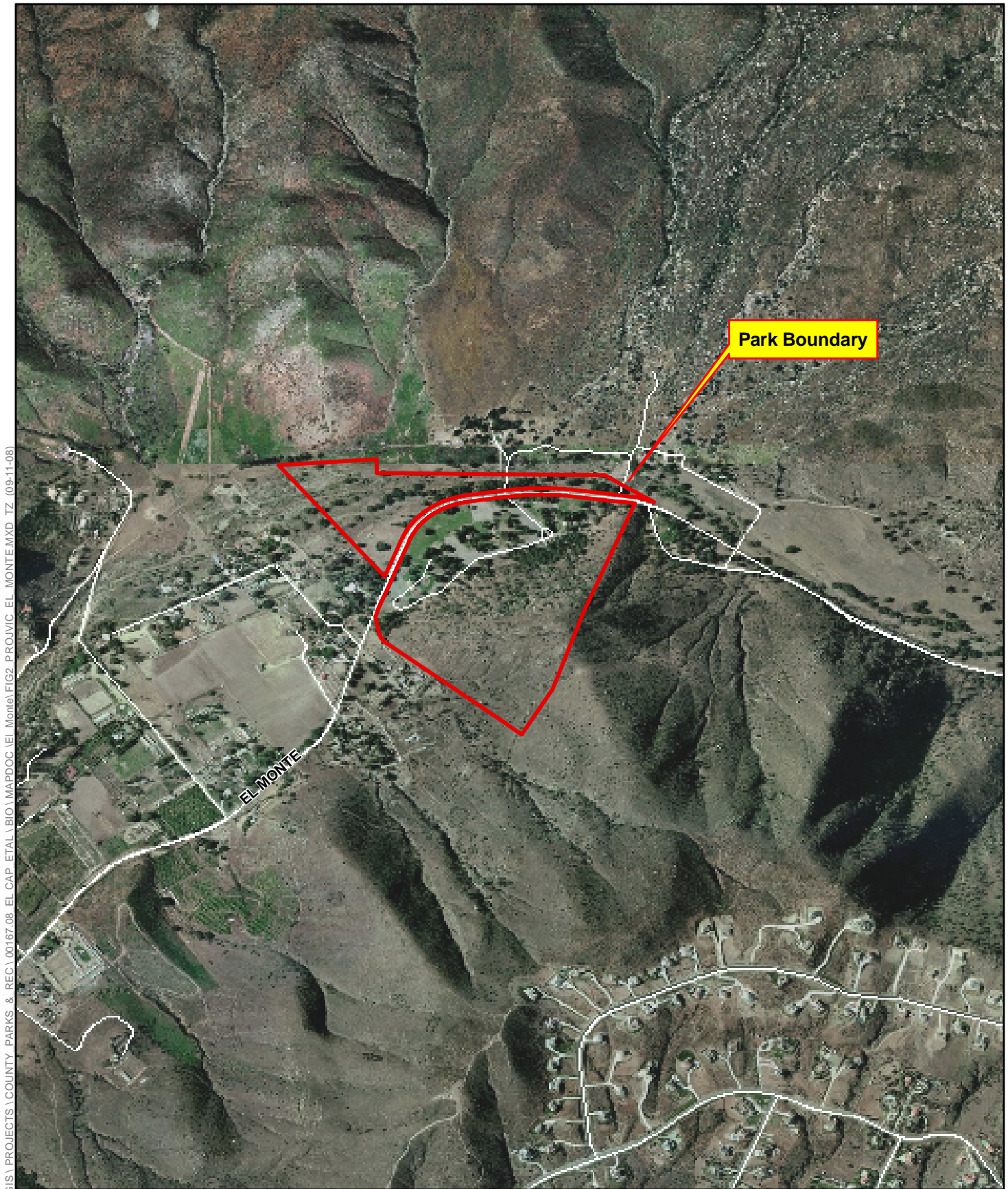
To provide a baseline evaluation of biological resources, the following studies were conducted by ICF Jones & Stokes: (1) vegetation community mapping; (2) rare plant surveys; (3) pitfall trap arrays to sample amphibians, reptiles, and small mammals; (4) avian point counts; (5) nocturnal bird surveys; (6) small mammal trapping; (7) acoustic sampling and roost surveys for bats; (8) a track and sign survey for medium-to-large mammals; and (9) a camera station survey for medium-to-large mammals.

In addition to methods and results for all the work conducted, this report provides recommendations and options for the County to preserve and enhance the biological resources present within the Park.

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<sup>1</sup> The assessor's parcel data list the Park to be 87.7 acres; however, calculations generated from the GIS data show the Park as 87.8. Therefore, this report references the property as 87.8 acres.





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SOURCE: ESRI Imagery



## **2.1 Physical and Climatic Conditions**

### **2.1.1 Geography**

The natural setting within the Park is characterized by a steep coastal foothill and a ravine through which the San Diego River flows. The Park is situated west of El Capitan Reservoir and mostly south of the San Diego River, although a portion of the river is within the Park boundary. Elevations within the Park range between approximately 1,600 ft (487 m) AMSL along a hill on the southern portion of the Park, and approximately 900 ft (274 m) AMSL in the northern portion of the property within the San Diego River. The closest sources of fresh water are the San Diego River and El Capitan Reservoir.

### **2.1.2 Soils**

Several general soil associations are represented within the Park: the Cieneba series, Ramona series, Riverwash, and Tujunga series (Figure 3).

The ***Cieneba*** soil series is characterized as excessively drained very shallow to shallow, coarse sandy loams and is usually found on slopes ranging from 5 to 75 percent. It is found on uplands at elevations ranging from 200 to 3,000 ft (61 to 914 m). It is usually 10 to 20 inches (in) thick and medium acidic. The topsoil ranges from brown to dark brown in color and coarse sandy loam to sandy loam in texture. The layer below this consists of weathered granodiorite. Runoff is high to very high and the erosion hazard is very high. Boulders and rock outcrops are present. Specific soil types found at the Park consist of Cieneba coarse sandy loam (30 to 65 percent slopes, eroded) and Cieneba-Fallbrook rocky sandy loam (30 to 65 percent slopes, eroded). These soils occur south of the river valley on steep slopes and support open coast live oak woodland and coastal sage scrub vegetation.

The ***Ramona*** soil series is characterized by well-drained, very deep sandy loams over sandy clay loam sub-soils. These soils are usually found on mountainous uplands at elevations ranging from 200 to 1,800 ft (61 to 547 m). These soils

developed from weathered granitic rocks and the surface layer is usually a yellowish-brown sandy loam 17 in thick over brown sandy clay over 40 in thick. The specific soil type found in the Park is Ramona sandy loam (9 to 15 percent slopes, eroded). This soil type occurs near the southern boundary of the Park and supports coastal sage scrub vegetation.

***Riverwash*** occurs throughout the stream channel and immediate stream banks along the San Diego River. Riverwash is a term used to collectively refer to unconsolidated sands, gravels, and cobbles that occur in intermittent or ephemeral stream courses. This soil is often barren due to scour from storm events. This soil type occurs exclusively along the river bottom and supports sparse woodland, annual grassland and coastal sage scrub vegetation.

The ***Tujunga*** soil series is characterized by very deep excessively drained sands derived from recent granitic alluvium, and is usually found on slopes ranging from 0 to 5 percent. These soils are located on alluvial fans and floodplains between sea level and 1,500 ft (457 m). The surface layer is usually brown sand approximately 14 in thick, over pale brown coarse sand over 60 in thick. Permeability is rapid in this soil and runoff is very slow. The specific soil type found in the Park is Tujunga sand (0 to 5 percent slopes). These soils occur on the outer floodplain of the upper San Diego River and support riparian woodland and oak woodland within the Park.

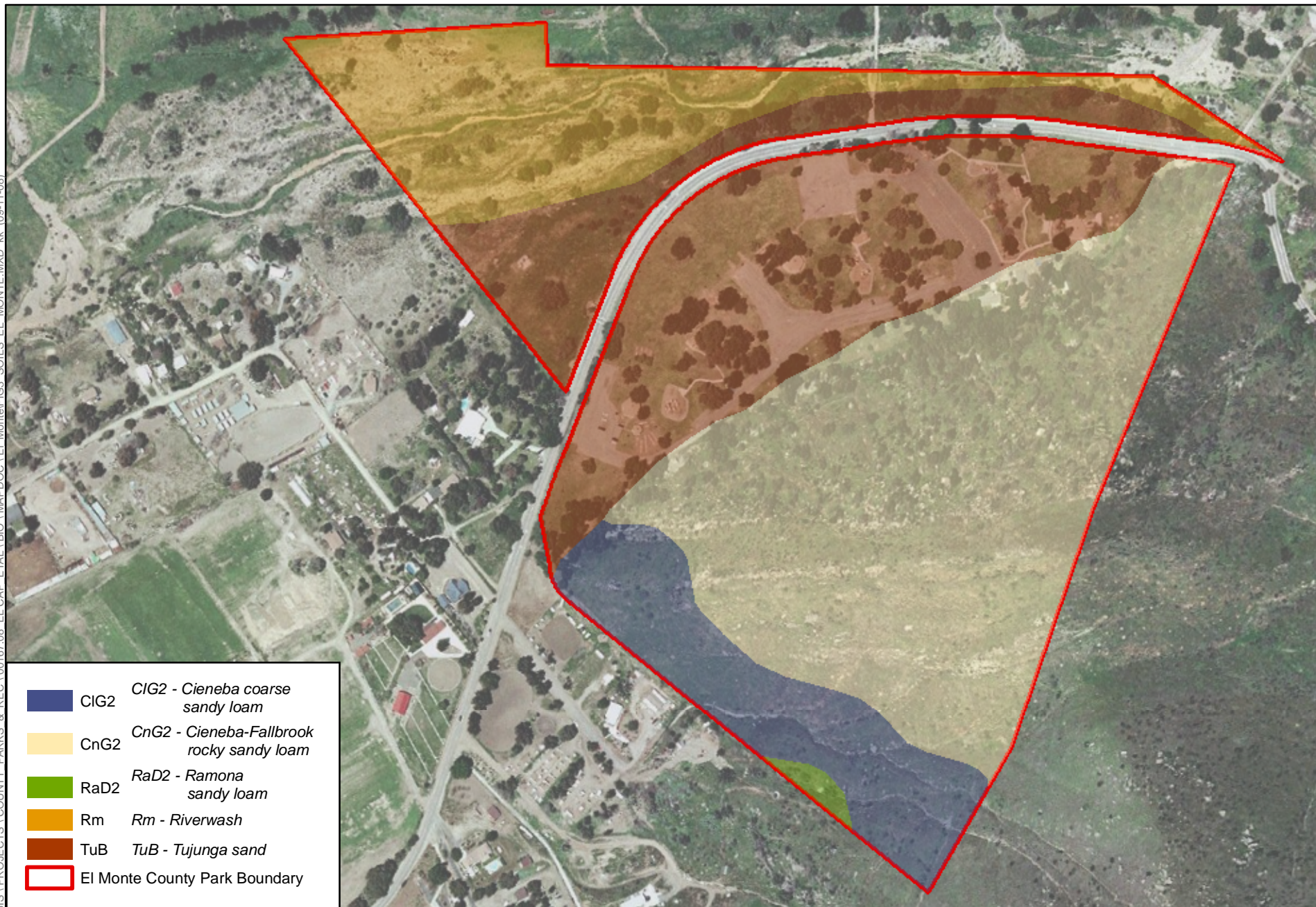
## 2.1.3 Climate

A semi-permanent, Pacific high-pressure cell, located over the Pacific Ocean, dominates San Diego County's climate. This cell drives the dominant on-shore circulation, maintaining clear skies for much of the year. Summers at the Park are typically warm and dry, while winters are mild with occasional rain (USDA 1973).

The Western Regional Climate Center, a collaborative project of the National Oceanic and Atmospheric Agency and the Desert Research Institute, maintains a climatic station in El Cajon – the closest such station to the Park. Data collected at the station indicate that the area experiences a normal mean temperature of approximately 65 degrees Fahrenheit (°F), with a mean maximum temperature of 77.8°F and a mean minimum of 52.4°F. The El Cajon area tends to experience more sunshine than the coastal regions of southern California due to its inland location. In a normal year, precipitation at the Park averages 15-18 inches and falls mostly in the winter and spring (San Diego County Flood Control District 2007).

A predominant feature of the local climate is the sea-breeze/land-breeze cycle. During the daytime, particularly in the summer, on-shore winds move inland with speeds of approximately seven to ten miles per hour (mph). Easterly land breezes of approximately two to four mph often occur at night. Surrounding rugged terrain, which induces turbulence into the airflow, modifies the influence of this cycle. This cycle is also periodically affected by land airflow that

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SOURCE: ESRI Imagery

dominates weather patterns. The most widely recognized of these are the Santa Ana conditions, during which strong, hot and dry easterly winds prevail for two- or three-day periods.

## **2.1.4 Fire Cycles**

The Park is somewhat dominated by coastal sage scrub vegetation, which is naturally maintained by infrequent fires. If the natural fire cycle is suppressed, the coastal sage scrub can become senescent, declining in both health and diversity. If the fire frequency is increased, vegetation could shift towards disturbed grassland habitats or opportunistic pioneering shrub communities. The fire cycles within the area are affected by actions within and adjacent to the Park boundary. Surrounding development and brush management actions associated with urban development have altered the fire cycles throughout most of western San Diego County. According to the County of San Diego fire burn data, the northeastern and southern portions of the Park burned in the 2003 Cedar Fire; the Park has not burned during any other recent fires (SanGIS 2008) (Figure 4).

## **2.1.5 Hydrology**

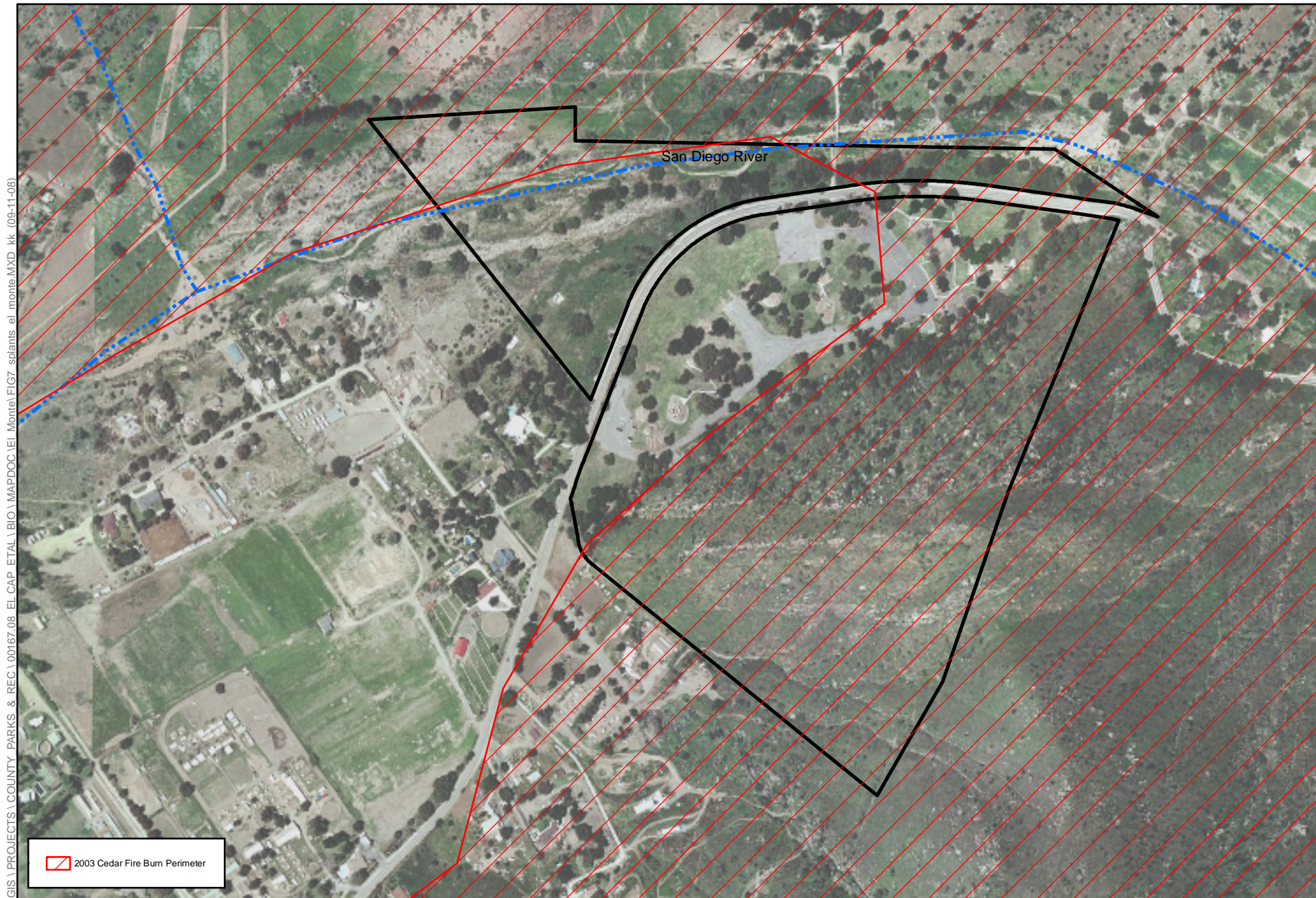
The Park is situated within the San Diego River Watershed area. Designated beneficial uses for the San Diego River and its tributaries include: municipal and domestic supply; agricultural supply; industrial service supply; industrial process supply; contact and non-contact water recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; and rare, threatened, or endangered species habitat (California Regional Water Quality Control Board San Diego Region 2003). Intermittent jurisdictional waters are located along the northern Park boundary and consist of the main low-flow channel of the San Diego River approximately two miles downstream of the El Capitan Reservoir (Figure 4).

## **2.1.6 Trails**

Currently the Park does not contain any formally designated trails. However, the County has plans to install a multi-use trail and equestrian staging area within the Park. This project would include the construction of an approximately one-mile trail linkage within the southern portion of the Park and an equestrian staging area in the northwest area of the Park. The equestrian staging area is expected to be approximately 1.4 acres in size and will be located on a disturbed, former ball field immediately northwest of El Monte Road (Figure 5). The staging area would be unpaved and would include a dirt parking area. A trail would connect the proposed staging area to the Park east of El Monte Road via an existing road crossing. Another portion of the trail would roughly parallel El Monte Road; extend northeast to southwest for a short distance then turn eastward, ascending the slope located along the southern boundary of the Park to connect with an existing trail southeast of the Park. The trail would extend approximately one

mile east of the equestrian staging area with the portion of the proposed trail that extends along El Monte Road being located along the Park fence line.





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SOURCE: ESRI Imagery



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Place names in this report follow both specific names and standards used for mapping by the U.S. Geological Survey (e.g., “Fosters Canyon” rather than Foster’s Canyon). The following sources are followed for taxonomy and nomenclature, including both scientific and standardized English names: Rebman and Simpson (2006) for plants; Arnett (2000) for higher taxonomic categories of invertebrate animals; generally Opler and Wright (1999) or Hogue (1993) for invertebrate species; Collins and Taggart (2002) for amphibians and reptiles; American Ornithologist’s Union (1998 and supplements) for birds; and Baker et al. (2003) for mammals. Where this information differs from MSCP names, we provide the MSCP information parenthetically. For clarity and to differentiate standardized, sourced, English names for species from descriptions (e.g., Yellow Warbler and not any other warbler that is yellow), we follow most published sources of standardized names by capitalizing them; we also include the scientific binomial (from the cited reference) with the first mention of a species in the body of this report.

### 3.1 Vegetation

Prior to conducting surveys for the project, searches of available literature and databases were conducted to determine special-status species previously detected or with potential to occur at the Park and to assess the physical characteristics of the site and surrounding areas. Available data that were reviewed included the California Natural Diversity Database (CDFG 2008), California Native Plant Society Inventory or Rare and Endangered Plants (CNPS 2008), the U.S. Department of Agriculture (USDA) soil survey of the area (USDA 1973), and U.S. Geologic Survey (USGS) topographic maps to identify potential stream courses and other notable topographic features.

Surveys were conducted to categorize and map the plant communities within the Park, map special-status plants, and document all flora observed within the Park (Table 1). During each rare plant survey, ICF Jones & Stokes botanists traversed the study area by meandering transects in an effort to accurately categorize vegetation communities and to identify the locations of any special-status species readily detectable. During these surveys, all plants species detected were recorded (Appendix A)



Vegetation communities were mapped on a “one-inch equals 200 feet” (1:200) scale aerial photograph of the Park in the field and later digitized into a geographic information system (GIS) coverage using ArcGIS software. Mapping included the entire Park; vegetation communities were categorized using standard County classifications (Holland 1986; Oberbauer 2005). All plant species observed were noted, and plants that could not be identified in the field were identified later using taxonomic keys including Beauchamp (1986) and Hickman (1993), or verified with herbarium specimens at the San Diego Natural History Museum.

**Table 1.** Vegetation Mapping and Floristic Inventory Surveys at the Park in 2008

Survey Personnel	Date
Klutz, Korey	02/25/2008
Klutz, Korey	03/03/2008
Klutz, Korey	03/05/2008
Klutz, Korey	03/10/2008
Scott Boczkiewicz	03/18/2008
Borcher, Andrew	03/20/2008
Borcher, Andrew	04/20/2008

Locations of special-status plant populations were mapped using either sub-meter accurate global positioning system (GPS) or recreational grade GPS receivers (accurate from 3 to 16 ft (1 to 5 m)). Groups of individuals were mapped as single points with attribute data including total individuals observed.

## 3.2 Invertebrates

### 3.2.1 Quino Checkerspot Butterfly

A habitat assessment was conducted on March 10<sup>th</sup>, 2008 to determine if focused protocol surveys for the federally endangered Quino Checkerspot Butterfly (*Euphydryas editha quino*) would be appropriate within the Park. Upon completion of the habitat assessment it was determined that due to the dense nature of tree and shrub canopies that it would be unlikely that the Park would support the Quino Checkerspot Butterfly. Furthermore, Quino Checkerspot Butterfly primary host plant Dwarf Plantain (*Plantago erecta*) was not observed within the Park.

## **3.2.2 Other Invertebrates**

No focused studies were performed to inventory invertebrates within the Preserve. However, all invertebrates encountered during other surveys or captured in the pitfall traps associated with the herpetological surveys were identified and recorded in the wildlife table (Appendix B). All unidentifiable invertebrates were photographed, and those photographs were provided to a local entomologist for identification.

## **3.3 Herpetofauna**

ICF Jones & Stokes conducted surveys for herpetofauna (amphibians and reptiles) within the Park from March through July 2008. Terrestrial herpetological surveys were conducted using pitfall trap arrays as outlined in “Herpetological Monitoring Using a Pitfall Trapping Design in Southern California” (Stokes et al. 2001). This design uses a standardized array of pitfall traps, funnel traps, and drift fencing to perform long-term research over a wide geographic area with replicates among site localities, habitats, and environments.

The optimal design for drift fencing includes a three-arm array with seven pitfall traps and three funnel traps. This study’s array design was consistent with this optimal design, and recommendations for array materials and trap construction were followed. As the site temperatures were not excessive during the trapping period, biologists constructed funnel traps with no pitfall trap retreat underneath, as described in the above mentioned protocol.

The selection of the array was based on access, vegetation community, soils, and topology. One array was constructed in the sandy floodplain of the San Diego River on the northern portion of the Park (Figure 5). The location was mapped using GIS technologies.

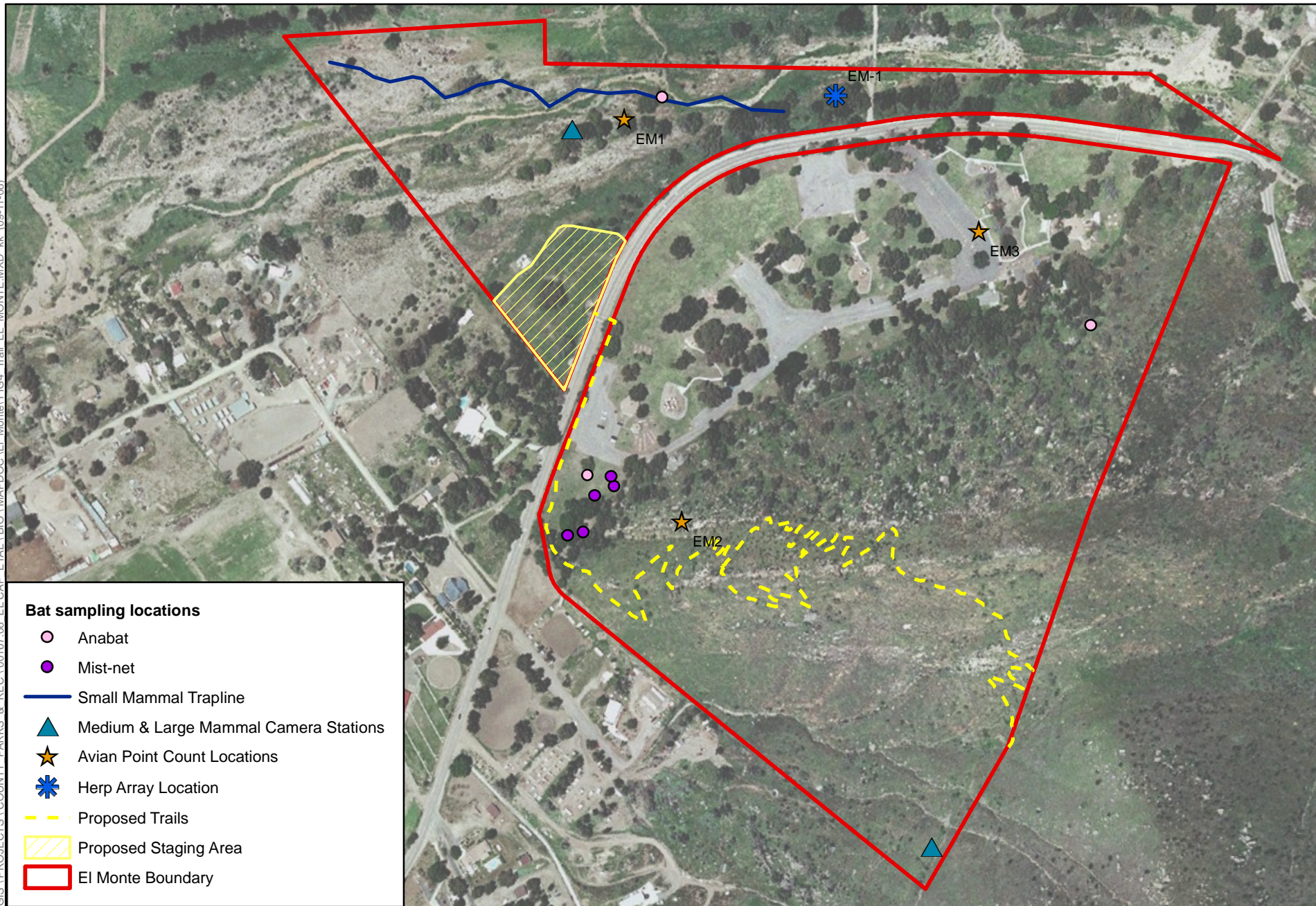
In addition to the array, three 3 X 3 ft boards were placed on the southern portion of the Park. These boards were checked in conjunction with array sampling.

All areas immediately surrounding the arrays and boards were actively searched for herptiles during the array monitoring. Active searching included looking under shrubs and logs. All herptiles captured or observed during active searches and other wildlife surveys were recorded and are included in the wildlife tables in Appendix B.

### **3.3.1 Monitoring Arrays**

Array traps were sampled on four consecutive days once a month beginning in March and continuing through July. The traps were opened on a Monday afternoon, sampled Tuesday through Friday, and closed Friday.

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SOURCE: ESRI Imagery



0 200 400 800 1,200 Feet

Figure 5  
Proposed Trails and  
Biological Inventory Locations  
El Monte County Park



Array traps were checked during early morning hours to ensure that animals were released before daytime temperatures reached levels that could result in mortality. All animals were identified to species and immediately released at the point of capture. Biologists did not handle animals other than to photograph and release them from traps. Because the trapping effort's purpose was to generate an inventory of species present within the Park (i.e., not to assess population sizes or dynamics), individuals were not marked, weighed, or otherwise measured.

Data were recorded on paper and entered into an Excel spreadsheet. Recorded information included species and trap number.

## **3.4 Birds**

### **3.4.1 Diurnal Point Count Survey**

Avian use of the study area was formally documented through the use of three point count stations sampled once a month for six months beginning in April and concluding in September (Figure 5). Point counts provide a repeatable, quantitative sampling method for a broad spectrum of birds that is complementary to the general reconnaissance effort, strengthening the reference information developed on relative abundance of birds.

With sufficient sample size and accuracy, data generated can be evaluated against many hypotheses, even at some later time. At larger time and/or spatial scales the data produced on species richness and turnover can contribute to information on connectivity and response to disturbances. The data set may increase in value over time through its function as reference data contributing to investigation and calibration of both local and larger scale changes.

Point count methods followed recommendations provided in Ralph et al. (1995) for extensive (i.e., station independent) surveys. See that source for detailed discussion of the bases for, and further details on, the methods presented here. A summary of methods, including additions beyond the recommendations, is provided below.

Stations were placed non-randomly to maximize sampling of the study area and to minimize coverage of outside areas. No particular features (e.g., plant community, slope or aspect) were selected for or avoided, primarily due to the broad objectives of the study. Stations were generally located at or near existing trails to facilitate access. Prior to the first counts, all stations were mapped in the field, located using GPS, marked for later identification, and photographed. The view-shed from each point was also photographed in the four cardinal compass directions.

Counts were conducted at each station once a month (April through September). The following recommendations, drawn directly from Ralph et al. (1995), were followed:

- Stations were located at least 820 ft (250 m) apart to ensure independence (i.e., no or minimal overlapping of individual birds detected).
- Counts were conducted at each station for ten minutes (stratified into periods of 3, 2, and 5 minutes) and started quickly upon reaching the point.
- All detected birds were counted except for any judged to have been counted at a previous station.
- Both seen and heard individuals were recorded as long as clearly identified.
- Birds were recorded within each time stratum as: (1) within a 164 ft (50 m) radius from the station, (2) outside the 164 ft (50 m) radius, or (3) flying over. This will allow rudimentary density estimates (without weighting for detectability).
- Individuals were counted at the location where first detected and time of first detection, even when not identified until they have moved or a new time period has begun.
- Adverse weather was avoided (e.g., dense fog, strong winds, extended rain).
- Stations were counted in the same order each time, starting at approximately the same time relative to sunrise, and finishing within four hours after sunrise. Note that counting stations in the same order each time is recommended as the preferred method where the primary purpose of the data is for comparison with future data sets at the same study area. For the current work this was judged to be a higher priority than maximizing comparability with point counts investigating regional issues, which are best counted by randomizing the order of stations within sites and the order of sites within a day.

Additional point count methods used beyond those provided in Ralph et al. (1995) include:

- No attempts were made to attract birds, such as through use of taped vocalizations or “pishing” (imitating avian scold or alarm calls).
- Prior to the initial point counts, the observer practiced distance estimations by locating an object roughly 131 to 197 ft (40 to 60 m) away, assigning it as beyond or closer than 164 ft (50 m). This was done several times on several different days, in different directions, and on varied terrain, but always in open shrub lands similar to that in which the stations were located.
- Birds noted only in flight were additionally recorded as either utilizing the landscape (e.g., actively foraging swallows and raptors, and raptors using thermal updrafts) or not (e.g., birds commuting between distant habitat patches off-site, such as cormorants over an upland site, or birds migrating high overhead).
- Birds were only counted when they had clearly fledged and moved away from their nest. Thus young raptors, which often spend several transitional days immediately adjacent to the nest, would not be counted until at least

located in a part of the tree or cliff they are not expected to have reached by walking or climbing.

- Vocalization type is typically used to categorize birds that are heard only with regard to whether or not they are assumed to be flying over or perched. Thus flight calls for a particular species were used to categorize a bird as in flight, making it important to separate calls accurately by type for species heard only.
- When a flock was only heard, only the number definitely heard was recorded, but when a flock was seen and individuals could not be precisely counted, a best estimate was used. Note that with or without this method, point count censusing assumes that at each station an observer has a good opportunity to see and hear birds and (for comparison among stations) that stations are comparable in this regard.
- No individual birds were ‘discarded’ (not counted) due to lack of identification, unless they are at the level of simply, “unidentified bird” (e.g., an unrecognized call). Instead they should be retained at the highest level of identification supported (e.g., “hummingbird sp.”). Variability among surveyors in such treatment can substantially affect estimates of abundance for some groups, or for overall avian abundance.

Numerous issues that may substantially affect how data are recorded or later interpreted from avian point counts are typically not addressed in published work on suggested methods, in published results, or both. To aid future comparability while also allowing current point counts to provide censusing of a broad spectrum of bird species and behaviors, the following additional discussion of methods is provided.

Birds recorded but not identified to the level of species are counted in the totals and other statistics for individuals but not the totals or statistics for species, except where they clearly represented species otherwise unrecorded. Thus, “raptor sp.” would not add to the overall species total if raptors were also recorded to the species level. However, individual “raptor sp.” would (1) be counted in the total species number for the particular counts on which they occurred, when no other raptors were recorded as identified to species on that count and (2) add to the total abundance of birds in any relevant totals.

“Fly-by” (also called “fly-over”) birds were not generally added to the totals calculated for numbers of individuals or species. This is standard practice for point count analysis (Ralph et al. 1995). The rationale is that such birds are neither making any use of nor influencing the study area. However, totals here do include small numbers of birds judged to be foraging or hunting while in flight over the study area, as they are anticipated to be making use of the study area in the same way that a bird foraging from a perch at the same distance from the observer is making use of the study area. For the current work, most observations of swifts, swallows, and raptors (including Turkey Vultures) are included.

The point counts were designed as '2-interval' counts (referring to distance, not time), using the terminology of Bibby et al. (2000; pp. 101-102). A radius of 164 ft (50 m) was set, and all birds recorded were categorized as inside or outside of the resulting circle. This allows a calculation of density with an adjustment for detectability, but one must guess in applying the detectability adjustment, as this format does not allow testing of how detectability for a given species attenuates across distance (e.g., half normal to a fixed limit). Because the sample size is limited and fragmentation and disturbance make generalizations about distribution across the site tenuous, no density-based estimates of total abundance are provided for any species based on the current results.

### **3.4.2 Nocturnal Bird Survey**

Nocturnal bird surveys were conducted for nighttime birds at the Park. Methods include a combination of walking and slowly driving roads, looking and listening for birds. A moderately powerful headlamp was used to aid identifications.

## **3.5 Small Mammal Trapping**

On March 3 and 5, 2008, ICF Jones & Stokes' biologists Phillip Richards and Korey Klutz assessed the physical conditions, vegetative community distribution, vegetative cover, and accessibility for planning the trapping program for small mammals within the Park. For the purposes of this project, "small mammals" include species in the squirrel, pocket gopher, heteromyid, mouse, rat, and vole families.

Due to budgetary and logistical constraints the design of the trapping program for the Park needed to consider the sampling of three other County Parks/Preserves during the same field effort (Stelzer County Park, and Oakoasis and El Capitan Preserves). The locations of traplines and the number of traps planned during the sampling program were primarily based on the following variables: access constraints (e.g., roads and trails), drive time to and from each Park\Preserve and the habitat diversity within all four Parks\Preserves. Specifically, the trapping plan was designed to assess the small mammal diversity within representative habitats found within the four Parks\Preserves.

The initial small mammal trapping effort consisted of four traplines totaling 200 traps on the three other Parks. Upon completion and review of the initial trapping data it was determined that one more trapline (trapline 5) would be added at El Monte Park. The trapline at El Monte Park was set for four nights for a total of 160 trap nights. This additional trapline was deemed important because it provided site-specific sampling of the Park. The trapline was set and baited during the afternoon of September 22, 2008. Traps were systematically checked in the early morning between 0530 and 0700 from September 23 through September 26, 2008 (Table 2). Trapline 5, located in the northern portion of the Park, consisted of 40 traps (Figure 5, Table 3).

Trapline locations were selected based on three criteria: 1) sampling of different vegetative communities, 2) geographic distribution across the Park complex, 3) and sampling of unique features (e.g., washes). Sequentially numbered 12-in Sherman live traps were set at dusk, approximately 16 to 33 ft (5 to 10 m) apart. Traps were sign set and placed where potential small rodent captures were judged to be most probable. Where rodent sign was not apparent, traps were placed near the base of shrubs. The location of each trap was recorded using a recreational grade GPS receiver (Garmin brand, WAAS enabled). Mixed birdseed was used as bait, and a few seeds were trailed out from the mouth of the trap, usually toward a game trail, burrow, or open area. All traps were checked and closed at dawn.

When animals were captured, each animal was transferred from the trap into a cloth bag. The animals were removed by their napes and identified to species. The sex and reproductive condition of each animal was recorded (i.e., testes scrotal, not scrotal, vagina perforate, not perforate). Any mites, ticks, or other parasites were noted. Digital photos were taken of some specimens. Once the data were recorded onto data sheets, each animal was released where captured. This whole process took several minutes for each capture. The released animals were observed until they moved to the safety of a burrow or clump of vegetation.

**Table 2.** Personnel, Date, Time, and Conditions of the Small Mammal Trapping Program at the Park in 2008

Trapline	Personnel	Date Checked	Time Checked	Conditions
5	Doug Allen	9/23/08	0525	Clear; 51-54°F; Wind 0-1; Last ¼ of Moon Visible; Moderate Humidity
	Cindy Dunn	9/24/08	0550	Clear; 57°F; Wind 0; Last ¼ of Moon Visible; Moderate Humidity
	Doug Allen	9/25/08	0600	Clear; 62°F; Wind 0-1; Last ¼ of Moon Visible; Moderate Humidity
	Doug Allen Cindy Dunn	9/26/08	0553	Clear; 57-59°F; Wind 0-1; Last ¼ of Moon Visible; Moderate Humidity

**Table 3.** Trapline Description

Trapline	Trap Nights	Number of Traps	Physical Description	Vegetative Community
5	4	40	Along ephemeral drainages; soils mostly coarse sand, scattered shrubs mixed with areas of dense non-native grasses, and open areas of bare soil. Area dominated by California Buckwheat ( <i>Eriogonum fasciculatum</i> ).	Diegan coastal sage scrub



## **3.6 Medium and Large Mammals**

For the purposes of this project, “medium and large mammals” include all mammals in the hare, rabbit, beaver, canid, procyonid, mustelid, skunk, cat, and cervid families.

### **3.6.1 Camera Tracking Stations**

Remote camera stations were used to help document the presence of medium and large mammals within the Park. These stations allow for the detection of species that are rarely encountered because of their nocturnal or crepuscular activity patterns. Within the Park, two camera tracking stations were set up at locations that were judged to have a high potential for movement of medium and large mammals (e.g., along the floodplain and the hiking trails; Figure 5).

Each station consisted of one Moultrie infrared digital game camera. These cameras were programmed to record an image every time the motion sensor was triggered. Each image includes an information tag that records the date, time, temperature, camera id, and moon phase. Once in place the cameras were periodically checked and all recorded images were downloaded to a portable hard drive. This method allowed the cameras to record continuously throughout the study period (June 9 - September 4, 2008). The digital images were then interpreted and all animals were identified to the species level.

### **3.6.2 Mammal Track and Sign Survey**

Sections of existing trails and roads were carefully examined for tracks and signs (scat, scrapings, etc.) of medium and large mammals throughout the survey season. These surveys were primarily conducted during the day; however, periodic nighttime surveys were also performed. Daytime surveys involved hiking accessible roads, trail reaches and periodic inspections of hilltops, ridges, drainages, and game trails. Nighttime surveys involved a combination of driving, hiking and listening within the Park, and when feasible, handheld lights were used to identify any wildlife, or wildlife sign observed during the survey. Finally, mammal tracks and signs were also carefully evaluated when detected during other fieldwork.

## **3.7 Bats**

Two types of bat surveys were conducted in this study: passive and active, which consisted of a combination of techniques including acoustic surveys, mist-netting, and roost surveys.

### **3.7.1 Passive Surveys**

Passive surveys using Anabat II bat detectors (Titley Electronics, New South Wales, Australia) were conducted within the Park. Anabat II bat detectors (Anabats) are utilized to detect and record bat echolocation signals (O'Farrell et al. 1999). These calls are then analyzed and most can be identified to the species level by a biologist experienced with bat vocalization identification. Passive Anabats are designed to automatically turn on and off at set times (i.e., sunset and sunrise), and automatically record bat echolocation signals to a compact flash card. Bat echolocation calls are then downloaded from the compact flash card to a computer and analyzed in the laboratory using specialized software designed for the Anabat system called 'Analook' (version 3.3q). An attempt was made to identify all recorded bat echolocation calls and an index of relative bat activity was generated by taking the number of batcall files recorded divided by the number of Anabat nights (number of Anabats times number of recording nights) multiplied by a factor of 10 to reduce use of fractional numbers.

Passive Anabats were used to survey for bats in the Park during three monitoring sessions: spring, summer, and fall 2008. During the three monitoring sessions, a total of two passive Anabat units were placed in the Park to monitor bats for three consecutive nights.

### **3.7.2 Active Surveys**

One active foraging bat survey was conducted using an Anabat bat detector, listening for audible bat echolocation calls, and using mist-nets in an attempt to document additional bat species foraging in the Park. The survey was conducted near a group of oaks located at the southwest section of the Park on August 20, 2008.

## 4.1 Vegetation

Vegetation communities and land cover types present within the Park consist of southern coast live oak riparian woodland, open coast live oak woodland, Diegan coastal sage scrub, disturbed habitat and developed lands (Figure 6, Table 4). A description of the vegetation communities and the dominant plant species detected during the survey are found below. A complete list of plant species observed within the Park is provided as Appendix A.

**Table 4.** Vegetation Communities and Land Cover Types within the Park

Vegetation/Land Cover Type	Acreage
Southern Coast Live Oak Riparian Woodland*	12.9
Open Coast Live Oak Woodland	20.2
Diegan Coastal Sage Scrub	29.2
Disturbed Habitat	3.4
Developed (Includes landscaped areas, parking lots and structures)	22.1
<b>Total</b>	<b>87.8</b>
*includes acreage for non-vegetated channel	

### 4.1.1 Southern Coast Live Oak Riparian Woodland (61310)

Southern coast live oak riparian woodland is a dense evergreen sclerophyllous riparian woodland dominated by Coast Live Oak (*Quercus agrifolia*). According to Holland (1986), it is richer in herbs and poorer in understory shrubs than other

riparian communities. It typically occurs in bottom lands and outer floodplains along larger streams, on fine-grained, rich alluvium.

Coast live oak riparian woodland occurs along both sides of the intermittent stream channel (upper San Diego River) that flows north of the Park. This vegetation community intergrades into Diegan coastal sage scrub and disturbed habitat along the outer margins of the floodplain. Areas mapped as riparian woodland contain an open canopy of oaks with total tree cover near 50 percent. Throughout the canyon bottom, these habitat types include a mixture of mature and sapling oaks. Plant diversity is low within these habitat types due to the dense canopy cover and presence of non-native understory. However, additional native plant species also observed in the understory included herbs and shrubs typical of Diegan coastal sage scrub such as Western Ragweed (*Ambrosia psilostachya*), California Sagebrush (*Artemisia californica*), and California Buckwheat (*Eriogonum fasciculatum*).

## 4.1.2 Open Coast Live Oak Woodland (71161)

Open coast live oak woodland is typically dominated by Coast Live Oak trees that reach 30 to 80 ft (9 to 24 m) in height. The shrub layer within this habitat is usually poorly developed while the herb layer is continuous and typically dominated by non-native grasses. This community typically occurs on north-facing slopes and shaded ravines in southern California (Holland 1986).

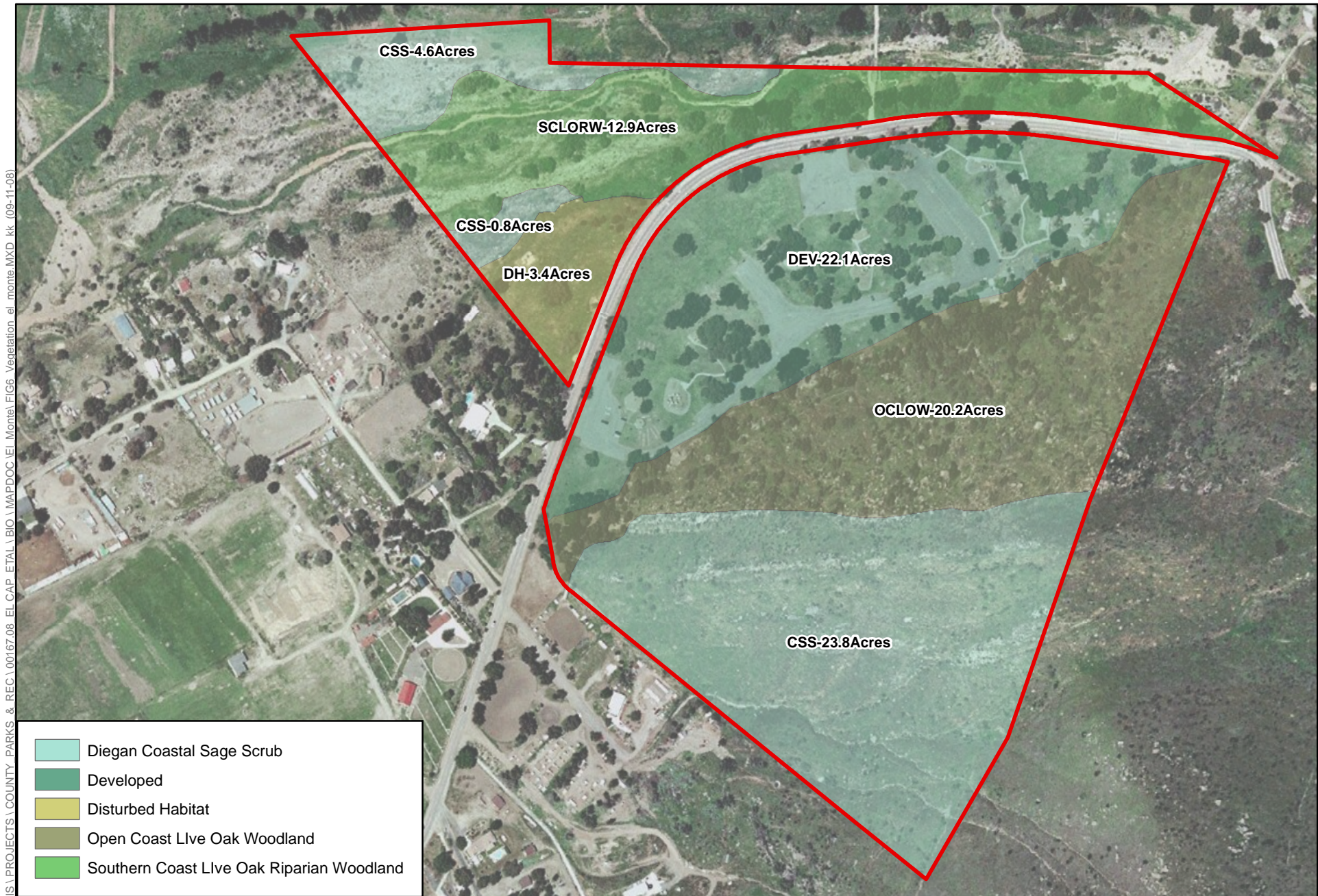
Open coast live oak woodland at the Park is on a steep north-facing slope and consists of scattered oaks with an understory of coastal sage/chaparral scrub. Coast live oak was the dominant plant species with occasional Engelmann Oak (*Quercus engelmannii*) and Toyon (*Heteromeles arbutifolia*) forming the upper canopy. California Sagebrush, Laurel Sumac (*Malosma laurina*), and other native shrubs were also present in this vegetative community.

## 4.1.3 Diegan Coastal Sage Scrub (32500)

Diegan coastal sage scrub is a native habitat type composed of a variety of soft, low, aromatic shrubs characteristically dominated by drought-deciduous species such as California sagebrush, California buckwheat, and sages (*Salvia* spp.), with scattered evergreen shrubs including Lemonadeberry (*Rhus integrifolia*), Laurel Sumac, and Toyon. It typically develops on south-facing slopes and other xeric situations (Holland 1986).

Diegan coastal sage scrub occurs on the south-facing slopes in the southern half of the Park. It also exists north of the San Diego River adjacent to the oak woodlands. The vegetation is highly variable throughout the Park but is generally dominated by sparse California Sagebrush, White Sage (*Salvia apiana*), California Buckwheat, and Deerweed (*Lotus scoparius*). Diegan coastal sage scrub observed on the Park also includes smaller stands of laurel sumac and a large variety of native herbs. Sensitive plants associated with coastal sage





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SOURCE: ESRI Imagery

Figure 6  
Vegetation Communities  
El Monte County Park

scrub within the Park include California Black Walnut (*Juglans californica*) and San Diego Sunflower (*Viguiera laciniata*).

#### **4.1.4 Non-Vegetated Channel (13200)**

Non-vegetated stream channel occurs in ephemeral and intermittent drainages that are dominated by riverwash (composed of unconsolidated cobbles, rocks, and sand), or exposed silt, sand, and clay substrates. Plant growth in non-vegetated stream channels is generally restricted by lack of water availability during much of the year, seasonal scouring effects during high flow conditions, or deposition of heavy rocks and sediments low in organic matter (Holland 1986).

Non-vegetated stream channel, also known as non-wetland waters of the U.S., within the Park include the main channel of the upper reach of the San Diego River. For the purpose of mapping vegetation communities the non-vegetated channel was included in the acreage calculations for southern coast live oak riparian woodland. The river is braided in this area and includes many high-flow channels adjacent to the main low-flow channel. This segment of the San Diego River is under the joint jurisdiction of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), the Regional Water Quality Control Board (RWQCB), and the County.

#### **4.1.5 Disturbed Habitat (11300)**

Disturbed habitat within the Park consists of an area that was formerly used as a ball field.

#### **4.1.6 Developed Land (12000)**

Developed land within the Park consists of existing roads, buildings, and infrastructure.

#### **4.1.7 Special-Status Plant Species**

The following section discusses special-status plant species observed at the Park. A special-status plant species is one listed by federal or state agencies as threatened or endangered; considered to be of special status by one or more special interest groups, such as the California Native Plant Society (e.g., CNPS List 1, 2, 3, and 4 Plant Species); or is included on the County's Sensitive Plant list (Group A, B, C, or D Listed Plants).

Four special status plant species were detected at the Park: Delicate Clarkia (also known as Campo Clarkia) (*Clarkia delicata*), San Diego Sunflower, California Black Walnut and Engelmann Oak.

## Special-Status Plant Species Observed

### **Delicate Clarkia (also known as Campo Clarkia) (*Clarkia delicata*)**

*CNPS List 1B, San Diego County Group A*

Delicate Clarkia is an annual wildflower that is typically found on the periphery of oak woodland habitats and within cismontane chaparral. This species occurs within and adjacent to the southern coast live oak riparian woodland along the northern portion of the Park (Figure 7).

### **Engelmann Oak (*Quercus engelmannii*)**

*CNPS List 4, San Diego County Group D*

Engelmann Oak is commonly found in the foothills between 500 and 4,000 ft (152 and 1,219 m). Growing to 40 ft tall (12 m), this tree has flat, grey-blue-green leaves and tolerates less water than coast live oak. Larger oaks are sometimes found growing in savannah grasslands but it may also occur as a shrubby element within chaparral. Engelmann Oaks are still relatively abundant throughout their range in southern California. Individual Engelmann Oaks were found at the Park interspersed with Coast Live Oaks and this population represents a fairly small grouping.

### **San Diego Sunflower (*Viguiera laciniata*)**

*CNPS List 4, San Diego County Group D*

San Diego Sunflower is associated with arid Diegan coastal sage scrub at a variety of elevations. In San Diego County, its distribution is primarily south of Highway 78 in San Diego County to the international border. The species occurs as a co-dominant shrub within the coastal sage scrub at the southern portion of the Park.

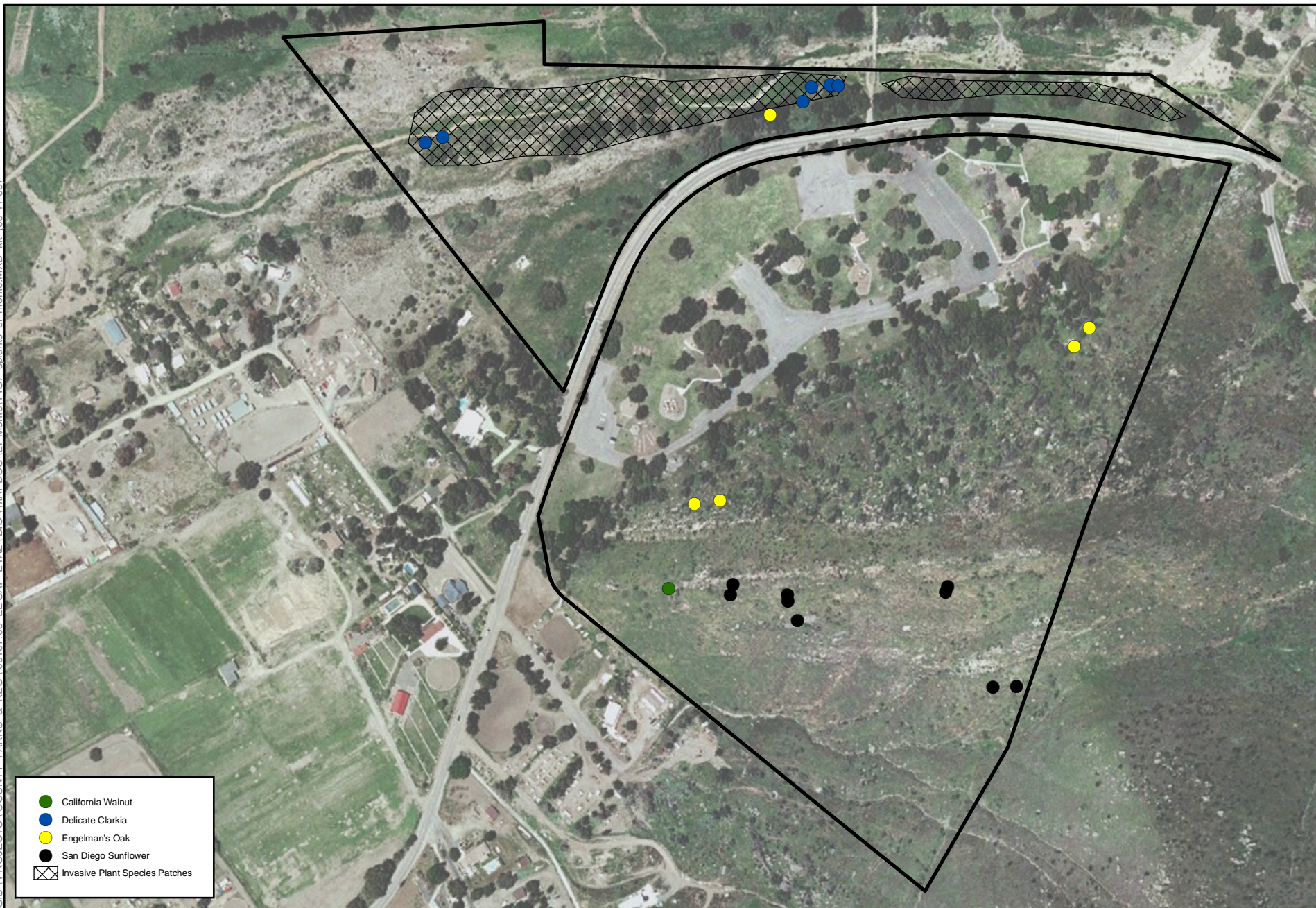
### **California Black Walnut (*Juglans californica*)**

*CNPS List 4, San Diego County Group D*

California Black Walnut is a deciduous tree found in open savannah and woodland habitats at elevations generally below 100 ft (300 m). One sapling Black Walnut was found on the Park on a south-facing slope in the southern portion of the Park. This species was not observed growing in its typical bottomland habitat.



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SOURCE: ESRI Imagery



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Figure 7  
Special Status Plant Species  
El Monte County Park



## **Special-Status Plant Species not Observed but with a High Potential to Occur**

### **Lakeside Ceanothus (*Ceanothus cyaneus*)**

*CNPS List 1B, San Diego County Group A*

Lakeside Ceanothus is a 3 to 10 ft (1 to 3 m) tall shrub species known from an extremely small range (southern Ramona to the foothills of Lakeside) in San Diego County. Typically, this ceanothus occurs in dense, almost impenetrable chaparral with a mix of Chamise and other shrubs such as Manzanita. Potential exists for Lakeside Ceanothus to occur within the Park within the open coast live oak woodland habitat found just south of the developed areas.

## **4.1.8 Invasive Plant Species**

In general, the upland areas within the Park are dominated primarily by native or naturalized plant species. However, within the southern coast live oak riparian woodland several large patches of Tree Tobacco (*Nicotiana glauca*), Tamarisk (*Tamarisk ramosissima*) and Castor Bean (*Ricinus communis*) are intermixed with the native plant species (Figure 7).

## **4.2 Invertebrates**

All invertebrates identified on the Park below the level of family are included in Appendix B.

### **4.2.1 Butterflies**

Butterfly species observed on the Park were limited to three species: Sara's Orangetip (*Anthocaris sara*), Pale Swallowtail (*Papilio eurymedon*), and Common White (*Pontia protodice*). No Quino Checkerspot butterfly or any other special-status butterfly surveys were performed on the Park.

### **4.2.2 Other Invertebrates**

Twelve other invertebrate species were captured in the pitfall traps associated with the herpetological array or observed during other fieldwork (Appendix B). These species were identified in the field, or photographed and provided to a local entomologist to identify. No invertebrate species were collected.

### 4.2.3 Special-Status Invertebrate Species

No special-status invertebrate species are reported for the Park by the CNNDDB (CDFG 2008).

#### Special-Status Invertebrate Species Observed

No special-status butterfly species or other invertebrate species were detected during any surveys.

#### Special-Status Invertebrate Species not Observed but with a High Potential to Occur

No special-status invertebrate species have high potential to occur at the Park.

## 4.3 Amphibians

One amphibian species, Western Toad (*Bufo boreas*), was captured in the pitfall traps during the 2008 sampling at the Park (Appendix B). Other amphibians with potential to occur are limited to Arboreal Salamander (*Aneides lugubris*), Garden Slender Salamander (*Batrachoseps major major*), Common Ensatina (*Ensatina eschscholtzi*), Chorus Frog (*Pseudacris regilla*), California Chorus Frog (*Pseudacris cadaverina*), and Western Spadefoot (*Spea hammondi*).

### 4.3.1 Special-Status Amphibian Species

#### Special-Status Amphibian Species Observed

No sensitive amphibian species were detected during the 2008 surveys.

#### Special-Status Amphibian Species not Observed but with a High Potential to Occur

##### Western Spadefoot (*Scaphiopus [=Spea] hammondi*)

*State Species of Special Concern, San Diego County Group II*

The Western Spadefoot range covers the central portion of northern California, the Great Valley, and Coast Ranges from San Francisco to Baja California (Lemm 2006). Although they spend the great majority of their life outside water, they require temporary rain pools with water temperatures between 48° and 86°F (9° and 30° C) lasting upwards of three weeks. These pools must also lack

predators of eggs and tadpoles such as introduced fishes, bullfrogs, and crayfishes (Jennings and Hayes 1994). Vernal pools are sometimes occupied, but in all cases the species must have access to soils suitable for digging to allow estivation during the dry season. Tolerance of disturbance is high where conditions are otherwise suitable, and the species is sometimes found in pools resulting from landscape modification by man, even adjacent to roads. This species is known to occur in the area and has high potential to occur in pooled areas along the San Diego River.

## 4.4 Reptiles

During the 2008 sampling at the Park, six reptile species were detected (Table 5, Appendix B). One reptile species, Side-blotched Lizard (*Uta stansburiana*), was captured by the pitfall arrays. One species, Western Fence Lizard (*Sceloporus occidentalis*), was observed under two of the three cover boards in the western portion of the Park. Four additional reptile species observed/detected, but not captured in the arrays or under the cover boards, include Southern Alligator Lizard (*Elgaria multicarinata*), Granite Spiny Lizard (*Sceloporus orcutti*), Common Kingsnake (*Lampropeltis getula*), and Gopher Snake (*Pituophis catenifer*).

Based on the presence of suitable habitat, several additional reptile species may also occur on the Park. Potential sensitive species include California Legless Lizard (*Anniella pulchra*), San Diego Horned Lizard (*Phrynosoma coronatum blainvillii*), Coronado Skink (*Eumeces skiltonianus interparietalis*), Orange-throated Whiptail (*Cnemidophorus hyperythrus beldingi*), Coastal Western Whiptail (*Cnemidophorus tigris stejnegeri*), Red Diamond Rattlesnake (*Crotalus ruber ruber*), San Diego Ringneck Snake (*Diadophis punctatus similis*), Coastal Rosy Boa (*Lichanura trivirgata roseofusca*), and Coastal Patch-nosed Snake (*Salvadora hexalepis vigultea*). Other potential species include Western Banded Gecko (*Coleonyx variegatus*), Gilbert's Skink (*Eumeces gilberti*), Granite Night Lizard (*Xantusia henshawi*), Western Racer (*Coluber mormon*), Speckled Rattlesnake (*Crotalus mitchellii*), Southern Pacific Rattlesnake (*Crotalus oreganus*), Western Blind Snake (*Leptotyphlops humilis*), Night Snake (*Hypsiglena torquata*), Coachwhip (*Masticophis flagellum*), Striped Racer (*Masticophis lateralis*), Longnose Snake (*Rhinocheilus lecontei*), Western Blackhead Snake (*Tantilla planiceps*), and Lyre Snake (*Trimorphodon biscutatus*).

**Table 5.** Reptile Species Observed or Captured at the Park in 2008

Scientific Name	Common Name	Special Status
<i>Elgaria multicarinata</i>	Southern Alligator Lizard	
<i>Sceloporus occidentalis</i>	Western Fence Lizard	
<i>Sceloporus orcutti</i>	Granite Spiny Lizard	
<i>Uta stansburiana</i>	Side-blotched Lizard	
<i>Lampropeltis getula</i>	Common Kingsnake	
<i>Pituophis catenifer</i> [ <i>Pituophis melanoleucus</i> ]	Gopher Snake	

#### 4.4.1 Special-Status Reptile Species

##### Special-Status Reptile Species Observed

No special-status reptile species were detected during the surveys and no additional sensitive herptiles are currently recorded for the Park by the CNDDDB (CDFG 2008).

##### Special-Status Reptile Species not Observed but with a High Potential to Occur

###### San Diego Horned Lizard (*Phrynosoma coronatum blainvillii*)

*State Species of Special Concern, San Diego County Group II, MSCP Covered Species*

The San Diego Horned Lizard is a large lizard that historically was found in Kern, Los Angeles, Santa Barbara, and Ventura counties southward to Baja California, Mexico. Horned Lizards inhabit a variety of vegetation communities including coastal sage, annual grassland, chaparral, oak woodland, riparian woodland, and coniferous forest (Stebbins 2003). Loose, fine soils with a high sand content, an abundance of prey and open areas with limited overstory typify suitable habitat for this species (Jennings and Hayes 1994).

The San Diego Horned Lizard's insectivorous diet consists mostly of native Harvester Ants (*Pogonmyrmex* sp.) which make up over 90% of their prey items, but it is an opportunistic feeder that will take other insects including termites, beetles, flies, wasps, and grasshoppers (Stebbins 2003, Jennings and Hayes 1994).

This species has disappeared from about 45% of its former range and a number of factors have led to this decline including habitat fragmentation and degradation, loss of native prey to exotic species, and extensive collection for the curio trade (Jennings and Hayes 1994). The specialized diet of Harvester Ants has made Horned Lizards especially vulnerable to extirpation since the introduction of Argentine Ants (*Linepithema humile*). This species has high potential to occur in the coastal sage and native woodland habitats found at the Park; however, the portion of the San Diego River within the boundary has a large non-native ant population that may preclude this species from that area.

### **Coronado Skink (*Eumeces skiltonianus interparietalis*)**

*State Species of Special Concern, San Diego County Group II*

The Coronado Skink is a medium-sized secretive lizard that is typically found in the moister areas of coastal sage, chaparral, oak woodlands, pinon-juniper, riparian woodlands and pine forests (Jennings and Hayes 1994). Their prey includes small invertebrates found in leaf litter or dense vegetation at the edges of rocks and logs. The Coronado Skink is found along the coastal plain and Peninsular Ranges west of the deserts from approximately San Geronimo Pass in Riverside County south to San Quentin, Mexico (Jennings and Hayes 1994). This species has high potential to occur in the coastal sage, chaparral and native woodlands found at the Park.

### **Orange-throated Whiptail (*Cnemidophorus hyperythrus beldingi*)**

*State Species of Special Concern, San Diego County Group II, MSCP Covered Species*

The Orange-throated Whiptail is a medium-sized lizard that ranges from Southern California (specifically Corona del Mar in Orange County and Colton in San Bernardino County) southward to the tip of Baja California, Mexico. Historically, most populations of the Orange-throated Whiptail were found on floodplains or terraces along streams in brushy areas with loose soil and rocks (McGurty 1980).

Habitat types they are known to use include chaparral, non-native grassland, coastal sage scrub, juniper woodland, and oak woodland. California Buckwheat is an important indicator of appropriate habitat for Orange-throated Whiptails (Dudek 2000). This plant species is a colonizer of disturbed, sandy soils and usually indicates open shrub spacing that is required for foraging and thermoregulatory behavior. Orange-throated Whiptails appear to be dietary specialist with most (> 85%) of its prey being comprised of termites (Dudek 2000). The decline of Orange-throated Whiptails is likely due to loss of habitat to agriculture and urban development. This species has high potential to occur in coastal sage scrub with California Buckwheat.

### **Coastal Western Whiptail (*Cnemidophorus tigris multiscutatus*)**

*San Diego County Group II*

Coastal Western Whiptail is a medium-sized slender lizard that is found in arid and semiarid desert to open woodlands where the vegetation is sparse so running is easy (Stebbins 2003). Its range includes coastal Southern California and western Baja California. The decline of Coastal Western Whiptails is likely due to loss of habitat to agriculture and urban development. This species has high potential to occur in the undisturbed habitats at the Park.

### **Red Diamond Rattlesnake (*Crotalus ruber ruber*)**

#### *State Species of Special Concern, San Diego County Group II*

The Red Diamond Rattlesnake is a large, heavy-bodied rattlesnake that has a wide tolerance for varying environments and can be found in a variety of vegetation types, but it is most commonly seen in areas with heavy brush and cactus, rocks or boulders (Stebbins 2003). The known range extends from San Bernardino County along the coastal and desert slopes southward to Baja California. Adult Red Diamond Rattlesnakes eat mostly squirrels and rabbits, but lizards, specifically the Western Whiptail, are a significant food source for juveniles (Jennings and Hayes 1994). Urban development and the trend towards planting orchards on the steeper rocky hillsides have significantly decreased the amount of appropriate habitat for this species (Jennings and Hayes 1994). This species has high potential to occur on the rocky slopes of the Park.

### **Coastal Rosy Boa (*Charina trivirgata roseofusca*)**

#### *San Diego County Group II*

Coastal Rosy Boas are heavy-bodied snakes that inhabit arid scrublands, semi-arid and rocky shrublands, rocky deserts, canyons, and other rocky areas (Stebbins 2003). This species eats rodents, small birds, lizards, small snakes, and amphibians and kills its prey by constriction. Coastal Rosy Boas occur in southwestern California from the coastal slopes of the San Gabriel and San Bernardino mountains, and across the peninsular ranges into the desert in San Diego County (Stebbins 2003). Threats to this species include habitat degradation and fragmentation from urban development. This species has the potential to occur in any of the habitats found on the Park.

### **Coast Patch-nosed Snake (*Salvadora hexalepis virgutea*)**

#### *State Species of Special Concern, San Diego County Group II*

The Coast Patch-nosed Snake is a medium-sized, slender snake that is a habitat generalist that makes use of whatever vegetative cover is available and thrives in most environments. It is also a generalist in its diet, opportunistically feeding on anything it can overpower including small mammals, lizards, and the eggs of lizards and snakes. The species ranges from Creston in San Luis Obispo County southward into Baja California (Stebbins 2003). This species' decline is likely due to conversion of habitat to development, agriculture or non-native plant species. This species has the potential to occur throughout the Park due to presence of suitable habitat.

## 4.5 Birds

Avian species richness (total species detected) was found to be moderate at the Park. In total, 52 bird species were detected either within the Park boundary or immediately adjacent. Fifty species were detected during the point counts and two additional species were recorded during other fieldwork. These included year-round residents, winter-only species, breeding species that migrate to the Neotropics, and species that are strictly migratory through the Park, neither breeding nor wintering there.

A significant component of the Park's avifauna is species that are closely associated with oak woodlands as the Park supports numerous coast live oak trees. These species include Red-shouldered Hawk (*Buteo lineatus*), Acorn Woodpecker (*Melanerpes formicivorus*), Nuttall's Woodpecker (*Picoides nuttallii*), Ash-throated Flycatcher (*Myiarchus cinerascens*), American Crow (*Corvus brachyrhynchos*), Oak Titmouse (*Baeolophus inornatus*), White-breasted Nuthatch (*Sitta carolinensis*), House Wren (*Troglodytes aedon*), Western Bluebird (*Sialia mexicana*), European Starling (*Sturnus vulgaris*), Orange-crowned Warbler (*Vermivora celata*), Black-headed Grosbeak (*Pheucticus melanocephalus*), and Bullock's Oriole (*Icterus bullockii*).

Woodpeckers construct most of the tree cavities on the Park and these provide vital nest sites for a variety of birds. At least two species of woodpeckers are present and at least seven other avian species detected nest only in cavities, including the County sensitive and MSCP-covered Western Bluebird. Acorn Woodpeckers are resident on the Park and are numerous within the oak trees with a total of 53 observations during the point counts. This species normally stores food in highly visible granaries, consisting of acorns stored in holes. At the Park, wooden poles and oak trees are used as granaries and these are vital to the continuation of the Acorn Woodpecker population on site.

Non-native species detected at the Park include European Starling, House Sparrow (*Passer domesticus*) and Wild Turkey (*Meleagris gallopavo*). Large numbers of European Starlings use the Park for nesting and foraging with a total of 113 observations during point counts. This species will use woodpecker cavities for nests and can have negative effects on large cavity-nesting species (Unitt 2004). A few individuals of House Sparrow and Wild Turkey were observed but neither species currently poses a threat to native avian populations at the Park.

Three raptor species were observed at the Park: Red-tailed Hawk (*Buteo jamaicensis*), Red-shouldered Hawk and Barn Owl (*Tyto alba*). The Red-shouldered Hawk was detected more often than the Red-tailed Hawk. This is expected as the species is more closely tied to oak woodlands. The lack of other hawks and owls commonly associated with oak woodlands may in part be due to the large number of American Crows present at the Park. A total of 116 observations of American Crow were noted during the point counts. This species is notorious for chasing out other raptors, especially potential predators.

There is no reasonable potential for Southwestern Willow Flycatcher (*Empidonax traillii extimus*) or Least Bell's Vireo (*Vireo bellii pusillus*) to occur at the Park beyond rare and brief visits, due to lack of suitable habitat. It is likely that other subspecies of Willow Flycatcher pass through the Park in spring and fall, though they were not recorded during the current work. Coastal California Gnatcatchers (*Poliophtila californica californica*) have historically been documented in the vicinity (Unitt 2004), but the habitat is currently not appropriate for this species.

## 4.5.1 Point Count Results

As detailed in Section 3.4, ten-minute avian point counts were conducted at three stations monthly from April through September 2008 (Figure 5). ICF Jones & Stokes' Wildlife Biologist Kylie Fischer conducted all of the counts.

A total of 50 bird species were detected during the point counts and two additional bird species were recorded during other fieldwork (Table 6). The most regularly encountered and/or most numerous bird species were Mourning Dove (*Zenaida macroura*), Anna's Hummingbird (*Calypte anna*), Acorn Woodpecker, Nuttall's Woodpecker, Black Phoebe (*Sayornis nigricans*), Ash-throated Flycatcher, Western Scrub-jay (*Aphelocoma californica*), American Crow, Bewick's Wren (*Thryomanes bewickii*), House Wren, Oak Titmouse, European Starling, California Towhee (*Pipilo crissalis*), House Finch (*Carpodacus mexicanus*), and Lesser Goldfinch (*Carduelis psaltria*).

**Table 6.** Avian Species Detected at the Park in 2008

Scientific Name	Common Name	Observed or Detected	Special Status	Breeding status
* <i>Meleagris gallopavo</i>	Wild Turkey	O		
<i>Callipepla californica</i>	California Quail	X		pr
<i>Ardea alba</i>	Great Egret	XFB		
<i>Buteo lineatus</i>	Red-shouldered Hawk	X	CSDS Group I	pr
<i>Buteo jamaicensis</i>	Red-tailed Hawk	X		
<i>Charadrius vociferus</i>	Killdeer	X		
<i>Tyto alba</i>	Barn Owl	O	CSDS Group II	
<i>Zenaida macroura</i>	Mourning Dove	X		pr
<i>Geococcyx californianus</i>	Greater Roadrunner	X		
<i>Archilochus alexandri</i>	Black-chinned Hummingbird	X		pr
<i>Calypte anna</i>	Anna's Hummingbird	X		pr
<i>Calypte costae</i>	Costa's Hummingbird	X		?
<i>Seelasphorus sp</i>	Rufous/Allen's Hummingbird	X		



Scientific Name	Common Name	Observed or Detected	Special Status	Breeding status
<i>Melanerpes formicivorus</i>	Acorn Woodpecker	X		pr
<i>Picoides nuttallii</i>	Nuttall's Woodpecker	X		pr
<i>Empidonax difficilis</i>	Pacific-slope Flycatcher	X		
<i>Sayornis nigricans</i>	Black Phoebe	X		pr
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher	X		pr
<i>Tyrannus vociferans</i>	Cassin's Kingbird	X		?
<i>Tyrannus verticalis</i>	Western Kingbird	X		
<i>Aphelocoma californica</i>	Western Scrub-Jay	X		pr
<i>Corvus brachyrhynchos</i>	American Crow	X		CO
<i>Corvus corax</i>	Common Raven	X		
<i>Tachycineta thalassina</i>	Violet-green Swallow	X		
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	X		
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	X		
<i>Baeolophus inornatus</i>	Oak Titmouse	X		pr
<i>Psaltiriparus minimus</i>	Bushtit	X		pr
<i>Sitta carolinensis</i>	White-breasted Nuthatch	X		pr
<i>**Campylorhynchus brunneicapillus sandiegensis</i>	San Diego Cactus Wren (=Coastal Cactus Wren)	X	CSC, MSCP, CSDS Group I	pr (off site)
<i>Salpinctes obsoletus</i>	Rock Wren	X		
<i>Catherpes mexicanus</i>	Canyon Wren	X		pr
<i>Thryomanes bewickii</i>	Bewick's Wren	X		pr
<i>Troglodytes aedon</i>	House Wren	X		pr
<i>Sialia mexicana</i>	Western Bluebird	X	MSCP, CSDS Group II	pr
<i>Chamaea fasciata</i>	Wrentit	X		
<i>Mimus polyglottos</i>	Northern Mockingbird	X		
<i>*Sturnus vulgaris</i>	European Starling	X		CO
<i>Phainopepla nitens</i>	Phainopepla	X		
<i>Vermivora celata</i>	Orange-crowned Warbler	X		
<i>Piranga ludoviciana</i>	Western Tanager	X		
<i>Pipilo maculatus</i>	Spotted Towhee	X		pr
<i>Pipilo crissalis</i>	California Towhee	X		CO
<i>Aimophila ruficeps canscens</i>	Southern California Rufous-crowned Sparrow (=California Rufous-crowned Sparrow)	X	MSCP, CSDS Group I	

Scientific Name	Common Name	Observed or Detected	Special Status	Breeding status
<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak	X		
<i>Passerina amoena</i>	Lazuli Bunting	X		
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	X		
<i>Icterus cucullatus</i>	Hooded Oriole	X		
<i>Icterus bullockii</i>	Bullock's Oriole	X		?
<i>Carpodacus mexicanus</i>	House Finch	X		pr
<i>Carduelis psaltria</i>	Lesser Goldfinch	X		CO
* <i>Passer domesticus</i>	House Sparrow	X		

#### Legend

\*=Non-native or invasive species

\*\*=Detected just outside the Park boundary but was included in point count sampling totals

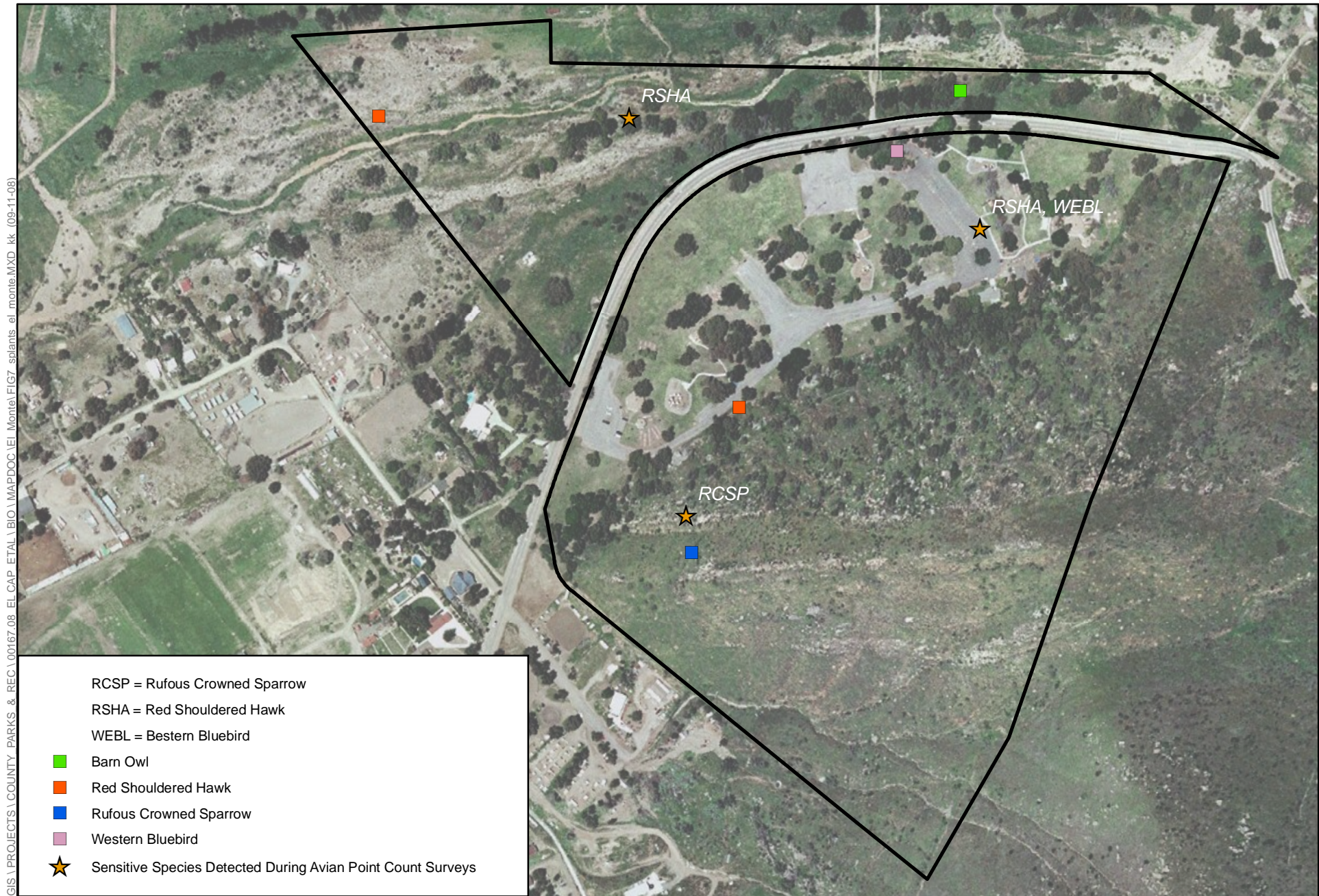
Observed or Detected: X = detected during point count, O = Observed during other fieldwork, FB = overhead or fly-by only

Special Status: FE= Federally Endangered, FT=Federally Threatened, SE= State Endangered, CSC= California Species of Special Concern, CFP= California Fully Protected, MSCP= Multiple Species Conservation Program Covered Species, CSDS=County of San Diego Sensitive Animal

Breeding Status: CO = Confirmed Breeding, pr = Probable breeder, ? = Possible breeder Rating is based on number of observations and period of observation (i.e. was the species identified throughout the breeding season or only during certain times of the year)

Tables 7 and 8 provide quantitative summaries of the results for species and individuals. The abundance and species richness observed during the avian point counts appear to be similar at all three points. This can be attributed to all three points being influenced by the presence of oak trees.

Three observations of unknown hummingbird species were excluded from the calculation of total species. These were most likely female and/or juvenile Black-chinned, Anna's or Costa's Hummingbirds that were seen in flight and the lighting and circumstances did not allow the observer to see any identifying characteristics beyond type of bird. One observations of an unknown hawk species was excluded from the species data but was included as a bird observation. The biologist was confident that the hawk had not been observed that day but was not able to identify the bird due to lighting and length of observation.



SOURCE: ESRI Imagery



0 200 400 800 1,200 Feet

Figure 8  
 Special Status Wildlife Species  
 El Monte County Park

**Table 7.** Avian Point Counts–Totals for Individuals\*

Month	Point Count Stations			Total # of Individuals	Mean # of Individuals
	1	2	3		
April	32	27	40	99	33.0
May	44	40	41	125	41.7
June	33	49	41	123	41.0
July	34	24	54	112	37.3
August	38	40	42	120	40.0
September	43	38	32	113	37.7
<b>Total # of Individuals</b>	<b>224</b>	<b>218</b>	<b>250</b>	<b>692</b>	
<i>Mean # of Individuals</i>	<i>37.3</i>	<i>36.3</i>	<i>41.7</i>		<i>38.4</i>
* - See Section 3.4.1 regarding the exclusion of individuals recorded as “fly-bys”.					

**Table 8.** Avian Point Counts–Totals for Species\*

Month	Point Count Stations			Total # of Species	Mean # of Species
	1	2	3		
April	17	13	18	26	16.0
May	17	19	15	30	17.0
June	16	13	18	31	15.7
July	19	9	17	23	15.0
August	15	11	15	23	13.7
September	18	10	11	22	13.0
<b>Total # of Species</b>	<b>33</b>	<b>32</b>	<b>30</b>		
<i>Mean # of Species</i>	<i>17.0</i>	<i>12.5</i>	<i>15.7</i>		<i>15.1</i>
* - Birds not identified to species were excluded from the calculation. “Fly-by” species were included in the calculations.					

## 4.5.2 Nocturnal Survey Results

The nocturnal bird surveys documented no nocturnal avian species using the Park; however, a Barn Owl was observed during a diurnal visit to the site. It is possible that the American Crows have chased off most nocturnal raptors that may nest in the woodland. Crows mob predators and the owls with potential to



occur are known crow predators. The Park supports high potential for Great Horned Owl (*Bubo virginianus*) and supports low potential for Western Screech-owl (*Megascops kennicottii*). These species could be present in small numbers, though were not detected during the 2008 surveys. Western Screech-owl may be absent from the Park due to the open, fragmentary structure of the woodlands (prefers dense woodlands). It is unclear why Common Poorwill (*Phalaenoptilus nuttallii*) was not detected during the surveys as there is high potential for this species to occur.

### 4.5.3 Special-Status Bird Species

Four sensitive species were detected during the point count at the Park including Red-shouldered Hawk, Barn Owl, Western Bluebird and Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canscens*). In addition, one San Diego Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*) was detected adjacent to the northern boundary of the Park. See Figure 8 for locations of special-status birds on the Park.

### Special-Status Bird Species Observed

#### Red-shouldered Hawk (*Buteo lineatus*)

##### *San Diego County Group I*

The Red-shouldered Hawk was once an uncommon breeder of lowland riparian woodlands, but has been thriving in urban environments with large trees such as gum (*Eucalyptus sp.*) (Unitt 2004). On the west coast, this species is found in California and northern Baja California and is common throughout San Diego County (Unitt 2004). A Red-shouldered Hawk was regularly detected during the point counts with observations in May, June, July and September. The sightings at the Park are not regionally significant as this species is still widespread.

#### Barn Owl (*Tyto alba*)

##### *San Diego County Group II*

The Barn Owl is the owl species that is most tolerant to urban development (Unitt 2004). It will nest in buildings, nest boxes, at the base of the leaves in palm trees, and in cavities in native trees. Even though this species is tolerant of human development, dense housing communities do not provide suitable nesting habitat and loss of birds to increased traffic has a negative effect on the species (Unitt 2004). One Barn Owl was flushed during a diurnal visit to the Park. This species was not detected during nocturnal surveys. This bird may occasionally forage within the northern boundary of the Park and probably breeds nearby. This sighting is not regionally significant as this species is still widespread.

### **Western Bluebird (*Sialia mexicana*)**

#### *San Diego County Group II, MSCP Covered Species*

The Western Bluebird is a stocky blue bird with a chestnut chest and is considered common in the foothills and mountains of San Diego County. This species can usually be found in montane coniferous and oak woodlands (Unitt 2004). It can also occur in areas with scattered trees, open forests, scrubs and during the winter in the desert. Western Bluebirds breed in western North America from southern British Columbia south to central Mexico, east to western Montana and west Texas, but are absent from the Great Basin (Guinan et al. 2000). It can also winter outside its breeding range in central California and along the lower Colorado River (Guinan et al. 2000). Western Bluebird numbers are declining due to loss of nesting cavities to logging, fire suppression, and competition with non-native species such as European Starling and House Sparrow (*Passer domesticus*) (Unitt 2004). A Western Bluebird pair was observed near the gated entrance to the Park. They were observed on site more than they were detected during the point counts and they most likely breed at the Park. As this species is still fairly common in San Diego County (Unitt 2004), the individuals detected do not represent a regionally significant population.

### **Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)**

#### *San Diego County Group I, MSCP Covered Species*

The Southern California Rufous-crowned Sparrow is a resident species that is closely associated with coastal sage scrub, steep rocky hillsides, burned chaparral, and openings in mature chaparral (Unitt 2004). Preferring open habitat with approximately 50% shrub cover, this species seeks cover in shrubs, rocks, grass, and forb patches (Dudek 2000, Unitt 2004). The Southern California subspecies is restricted to semiarid coastal sage scrub and sparse chaparral from Santa Barbara south to the northwestern corner of Baja California (Dudek 2000). Rufous-crowned Sparrows are declining due to loss of appropriate habitat and are sensitive to habitat fragmentation (Unitt 2004). One Southern California Rufous-crowned Sparrow was detected in September on the steep north-facing slope above the Park. This species may use the steep rocky slope for breeding. As this species is still found throughout San Diego County in large numbers (Unitt 2004), the individuals detected do not represent a regionally significant population.

## **Special-Status Bird Species not Observed but with a High Potential to Occur**

### **White-Tailed Kite (*Elanus caeruleus*)**

#### *State Fully Protected Species (nesting), San Diego County Group I*

The White-tailed Kite is found in lower elevations in open grasslands, agricultural areas, wetlands, and oak woodlands. Their primary source of food is the California Vole (*Microtus californicus sanctidiegi*) (Unitt 2004). It typically forages in open undisturbed habitats and nests in the top of a dense oak, willow or other large tree (Unitt 2004). The White-tailed Kite population is on the decline mostly due to urban sprawl; however, this species is still considered fairly widespread throughout the foothills of San Diego County (Unitt 2004). There is high potential for White-tailed Kite to occur on site. There is suitable foraging and nesting habitat within the boundaries of the Park and immediately adjacent.

### **Cooper's Hawk (*Accipiter cooperii*)**

#### *San Diego County Group I, MSCP Covered Species*

The Cooper's Hawk is a resident of riparian deciduous habitats and oak woodlands, but in recent times has become adapted to urban park environments (Unitt 2004). They hunt their primary source of food, passerines, in broken woodlands and forest margins and they are also known to take fish and mammals. The Cooper's Hawk population declined due to hunting and loss of habitat; however, this species is making a comeback through its adaptation to the urban environment (Unitt 2004). Cooper's Hawk has high potential to occur as there is suitable foraging and nesting habitat on site.

### **Golden Eagle (*Aquila chrysaetos*)**

#### *State Fully Protected Species, San Diego County Group I, MSCP Covered Species*

Golden Eagles nest on cliff ledges or trees on steep slopes and forage in grasslands, sage scrub, or broken chaparral (Unitt 2004). Development of the grasslands they forage over has taken a toll on the numbers of this species present in San Diego County. A territory averages 36 square miles so removal of foraging habitat will have significant impacts on this species (Unitt 2004). A pair of Golden Eagles is known to occur at El Cajon Mountain. The Park may be used for foraging, but does not provide suitable nesting habitat for the species. Due to the known proximity of a pair, there is high potential for this species to sporadically occur at the Park.

### **Sharp-shinned Hawk (*Accipiter striatus*)**

#### *San Diego County Group II*

Sharp-shinned Hawks breed in young coniferous forests with high canopies. This species has not been documented breeding in San Diego, however some summer sightings have been recorded (Unitt 2004). It is considered a fairly common migrant and winter resident, except in areas with deep snow (Dudek 2000). The known population breeding within California is very small and is vulnerable to impacts from falconry and logging. This species has high potential to occur as a migrant on site.



### **Merlin (*Falco columbarius*)**

#### *San Diego County Group II*

The Merlin is most often seen in grasslands but has the potential to occur in any habitat type except dense woodland (Unitt 2004). This species is a rare winter visitor to San Diego County that feeds mostly on small birds and can be found where small birds flock (Unitt 2004). This species has high potential to occur as a migrant on site.

### **San Diego Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis*)**

#### *State Species of Special Concern, San Diego County Group I, MSCP Covered Species*

The San Diego Cactus Wren is associated with cactus thickets. This species builds multiple nests within their territory but they do not use them all for raising young (Unitt 2004). They will also use nests as winter roosts. The San Diego Cactus Wren population decline has been due to habitat loss resulting from urban sprawl and fire (Unitt 2004). The fires throughout the County in 2003 and 2007 have decimated many acres of coastal sage scrub occupied by this species and cactus takes many years to grow to a level appropriate for use by Cactus Wrens (Unitt 2004).

This species is historically documented as having four regions where the population is concentrated: southern Marine Corps Base Camp Pendleton/Naval Weapons Station Fallbrook, Lake Hodges/San Pasqual Valley, Lake Jennings and Sweetwater/Otay (Unitt 2004). All four areas had many acres burned by fires in 2003 and 2007. Lake Jennings, one of the core areas, is approximately three miles southwest of the Park. At least one San Diego Cactus Wren was aurally detected on a slope north of the boundary of the Park on a hillside with cactus patches.

As this species was not detected within the boundary of the Park, it is included on the high potential to occur category. There are some cactus patches on the slope just north of the Park that appear to be used by this species. Cactus Wrens may forage within the boundary of the Park; however, there is no suitable nesting habitat within the Park. The extent of damage to the population is unknown at this time due to the large expanse of the 2003 and 2007 fires, thus, it is difficult to gauge the regional significance of this species existing adjacent to the Park.

### **Bell's Sage Sparrow (*Amphispiza belli belli*)**

#### *San Diego County Group I*

The Bell's Sage Sparrow is a resident species that is usually found in chaparral and coastal sage scrub in southern California into Baja California. This mostly ground-dwelling species prefers open chaparral and sage scrub and is one of the

first species to inhabit recently burned habitat (Unitt 2004). This subspecies occurs along the coastal lowlands, inland valleys, and in the lower foothills of the local mountains in southern California into Baja California (Dudek 2000). The decline in this species can be attributed to fire suppression, invasion by exotic plant species, loss of habitat to agriculture and urban development, and population isolation due to habitat fragmentation (Unitt 2004, Dudek 2000). Bell's Sage Sparrow has high potential to occur as there is suitable nesting habitat for the species on site.

## 4.6 Small Mammal Trapping

In total, three small mammal species were recorded at the Park during small mammal trapping and other surveys (Table 9). These species were detected through capture, direct observation or sign. El Monte County Park trapping results indicate that the Park does not have an abundant or diverse small mammal population as there was only one capture from one species, the Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*), a special-status mammal species. It should be noted that the hillside was not sampled as representative results from the other traplines in the adjacent Preserves/Parks were intended to provide baseline data for species that occur within these habitat types. The trapline was set in the coastal sage scrub adjacent to the San Diego River in an effort to capture species that would be in a different niche than the ones trapped on the surrounding Preserves/Parks. Anecdotally it should be noted that the developed portions of El Monte Park have a very large California Ground Squirrel (*Spermophilus beecheyi nudipes*) population. The trapline location was selected in an area to avoid capture of this species.

The traplines that were sampled in the vicinity of El Monte Park, but on other County Preserves/Parks, indicate that several other small mammal species may occur at El Monte Park. Sensitive species potentially occurring onsite include Dulzura Pocket Mouse (*Chaetodipus californicus femoralis*) and San Diego Desert Woodrat (*Neotoma lepida intermedia*). Other species with potential to occur onsite include Dulzura Kangaroo Rat (*Dipodomys simulans*), California Mouse (*Peromyscus californicus insignis*), Northern Baja Mouse (*Peromyscus fraterculus*) and American Deer Mouse (*Peromyscus maniculatus gambelii*).

**Table 9.** Small Mammals Detected at the Park in 2008

Scientific Name	Common Name	Special Status	Vegetation Communities	Method of Detection
<i>Spermophilus beecheyi</i>	California Ground Squirrel		all communities	visual, sign
<i>Thomomys bottae</i>	Botta's Pocket Gopher		coastal sage scrub	sign
<i>Chaetodipus fallax fallax</i>	Northwestern San Diego Pocket Mouse	CSC, CSDS Group II	coastal sage scrub	captured

Legend:

Special Status: CSC= California Species of Concern, CSDS= County of San Diego Sensitive Animal

#### 4.6.1 Special-Status Small Mammal Species

One special-status small mammal species was captured at the Park, the Northwestern San Diego Pocket Mouse.

#### Special-Status Small Mammal Species Observed

##### Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)

*State Species of Special Concern, San Diego County Group II*

The Northwestern San Diego Pocket Mouse is typically found in coastal sage scrub, sage scrub/grassland ecotones, and chaparral (Dudek 2000). It inhabits open, sandy areas of both the Upper and Lower Sonoran areas of southwestern California and northern Baja California (Dudek 2000). This species is sensitive to habitat fragmentation and degradation, which has led to its decline. One Northwestern San Diego Pocket Mouse was captured at the Park.

#### Special-Status Small Mammal Species not Observed but with a High Potential to Occur

##### Dulzura Pocket Mouse (*Chaetodipus californicus femoralis*)

*State Species of Special Concern, San Diego County Group II*

Dulzura Pocket Mouse is mainly active on the ground, but also climbs shrubs and small trees when feeding (CDFG 2005). This species can become torpid by day at any time of the year, and is inactive in cold wet weather. It breeds in spring to early summer and occurs from sea level to approximately 7,900 ft (2,408 m) AMSL (CDFG 2005). This species prefers dense chaparral and is less common

in dry grassland and desert scrub. During the trapping program, 44 of the 160 animals captured in the adjacent Preserves/Parks were Dulzura Pocket Mouse (ICF J&S 2008a, ICF J&S 2008b, ICF J&S 2008c). This was the most abundant species captured during 2008. There is high potential for this species to occur at the Park.

### **San Diego Desert Woodrat (*Neotoma lepida intermedia*)**

*State Species of Special Concern, San Diego County Group II*

San Diego Desert Woodrat requires large amounts of water, which it obtains from fleshy plants such as Yucca species and Prickly Pear Cactus (*Opuntia* sp.). It usually makes a stick house under one of these food plants, or may den among rocks (CDFG 2005). House materials include cacti, sticks, bones and a variety of debris. Houses provide insulation against excessive heat as well as protection from predators. This species breeds in late winter or spring, occurs from sea level to approximately 8,500 ft (2,591 m) AMSL in deserts and coastal sage scrub, and prefers areas with rocky outcrops and plentiful succulents (CDFG 2005). During our trapping program, 12 of the 160 animals captured in the adjacent Preserves/Parks were San Diego Desert Woodrat (ICF J&S 2008a, ICF J&S 2008b, ICF J&S 2008c). There is high potential for this species to occur at the Park.

## **4.7 Medium and Large Mammals**

### **4.7.1 Camera Tracking Stations**

After evaluating the images captured on the two camera stations, a total of two species of mammals were detected including Coyote (*Canis latrans*) and Bobcat (*Felis rufus*) (Table 10, Appendix B). See Figure 5 for camera station locations. During the course of this survey effort one of the two cameras was stolen from the Park, as a result only one of the two cameras was able to run for the entire survey period. Only 17 days of data was able to be collected from the location of the stolen camera. This incident resulted in a decreased number or lack of detections for species thought or known to occur within the Park.

### **4.7.2 Track & Sign Surveys**

A total of four medium and large mammals were detected in the Park through direct observation, tracks, sign, and nocturnal surveys including: Desert Cottontail (*Sylvilagus audubonii*), Coyote, Bobcat, and Southern Mule Deer (*Odocoileus hemionus fuliginata*) (Table 10, Appendix B). Movement of larger animals appeared to be concentrated along easily traveled routes with good visibility such as roads and ridges. Most signs of smaller animals were within natural communities with cover.

Although only a limited number of medium and large mammal species were detected within the Park, due to the proximity to large amounts of open space and the presence of potentially suitable habitat, the following species may also utilize the Park: Brush Rabbit (*Sylvilagus bachmani*), Common Gray Fox (*Urocyon cinereoargenteus*), Long-tailed Weasel (*Mustela frenata*), Black-tailed Jackrabbit (*Lepus californicus*), Western Spotted Skunk (*Spilogale gracilis*), Opossum (*Didelphis virginiana*), and Mountain Lion (*Puma concolor*).

No clear evidence of regular or important, larger-scale dispersal across the site was found, though such movement may well occur. Certainly it can be assumed that larger mammals regularly move on, off of, and across the Park, to and from adjacent open space.

**Table 10.** Medium and Large Mammals Detected at the Park in 2008

Scientific Name	Common Name	Special Status	Vegetation Communities	Method of Detection
<i>Sylvilagus audubonii</i>	Desert Cottontail		all communities	sign
<i>Canis latrans</i>	Coyote		all communities	visual, sign, camera station
<i>Lynx rufus</i>	Bobcat		all communities	sign, camera station
<i>Odocoileus hemionus fuliginata</i>	Southern Mule Deer	CSDS Group II, MSCP	all communities	sign

Legend:

Special Status: CSDS= County of San Diego Sensitive Animal, MSCP= Multiple Species Conservation Program Covered Species

### 4.7.3 Special-Status Medium and Large Mammal Species

#### Special-Status Medium and Large Mammal Species Observed

One special-status medium or large mammal species was detected during the surveys: Southern Mule Deer.

#### Southern Mule Deer (*Odocoileus hemionus*)

##### *San Diego County Group II, MSCP Covered Species*

Southern Mule Deer are common across the western U.S. in a variety of habitats from forest edges to mountains and foothills (Whitaker 1996). Mule Deer prefer

edge habitats, rarely travel or forage far from water and are most active around dawn and dusk. Sign of Southern Mule Deer was seen at the Park.

## **Special-Status Medium and Large Mammal Species not Observed but with a High Potential to Occur**

### **San Diego Black-tailed Jackrabbit (*Lepus californicus*)**

*State Species of Special Concern, San Diego County Group I*

The San Diego Black-tailed Jackrabbit is a large, long legged hare, with distinctive long ears and a blackish tail (Whitaker 1996). The Black-tailed Jackrabbit inhabits a wide range of habitats, including deserts, irrigated croplands, high mountains to 8,202 ft (2,500 m) AMSL, and is commonly found in the western United States to Mexico and Baja California. The San Diego population is found mostly on the coastal side of local mountains in open habitats, usually avoiding dense stands of chaparral or woodlands (Stephenson and Calcarone 1999). This species has been declining due to urban development, habitat loss, and fragmentation leading to population isolation (Dudek 2000). Suitable habitat for this species occurs within the Park.

### **Mountain Lion (*Puma concolor*)**

*San Diego County Group II, MSCP Covered Species*

Mountain Lions prefer rocky areas, cliffs, and ledges that provide cover within open woodlands and chaparral (Dudek 2000). Riparian areas also provide protective habitat connections for movement between fragmented habitats. This species is widespread in North and South America and occupy a broad variety of habitats from the northern limit of the Canadian forests to Patagonia in South America. Populations of this species require large areas to sustain themselves, requiring at least 850 square miles to remain stable (Dudek 2000). Habitat fragmentation, loss of large areas of undeveloped land, road kills, indiscriminate shootings, animal control measures, and loss of natural prey base have led to the decline of this species. This Park and the surrounding open space provide habitat for Mountain Lion to use for foraging and cover. As there is a large amount of open space surrounding the Park, potential for this species to move through the Park is high.



## 4.8 Bats

### 4.8.1 Acoustic Survey for Bats

A total of 13 bat species were detected using passive Anabats during the three seasons of monitoring (Table 11, Appendix B). The most active bat species detected were the Canyon Bat (*Parastrellus hesperus*), Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*), and Mexican Free-tailed Bat (*Tadarida brasiliensis*). Species detected infrequently included the Western Red Bat (*Lasiurus blossevillii*), Western Yellow Bat (*Lasiurus xanthinus*), and Townsend's Big-eared Bat (*Corynorhinus townsendii*). There were a suite of species detected during all three seasonal monitoring sessions that included the California Myotis (*Myotis californicus*), Small-footed Myotis (*Myotis ciliolabrum*), Yuma Myotis (*Myotis yumanensis*), Canyon Bat, Pocketed Free-tailed Bat, Mexican free-tailed Bat, and Western Mastiff Bat (*Eumops perotis*). Species detected during the spring only included the Hoary Bat (*Lasiurus cinereus*) and Western Red Bat. The Western Yellow Bat was detected only during the summer and the Townsend's Big-eared Bat only during the fall.

During the active survey conducted on August 20, 2008, mist-nets were placed under the coast live oak tree canopy where natural understory and leaf litter occurred (Figure 5). Both of the species that were captured were also documented during the passive Anabat sampling. Five adult male Pallid Bats (*Antrozous pallidus*) in breeding condition were captured along with eight Yuma Myotis of varying ages and sex. One of the female Yuma Myotis was post-lactating, indicating she had bred and nursed young in early 2008. Just after sunset, there were fairly large numbers of individuals of a variety of bat species observed foraging over and around the Park, indicating the presence of potentially several roosts in the immediate area.

A moderately large number of bat species and individuals appear to be supported by the Park. The Park is fairly diverse and contains habitat features important to bats in the southern California landscape such as riparian vegetation, oak woodland, scrub vegetation, and a fairly extensive amount of exposed rocky outcrops (Kruttsch 1948, Stokes et al. 2005). The occurrence of rare and sensitive species such as the Pallid Bat and Townsend's Big-eared Bat indicate the Park's importance to bat populations in this part of the County. The large numbers of bats observed in flight just after sunset indicates the Park and surrounding areas are highly supportive of a variety of bat species. This is likely due to the Park's location adjacent to a major river (San Diego River), and the presence of a diversity of habitat features on or near the site.

**Table 11.** Bat Species detected at the Park in 2008

Bat Species			Relative Activity Index*			Average Activity Index**
Scientific Name	Common Name	Special Status	Spring	Summer	Fall	
<i>Myotis californicus</i>	California Myotis		5.00	53.33	1.67	20.00
<i>Myotis ciliolabrum</i>	Small-footed Myotis	CSDS Group II	3.33	11.67	16.67	10.56
<i>Myotis yumanensis</i>	Yuma Myotis	CSDS Group II	21.67	61.67	71.67	51.67
<i>Lasiurus blossevillii</i>	Western Red Bat	CSC, CSDS Group II	3.33	nd	nd	1.11
<i>Lasiurus cinereus</i>	Hoary Bat		18.33	nd	nd	6.11
<i>Lasiurus xanthinus</i>	Western Yellow Bat		nd	1.67	nd	0.56
<i>Parastrellus hesperus</i>	Canyon Bat		66.67	411.67	168.33	215.56
<i>Eptesicus fuscus</i>	Big Brown Bat		nd	175.00	5.00	60.00
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	CSC, CSDS Group II	nd	nd	1.67	0.56
<i>Antrozous pallidus</i>	Pallid Bat	CSC, CSDS Group II	1.67	5.00	nd	2.22
<i>Tadarida brasiliensis</i>	Mexican Free-tailed Bat		126.67	61.67	106.67	98.33
<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat	CSC, CSDS Group II	410.00	106.67	501.67	339.44
<i>Eumops perotis</i>	Western Mastiff Bat	CSC, CSDS Group II	21.67	8.33	30.00	20.00

Legend:

nd = not detected

\* Number of bat passes per Anabat night X 10

\*\* Average of seasonal measures of relative activity for each bat species detected

Special Status:

CSC= California Species of Concern, CSDS= County of San Diego Sensitive Animal

## 4.8.2 Special-Status Bat Species

There were seven sensitive bat species detected during the surveys. These include Small-footed Myotis, Yuma Myotis, Western Red Bat, Townsend's Big-eared Bat, Pallid Bat, Pocketed Free-tailed Bat and Western Mastiff Bat. This Park together with the adjacent El Capitan Preserve provides suitable roosting and foraging opportunities for a number of sensitive bat species. These two areas appear to be extremely important for bats in the region.

## **Special-Status Bat Species Observed**

### **Small-footed Myotis (*Myotis ciliolabrum*)**

#### *San Diego County Group II*

The Small-footed Myotis is found through most of western North America, from southwestern Canada south into Mexico (BCI 2008). There is not much information on the habitat requirements of this species, but it has been documented under rock slabs and in crevices, mine tunnels, under loose tree bark, and in buildings (BCI 2008). This species hibernates in caves, typically in small groups. Reasons for decline are poorly understood as there has been little research conducted on this species. There is minimal roosting habitat for this species available on site; therefore, the Park may just be used for foraging by this species.

### **Yuma Myotis (*Myotis yumanensis*)**

#### *San Diego County Group II*

The Yuma Myotis is found throughout much of the western U.S. and up into Canada (BCI 2008). The species is always found near lakes, creeks or ponds where the species forages over the water. Typically, individuals skim low over the water and snatch up flying insects, but they can forage in other mesic areas. The species roosts by day usually in buildings or bridges, but have been documented using mines or caves (BCI 2008). Yuma Myotis are threatened by loss of riparian habitat and the decline in permanent water sources in the southwest. Both the roosting and foraging needs of the Yuma Myotis could be supported by the Park. Their water needs may be met seasonally by the San Diego River if water flows and year-round by the nearby El Capitan Reservoir.

### **Western Red Bat (*Lasiurus blossevillii*)**

#### *State Species of Special Concern, San Diego County Group II*

Western Red Bats are found from southern Canada, throughout U.S., all the way down to South America (BCI 2008). Several species in the genus *Lasiurus* are commonly referred to as "tree bats" because they roost only in tree foliage. The Western Red Bat is a typical tree bat, with a close association with cottonwoods (*Populus* sp.) and riparian areas (BCI 2008). Like all tree bats, this species is solitary, coming together only to mate and to migrate. Western Red Bats typically forage along forest edges, in small clearings, or around street-lights where they prefer moths (BCI 2008). Although largely undocumented, this species' decline appears to be in part due to the loss of lowland riparian forests in the Southwest. Both suitable roosting and foraging habitat for the Western Red Bat occurs in the Park.

### **Townsend's Big-eared Bat (*Corynorhinus townsendii*)**

#### *State Species of Special Concern, San Diego County Group II*

Townsend's Big-eared Bat occurs throughout the drier portions of California (Zeiner et al. 1990). It is non-migratory and hibernates from approximately October through April. A wide variety of natural communities are occupied, but mesic sites are preferred. They capture a variety of prey while in flight, which is slow and maneuverable, and they are capable of hovering (Zeiner et al. 1990). The species is known to roost predominantly in caves, but will use lava tubes, mines, tunnels, buildings, and other man-made structures (BCI 2008). They are extremely sensitive to disturbance at their roosting sites and have suffered severe population declines throughout much of the U.S. (BCI 2008). The Townsend's Big-eared Bat is likely not roosting at the Park, but is instead using it for foraging. The mines located in the adjacent El Capitan Preserve provide roosting habitat for this species.

### **Pallid Bat (*Antrozous pallidus*)**

#### *State Species of Special Concern, San Diego County Group II*

Pallid bats are widely distributed in the southwestern United States and northern Mexico (BCI 2008). They are locally common across most of California except in the far northwest and in higher portions of the Sierra Nevada. Habitats utilized include a wide variety of grasslands, shrublands, woodlands, and forests, including mixed conifer forest (Zeiner et al. 1990). They appear to be most common in open, dry, rocky lowlands and they roost in caves, mines, as well as crevices in rocks, buildings and trees. This is a colonial species that forages low over open ground, often picking up beetles and other species of prey off the ground (Zeiner et al. 1990). Flight is slow and maneuverable, and they are able to take a wide variety of prey, including large, hard-shelled insects (Zeiner et al. 1990). They have separate night and day roosts, hibernate in winter, and the sexes segregate in summer. Both suitable roosting and foraging habitat for the Pallid Bat occurs in the Park.

### **Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)**

#### *State Species of Special Concern, San Diego County Group II*

Pocketed Free-tailed Bats are rarely found in southwestern California. These bats live in arid desert areas and roost in crevices high on cliff faces in rugged canyons (BCI 2008). Nursery colonies are relatively small and usually include fewer than 100 individuals. This species primarily forages on large moths, especially over water. The regional status and species trends are unclear, but it is likely vulnerable to disturbance, especially at roosts, and perhaps also to threats to food supply from man-made toxins. The Pocketed Free-tailed Bat is likely not roosting in the Park as there are no cliffs, but the adjacent El Capitan Preserve provides suitable roosting habitat for this species. The individuals detected are likely using the Park as a place to forage.

### **Western Mastiff Bat (*Eumops perotis*)**

#### *State Species of Special Concern, San Diego County Group II*

Western Mastiff Bats are the largest native bats in the United States. This subspecies occurs from the western foothills of the Sierra Nevada and the coastal ranges (south of San Francisco Bay) southward into Mexico (BCI 2008). In southern California, they are found throughout the coastal lowlands up to drier mid-elevation mountains, but avoid the Mohave and Colorado deserts (Zeiner et al. 1990). Habitats include dry woodlands, shrublands, grasslands, and occasionally even developed areas. This big bat forages in flight and most prey species are relatively small, low to the ground, and weak-flying. For roosting, Western Mastiff Bats appear to favor rocky, rugged areas in lowlands where abundant suitable crevices are available for day roosts (BCI 2008). Roost sites may be in natural rock or in tall buildings, large trees or elsewhere. The reasons for this species' decline are poorly understood, but probably are related to disturbance, habitat loss, and perhaps widespread use of pesticides. The Western Mastiff Bat is likely not roosting in the Park as there are no cliffs, but the adjacent El Capitan Preserve provides suitable roosting habitat. The individuals detected are likely using the Park as a place to forage.

### **Special-Status Bat Species not Observed but with a High Potential to Occur**

There are no additional special-status bat species with high potential to occur at the Park.

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## Chapter 5

# Conclusions and Management Recommendations

The current surveys documented five land cover types and 232 species that were detected throughout the Park. Our surveys detected 138 plant species, 52 bird species, 20 mammal species (13 bats, three small mammals, and four medium and large bodied mammals), seven herptiles (one amphibian and six reptiles), and 15 invertebrate species. This list includes 18 sensitive species of which three wildlife species are MSCP-covered species.

Specific management recommendations are provided for the various taxonomic groups assessed during this survey effort. In addition to these management recommendations, we also recommend implementing the monitoring protocols addressed in the Biological Monitoring Plan for the Multiple Species Conservation Program (Monitoring Plan) (Ogden 1996) as appropriate within the Park. The Monitoring Plan identifies three types of MSCP biological monitoring including 1) habitat monitoring, 2) corridor monitoring, and 3) covered species monitoring.

**Habitat monitoring** is designed to focus on three areas including 1) permanent habitat loss as a result of development; 2) temporary habitat changes as a result of natural events (e.g., fires and flooding); and 3) loss of habitat value as a result of edge effects or other human related impacts.

**Corridor monitoring** within the Monitoring Plan is designed to assess utilization of key habitat linkages within the MSCP. Specifically, the use of animal sign (track and scat) and visual sightings shall be used to determine presence of focal species.

**Covered species monitoring** within the Monitoring Plan is designed to identify 1) short term threats to species persistence and 2) longer-term trends that may suggest declining populations. Specifically, the covered species monitoring will document protection of covered species, changes in preserved populations, collecting of new biological data, evaluating impacts of land uses and evaluating management activities within the Park.

The MSCP Monitoring Plan identifies 29 monitoring sites throughout the plan area. None of these sites are located within the Park; however, monitoring of MSCP-covered species is required.

It should be noted that that the Monitoring Plan is in the process of being revised by the U.S. Fish and Wildlife Service (Animal Monitoring Protocol) and the United States Geological Service (USGS) (Plant Monitoring Protocol). The revised Animal Monitoring Protocol covers the following species: California Gnatcatcher, Coastal Cactus Wren, Light-footed Clapper Rail, Tricolored Blackbird, Southwestern Willow Flycatcher, Burrowing Owl, California Least Tern, Thorne's Hairstreak, Wandering Skipper, and San Diego and Riverside Fairy Shrimp. The revised Plant Monitoring Protocol covers all of the MSCP covered plant species.

## 5.1 Flora

It is recommended that the County maintain an updated vegetation community map to be used as a tool for adaptive management within the Park. Updates should occur once every five years or within the first growing season following an unforeseen disturbance (i.e., fire, rock fall, flood or manmade disturbance). The purpose of the ongoing mapping effort should be to document changes in the vegetation communities within the Park that could affect quality and usage by wildlife. Vegetation monitoring for habitat value should be focused to identify adverse changes and their effects on the vegetation over time. This includes dramatic changes such as fire, as well as slower but equally important effects such as invasion by non-natives or slow decline of existing species.

Vegetation mapping/monitoring should also address habitat value for target species. Special-status plant species detected during the 2008 surveys consist of: Delicate Clarkia, Engelmann Oak, California Black Walnut and San Diego Sunflower. Periodic botanical surveys are recommended to monitor the special-status species detected within the Park. Such surveys would ideally occur during years of average or above-average rainfall in order to maximize detection.

It is recommended that disturbed land be restored through stabilization of eroded lands, and exotic plant species control. Restoration and enhancement potential exists throughout the developed portion of the Park and within the southern coast live oak riparian woodland north of El Monte Road. Specifically, the portions of the Park that are adjacent to the open coast live oak woodland should be passively restored to enhance the vegetative structure within the oak woodland habitats. Enhancement measures should be implemented within the southern coast live oak riparian woodland. These measures would involve the removal of Cal-IPC listed species such as Tamarisk, Tree Tobacco and Castor Bean (Table 13).

**Table 12.** Nonnative Plants with Highest Priority for Control on the Park

Species	Cal-IPC Status
Castor Bean ( <i>Ricinus communis</i> )	Limited
Tamarisk ( <i>Tamarix ramosissima</i> )	High
Tree Tobacco ( <i>Nicotiana glauca</i> )	Moderate

Finally, as noted below in the discussion regarding birds and bats, monitoring for the health of the oak woodlands should be a high priority. There was some indication that recruitment of oaks may be poor.

## 5.2 Invertebrates

Butterflies are known to exhibit “hilltopping” behavior. This behavior was observed on the Park at various rock outcrops at high points on the hills. Therefore, planned trails and public vistas should not be installed, or should be installed with minimal disturbance, on the highest points of hills.

Scorpions, ants, wasps, bees, and other venomous invertebrates are common within the Park. Ticks are also likely to occur. Signs should be posted to alert park users of their presence, recommending avoidance and providing information on what to do in case of a bite or sting.

## 5.3 Herpetofauna

The Park supports several herpetofauna species that will likely be encountered by the public on the roads and trails and off trail in the natural communities. Signs should be posted to inform park users to stay on roads and trails and to avoid wildlife when encounters occur. It should also be clear to park users that animal collecting is prohibited. The herpetological pitfall arrays installed as a part of this study will be sampled periodically to monitor the herpetofauna populations.

Rattlesnakes may occur within the Park on or near roads and trails. Signs should be posted to alert park users of potential rattlesnake presence, recommending avoidance and providing information on what to do in case of a bite.

## 5.4 Birds

Avian diversity on the Park reflects moderate integrity. A total of 52 bird species was documented on the Park; these include four sensitive species: Red-shouldered Hawk, Barn Owl, Western Bluebird, and Southern California Rufous-crowned Sparrow. Western Bluebird and Southern California Rufous-crowned Sparrow are the only MSCP-covered avian species detected within the Park.

MSCP Monitoring requirements for these species include implementing habitat-based monitoring for both the Western Bluebird and the Southern California Rufous-crowned Sparrow (County of San Diego 1996). One MSCP-covered species was detected immediately adjacent to the Park: San Diego Cactus Wren. As there is no suitable breeding habitat on the Park for this species, MSCP monitoring requirements are not applicable.

The most important features at the Park for birds are the oak woodlands (including existing cavities for nesting), and, to a slightly lesser degree, the floodplain present north of El Monte Road. These features are most vulnerable as bird habitat from alteration by invasive plants, from additional fires at short intervals, and from increased development in the surrounding areas.

European Starlings and American Crows are abundant at the Park. Elevated populations of American Crows, an aggressive nest predator, can lead to high nest mortality rates among other native birds. Monitoring of the native avian species should occur to determine if the crows are affecting viability of these species at the Park. European Starlings are competitors with large cavity nesting species. The woodpecker population and other large cavity nesting species should be monitored to determine if there are effects from competition with the large European Starling population.

Over the long term, it will be important to ensure the continued viability of the oak woodland through recruitment of new trees. Thus, the health of this community at the Park should be evaluated periodically to ensure that recruitment and lack of disease in the oaks can support a diversity of both plants and wildlife.

Both quantitative and qualitative monitoring of bird populations by qualified personnel is recommended. Quantitative monitoring can consist, for example, of maintaining the avian point counts. If necessary for budgetary reasons, they could be conducted at less frequent intervals (e.g., every other month), or only periodically (e.g., every other year). The accumulation of data over time will prove extremely valuable to identify trends in bird populations both at the Park and across the region.

Qualitative monitoring can range from informal efforts, such as compiling a bird checklist for the Park and soliciting new or interesting observations, to intensive efforts such as encouraging research use of the Park (e.g., breeding success of cavity-nesting birds). It is important to recognize that the avifauna of the Park will naturally change over time due to regional effects, climate change, and natural turnover. Without monitoring, there is potential for the Park to be managed for resources no longer present or in conflict with resources present but unrecognized.

## 5.5 Small Mammals

Habitat fragmentation is a leading cause in the decline of small mammal populations in species with low mobility (Vander Haegen et al. 2001). Patches of habitat occupied by sensitive species should be connected to wildlife corridors (such as riparian areas) to allow individuals to disperse and not become isolated and vulnerable. Future plans for the Park should address the potential isolation and genetic flow effects it may have on small mammal populations.

The small mammal species captured or observed at the Park are associated with shrub- and grass-dominated habitats. Habitat conservation is the primary way to protect small mammal populations from decline. Habitats found on the Park should not be degraded through activities such as off-road or off-trail use, conversion to other vegetation types, or the spraying of insecticides for insect control (i.e., ants or mosquitoes). Insectivorous mammal species are sensitive to the use of insecticides and if these methods are proposed for use in control of pest insect species, other alternatives should be explored.

## 5.6 Medium and Large Mammals

The Park is surrounded by a large amount of open space, and has the potential to serve as an important corridor for wildlife movement. Maintaining movement connections across El Monte Road will be an important consideration over time, especially if traffic volumes increase.

Southern Mule Deer was the only MSCP-covered mammal species detected during the field surveys. MSCP monitoring requirements for Southern Mule Deer includes monitoring suitable habitat and wildlife corridor sites within the MSCP. As detailed above, the Park has the potential to serve as an important corridor for wildlife movement between adjacent open space areas. Monitoring for medium and large mammals will include periodic sampling at the camera stations used during this study.

Due to the proximity to residential development, species such as Domestic Dog (*Canis familiaris*) and Domestic Cat (*Felis catus*) are likely to be found utilizing the Park. Both of these species have the potential to negatively impact the native species by introducing disease, or simply causing the native species to avoid portions of the Park. Future management decisions should consider the removal of any feral populations of cats/dogs, and restricting access for these species within the Park.

Domestic Dogs on leash are allowed on the Park. It is recommended that the County amend signage to state that dog owners should remove all feces in order to minimize potential vector born disease transmission to the local Coyote population. In addition, feces bags and disposal bins should be provided at trailheads to encourage the public to remove feces.

## 5.7 Bats

The following items are recommended to maintain and increase the habitat suitability for bats within the Park:

- Maintain riparian and oak woodland vegetation – these habitats are likely very important to both foraging and roosting bats in the Park.
- Restore natural oak woodland understory – in most parts of the Park the oak woodland understory is well-groomed with a monoculture grass and devoid of natural leaf litter. We recommend restoring the natural understory and allowing leaf litter to accumulate in at least some portions of the Park, providing increased foraging opportunities for the Pallid Bat (*Antrozous pallidus*), which often forages for terrestrial arthropods over natural understory vegetation and leaf litter under oak canopy.

## Chapter 6

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Appendix A

**Vascular Plant Species Observed  
within El Monte County Park**





Scientific Name	Common Name	Special Status
<b>Selaginellaceae - Spike-Moss Family</b>		
<i>Selaginella bigelovii</i>	Bigelow's spike-moss	
<b>Polypodiaceae - Polypody Family</b>		
<i>Polypodium californicum</i>	California polypody	
<b>Pteridaceae - Brake Family</b>		
<i>Cheilanthes covillei</i>	Coville's lip fern	
<i>Pellaea mucronata</i> var. <i>mucronata</i>	Bird's foot cliff-brake	
<i>Pentagramma triangularis</i> ssp. <i>triangularis</i>	California goldenback fern	
<b>Pinaceae - Pine Family</b>		
<i>Pinus</i> sp.	Pine	
<b>Aizoaceae - Fig-Marigold Family</b>		
* <i>Carpobrotus edulis</i>	Hottentot-fig	
<b>Amaranthaceae - Amaranth Family</b>		
* <i>Amaranthus albus</i>	White tumbleweed	
<i>Amaranthus blitoides</i>	Prostrate amaranth	
<b>Anacardiaceae - Sumac or Cashew Family</b>		
<i>Malosma laurina</i>	Laurel sumac	
* <i>Schinus terebinthifolius</i>	Brazilian pepper tree	
<i>Toxicodendron diversilobum</i>	Western poison-oak	
<b>Apiaceae (Umbelliferae) - Carrot Family</b>		
<i>Bowlesia incana</i>	American bowlesia	
* <i>Conium maculatum</i>	Common poison hemlock	
<i>Daucus pusillus</i>	Rattlesnake weed	
* <i>Foeniculum vulgare</i>	Sweet fennel	

Scientific Name	Common Name	Special Status
<i>Sanicula arguta</i>	Sharp-tooth sanicle	
<b>Apocynaceae - Dogbane Family</b>		
* <i>Vinca major</i>	Greater periwinkle	
<b>Asteraceae (Compositae) - Sunflower Family</b>		
<i>Ambrosia confertiflora</i>	Weak-leaf bur-sage	
<i>Ambrosia psilostachya</i>	Western ragweed	
<i>Artemisia californica</i>	Coastal sagebrush	
<i>Artemisia douglasiana</i>	Douglas mugwort	
<i>Artemisia dracunculus</i>	Tarragon, dragon sagewort	
<i>Baccharis douglasii</i>	Marsh baccharis	
<i>Baccharis salicifolia</i>	Mule-fat, seep-willow	
<i>Baccharis sarothroides</i>	Broom baccharis	
<i>Brickellia californica</i>	California brickellbush	
* <i>Centaurea melitensis</i>	Tocalote	
<i>Chaenactis glabriuscula</i>		
* <i>Conyza bonariensis</i>	Flax-leaf fleabane	
<i>Conyza canadensis</i>	Horseweed	
<i>Deinandra fasciculata</i>	Fascicled tarweed	
<i>Encelia californica</i>	California encelia	
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	Long-stem golden-yarrow	
<i>Filago californica</i>	California filago	
* <i>Filago gallica</i>	Narrow-leaf filago	
<i>Gnaphalium bicolor</i>	Bicolor cudweed	
<i>Gnaphalium californicum</i>	California everlasting	
<i>Gutierrezia sarothrae</i>	Broom matchweed/snakeweed	

Scientific Name	Common Name	Special Status
<i>Hazardia squarrosa</i> var. <i>grindelioides</i>	Sawtooth goldenbush	
* <i>Hedypnois cretica</i>	Crete hedypnois	
<i>Heterotheca grandiflora</i>	Telegraph weed	
<i>Isocoma menziesii</i>	Coastal goldenbush	
* <i>Lactuca serriola</i>	Prickly lettuce	
<i>Lasthenia californica</i>	Common goldfields	
* <i>Picris echioides</i>	Bristly ox-tongue	
* <i>Sonchus oleraceus</i>	Common sow-thistle	
<i>Stephanomeria virgata</i>	Tall wreath-plant	
* <i>Taraxacum officinale</i>	Common dandelion	
<i>Viguiera laciniata</i>	San Diego sunflower	CNPS 4, CSDS Group D
<i>Xanthium strumarium</i>	Cockelbur	
<b>Boraginaceae - Borage Family</b>		
<i>Amsinckia menziesii</i> var. <i>menziesii</i>	Rigid fiddleneck	
<i>Cryptantha intermedia</i>	Nievitans cryptantha	
<i>Cryptantha maritima</i>	Whitechair cryptantha	
<i>Heliotropium curassavicum</i>	Salt heliotrope	
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	Slender pectocarya	
<i>Plagiobothrys nothofulvus</i>	Rusty popcornflower	
<b>Brassicaceae (Cruciferae) - Mustard Family</b>		
* <i>Brassica nigra</i>	Black mustard	
* <i>Brassica rapa</i>	Turnip, field mustard	
* <i>Capsella bursa-pastoris</i>	Shepherd's purse	
* <i>Hirschfeldia incana</i>	Short pod mustard	
* <i>Raphanus sativus</i>	Wild radish	

Scientific Name	Common Name	Special Status
<i>*Sisymbrium irio</i>	London rocket	
<b>Caprifoliaceae [incl. Adoxaceae] - Honeysuckle Family</b>		
<i>Lonicera subspicata</i> var. <i>denudata</i>	Southern honeysuckle	
<i>Sambucus mexicana</i>	Blue elderberry	
<b>Chenopodiaceae - Goosefoot Family</b>		
<i>*Chenopodium ambrosioides</i>	Mexican tea	
<i>*Salsola tragus</i>	Russian-thistle, tumbleweed	
<b>Convolvulaceae - Morning-Glory Family</b>		
<i>Calystegia macrostegia</i> ssp. <i>intermedia</i>	Morning-glory	
<i>Cressa truxillensis</i>	Alkali weed	
<b>Cucurbitaceae - Gourd Family</b>		
<i>Marah macrocarpus</i> var. <i>macrocarpus</i>	Manroot, wild-cucumber	
<b>Euphorbiaceae - Spurge Family</b>		
<i>Croton californicus</i>	California croton	
<i>*Ricinus communis</i>	Castor bean	
<b>Fabaceae (Leguminosae) - Legume Family</b>		
<i>*Lathyrus tingitanus</i>	Tangier pea	
<i>Lotus scoparius</i> var. <i>brevialatus</i>	Deerweed	
<i>Lupinus bicolor</i>	Miniature lupine	
<i>Lupinus hirsutissimus</i>	Stinging lupine	
<i>Lupinus succulentus</i>	Arroyo lupine	
<i>*Medicago lupulina</i>	Black medick, yellow trefoil	
<i>*Melilotus officinalis</i>	Yellow sweetclover	
<i>*Vicia sativa</i> ssp. <i>sativa</i>	Spring vetch	
<b>Fagaceae - Oak Family</b>		

Scientific Name	Common Name	Special Status
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak, encina	
<i>Quercus berberidifolia</i>	Scrub oak	
<i>Quercus engelmannii</i>	Engelmann's/mesa blue oak	CNPS 4, CSDS Group D
<b>Geraniaceae - Geranium Family</b>		
* <i>Erodium botrys</i>	Long-beak filaree/storksbill	
* <i>Erodium cicutarium</i>	Red-stem filaree/storksbill	
<b>Hydrophyllaceae - Waterleaf Family</b>		
<i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	eucrypta	
<i>Nemophila menziesii</i> var. <i>integrifolia</i>	Baby blue eyes	
<i>Phacelia cicutaria</i>		
<i>Phacelia grandiflora</i>	Large flower phacelia	
<b>Juglandaceae - Walnut Family</b>		
<i>Juglans californica</i> var. <i>californica</i>	California black walnut	CNPS 4, CSDS Group D
<b>Lamiaceae (Labiatae) - Mint Family</b>		
* <i>Lamium amplexicaule</i>	Henbit	
* <i>Marrubium vulgare</i>	Horehound	
<i>Mentha arvensis</i>	Tule mint	
<i>Salvia apiana</i>	White sage	
<i>Salvia columbariae</i>	Chia	
<i>Salvia mellifera</i>	Black sage	
<b>Malvaceae - Mallow Family</b>		
* <i>Malva parviflora</i>	Cheeseweed	
<b>Nyctaginaceae - Four O'clock Family</b>		
<i>Mirabilis laevis</i> var. <i>villosa</i>	Wishbone plant	
<b>Oleaceae - Olive Family</b>		

Scientific Name	Common Name	Special Status
<i>Fraxinus velutina</i>	Velvet ash	
<b>Onagraceae - Evening-Primrose Family</b>		
<i>Camissonia californica</i>	False-mustard	
<i>Clarkia delicata</i>	Delicate/Campo clarkia	CNPS List 1B, CSDS Group A
<i>Oenothera elata ssp. hookeri</i>	Great marsh evening-primrose	
<b>Paeoniaceae - Peony Family</b>		
<i>Paeonia californica</i>	California peony	
<b>Papaveraceae [incl. Fumariaceae] - Poppy Family</b>		
<i>Dicentra chrysantha</i>	Golden ear-drops	
<i>Eschscholzia californica</i>	California poppy	
<b>Polygonaceae - Buckwheat Family</b>		
<i>Eriogonum fasciculatum var. fasciculatum</i>	California buckwheat	
<i>Eriogonum sp.</i>	buckwheat	
<b>Portulacaceae - Purslane Family</b>		
<i>Claytonia perfoliata ssp. perfoliata</i>	Miner's-lettuce	
* <i>Portulaca oleracea</i>	Common purslane	
<b>Ranunculaceae – Buttercup Family</b>		
<i>Clematis sp.</i>	Virgins bower	
<b>Rhamnaceae - Buckthorn Family</b>		
<i>Ceanothus tomentosus</i>	Ramona-lilac	
<i>Rhamnus crocea</i>	Spiny redberry	
<i>Rhamnus ilicifolia</i>	Holly leaf redberry	
<b>Scrophulariaceae - Figwort Family</b>		
<i>Keckiella cordifolia</i>	Climbing bush penstemon	
<i>Scrophularia californica ssp. floribunda</i>	California bee plant/figwort	

Scientific Name	Common Name	Special Status
<b>Solanaceae - Nightshade Family</b>		
<i>Datura wrightii</i>	Jimson weed	
* <i>Nicotiana glauca</i>	Tree tobacco	
<b>Tamaricaceae - Tamarisk Family</b>		
* <i>Tamarix ramosissima</i>	Tamarisk, salt-cedar	
<b>Urticaceae - Nettle Family</b>		
* <i>Urtica urens</i>	Dwarf nettle	
<b>Vitaceae – Mistletoe Family</b>		
<i>Phoradendron macrophyllum</i>	Big-leaf misletoe	
<b>Agavaceae - Agave Family</b>		
<i>Yucca whipplei</i> Torrey	Our lord's candle	
<b>Iridaceae - Iris Family</b>		
<i>Sisyrinchium bellum</i>	Blue-eyed-grass	
<b>Juncaceae - Rush Family</b>		
<i>Juncus bufonius</i> var. <i>bufonius</i>	Toad rush	
<b>Poaceae (Gramineae) - Grass Family</b>		
* <i>Avena fatua</i>	Wild oat	
<i>Bromus californicus</i>	California brome	
* <i>Bromus diandrus</i>	Ripgut grass	
* <i>Bromus madritensis</i> ssp. <i>rubens</i>	Foxtail chess	
* <i>Bromus tectorum</i>	Cheat grass, downy brome	
* <i>Dactylis glomerata</i>	Orchard grass	
<i>Deschampsia danthonioides</i>	Annual hairgrass	
<i>Distichlis spicata</i>	Saltgrass	
* <i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley	
* <i>Lamarckia aurea</i>	Golden-top	



Scientific Name	Common Name	Special Status
<i>Melica imperfecta</i>	Coast range melic	
* <i>Pennisetum setaceum</i>	Fountain grass	
* <i>Poa annua</i>	Annual bluegrass	
* <i>Poa pratensis ssp. pratensis</i>	Kentucky bluegrass	
* <i>Vulpia myuros var. myuros</i>	Rattail fescue	

#### **Themidaceae - Brodiaea Family**

<i>Dichelostemma capitatum ssp. capitatum</i>	Blue dicks
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#### **Legend:**

\*=non-native species

#### **Status:**

#### **CNPS List – California Native Plant Society**

- 1B – Rare, threatened or endangered in California and elsewhere
- 2 – Rare, threatened or endangered in California but more common elsewhere
- 3 – May be rare but more research needed to determine true status
- 4 – Limited distribution and are uncommon but not presently rare or endangered

#### **San Diego County Group**

- A – Rare, threatened or endangered in California and elsewhere
- B – Rare, threatened or endangered in California but more common elsewhere
- C – Maybe quite rare, but more information is needed to determine their status
- D – Limited distribution and are uncommon but not presently rare or endangered

#### **References**

Scientific and common names are from Hickman (1993) and Skinner and Pavlik (1994). Additional common plant names are taken from Abrams (1923, 1944), Abrams and Ferris (1960), Beauchamp (1986), McAuley (1996), Munz (1974), Skinner and Pavlik (1994) and Simpson and Rebman (2006).

Appendix B

**Wildlife Species Detected on or Adjacent  
to El Monte County Park in 2008**



Scientific Name	Common Name	Method of Detection	Special Status
<b>INVERTEBRATES</b>			
<i>Butterflies</i>			
<i>Anthocaris sara</i>	Sara's Orangetip	X	
<i>Papilio eurymedon</i>	Pale Swallowtail	X	
<i>Pontia protodice</i>	Common White	X	
<i>Other Invertebrates</i>			
<i>Anuroctonus sp.</i>	Burrowing Scorpion	XT	
<i>Armadillidium vulgare</i>	Pill Bug	XT	
<i>Calosoma pustulosus</i>	Common Calosoma	XT	
<i>Centrophilus californicus</i>	Camel Cricket	XT	
<i>Cratidus osculans</i>	Wooly Darkling Beetle	XT	
<i>Dasymutilla sp.</i>	Red Velvet-Ant	XT	
<i>Eleodes sp.</i>	Stink Beetle	XT	
<i>Gryllus sp.</i>	Field Cricket	XT	
<i>Latrodectus hesperus</i>	Black Widow	XT	
<i>Pardosa sp.</i>	Wolf Spider	XT	
<i>Phloeodes pustulosus</i>	Ironclad Beetle	XT	
<i>Stenopelmatus sp.</i>	Jerusalem Cricket	XT	
<b>HERPTILES</b>			
<i>Bufo boreas</i>	Western Toad	XT	
<i>Elgaria multicarinata</i>	Southern Alligator Lizard	X	
<i>Sceloporus occidentalis</i>	Western Fence Lizard	X	
<i>Sceloporus orcutti</i>	Granite Spiny Lizard	X	
<i>Uta stansburiana</i>	Side-blotched Lizard	X	
<i>Lampropeltis getula</i>	Common Kingsnake	X	
<i>Pituophis catenifer</i> [ <i>Pituophis melanoleucus</i> ]	Gopher Snake	X	
<b>BIRDS</b>			
* <i>Meleagris gallopavo</i>	Wild Turkey	X	
<i>Callipepla californica</i>	California Quail	X	
<i>Ardea alba</i>	Great Egret	X	
<i>Buteo lineatus</i>	Red-shouldered Hawk	X	CSDS Group I
<i>Buteo jamaicensis</i>	Red-tailed Hawk	X	
<i>Charadrius vociferus</i>	Killdeer	X	
<i>Zenaida macroura</i>	Mourning Dove	X	
<i>Tyto alba</i>	Barn Owl		CSDS Group II
<i>Geococcyx californianus</i>	Greater Roadrunner	X	
<i>Archilochus alexandri</i>	Black-chinned Hummingbird	X	

Scientific Name	Common Name	Method of Detection	Special Status
<i>Calypte anna</i>	Anna's Hummingbird	X	
<i>Calypte costae</i>	Costa's Hummingbird	X	
<i>Seelasphorus sp</i>	Rufous/Allens Hummingbird	X	
<i>Melanerpes formicivorus</i>	Acorn Woodpecker	X	
<i>Picoides nuttallii</i>	Nuttall's Woodpecker	X	
<i>Empidonax difficilis</i>	Pacific-slope Flycatcher	X	
<i>Sayornis nigricans</i>	Black Phoebe	X	
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher	X	
<i>Tyrannus vociferans</i>	Cassin's Kingbird	X	
<i>Tyrannus verticalis</i>	Western Kingbird	X	
<i>Aphelocoma californica</i>	Western Scrub-Jay	X	
<i>Corvus brachyrhynchos</i>	American Crow	X	
<i>Corvus corax</i>	Common Raven	X	
<i>Tachycineta thalassina</i>	Violet-green Swallow	X	
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow	X	
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	X	
<i>Baeolophus inornatus</i>	Oak Titmouse	X	
<i>Psaltiriparus minimus</i>	Bushtit	X	
<i>Sitta carolinensis</i>	White-breasted Nuthatch	X	
<i>Campylorhynchus brunneicapillus sandiegensis</i>	San Diego Cactus Wren (=Coastal Cactus Wren)	X	CSC, MSCP, CSDS Group I
<i>Salpinctes obsoletus</i>	Rock Wren	X	
<i>Catherpes mexicanus</i>	Canyon Wren	X	
<i>Thryomanes bewickii</i>	Bewick's Wren	X	
<i>Troglodytes aedon</i>	House Wren	X	
<i>Sialia mexicana</i>	Western Bluebird	X	MSCP, CSDS Group II
<i>Chamaea fasciata</i>	Wrentit	X	
<i>Mimus polyglottos</i>	Northern Mockingbird	X	
* <i>Sturnus vulgaris</i>	European Starling	X	
<i>Phainopepla nitens</i>	Phainopepla	X	
<i>Vermivora celata</i>	Orange-crowned Warbler	X	
<i>Piranga ludoviciana</i>	Western Tanager	X	
<i>Pipilo maculatus</i>	Spotted Towhee	X	
<i>Pipilo crissalis</i>	California Towhee	X	
<i>Aimophila ruficeps canscens</i>	Southern California Rufous-crowned Sparrow (=California Rufous-crowned Sparrow)	X	MSCP, CSDS Group I
<i>Pheucticus melanocephalus</i>	Black-headed Grosbeak	X	
<i>Passerina amoena</i>	Lazuli Bunting	X	

Scientific Name	Common Name	Method of Detection	Special Status
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	X	
<i>Icterus cucullatus</i>	Hooded Oriole	X	
<i>Icterus bullockii</i>	Bullock's Oriole	X	
<i>Carpodacus mexicanus</i>	House Finch	X	
<i>Carduelis psaltria</i>	Lesser Goldfinch	X	
<i>Passer domesticus</i>	House Sparrow	X	
<b>MAMMALS</b>			
<i>Myotis californicus</i>	California Myotis	X	
<i>Myotis ciliolabrum</i>	Small-footed Myotis	X	CSDS Group II
<i>Myotis yumanensis</i>	Yuma Myotis	XT	CSDS Group II
<i>Lasiurus blossevillii</i>	Western Red Bat	X	CSC, CSDS Group II
<i>Lasiurus cinereus</i>	Hoary Bat	X	
<i>Lasiurus xanthinus</i>	Western Yellow Bat	X	
<i>Parastrellus hesperus</i>	Canyon Bat	X	
<i>Eptesicus fuscus</i>	Big Brown Bat	X	
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	X	CSC, CSDS Group II
<i>Antrozous pallidus</i>	Pallid Bat	XT	CSC, CSDS Group II
<i>Tadarida brasiliensis</i>	Mexican Free-tailed Bat	X	
<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat	X	CSC, CSDS Group II
<i>Eumops perotis</i>	Western Mastiff Bat	X	CSC, CSDS Group II
<i>Sylvilagus audubonii</i>	Desert Cottontail	S	
<i>Spermophilus beecheyi</i>	California Ground Squirrel	XST	
<i>Thomomys bottae</i>	Botta's Pocket Gopher	S	
<i>Chaetodipus fallax fallax</i>	Northwestern San Diego Pocket Mouse	T	CSC, CSDS Group II
<i>Canis latrans</i>	Coyote	XSC	
<i>Lynx rufus</i> [ <i>Felis rufus</i> ]	Bobcat	XC	
<i>Odocoileus hemionus fuliginata</i>	Southern Mule Deer	S	MSCP, CSDS Group II
<b>Legend:</b> *=Non-native or invasive species <b>Observed or Detected:</b> X = detected, T = trapped or captured, C = camera station, S = sign only <b>Special Status:</b> FE= Federally Endangered, FT= Federally Threatened, SE= State Endangered, CSC= California Species of Special Concern, CFP= California Fully Protected, MSCP= Multiple Species Conservation Program Covered Species, CSDS=County of San Diego Sensitive Animal			





Appendix C

# Photographs





**Photo 1. Holly Leaf Redberry growing on a north-facing slope**



**Photo 2. The portion of the San Diego river that falls within the Park, as seen from the top of the hill on the southern end of the Park**





**Photo 3. Herpetological array in San Diego River floodplain**



**Photo 4. Western Toad captured in herpetological array**





**Photo 5. Scorpion captured in herpetological array**

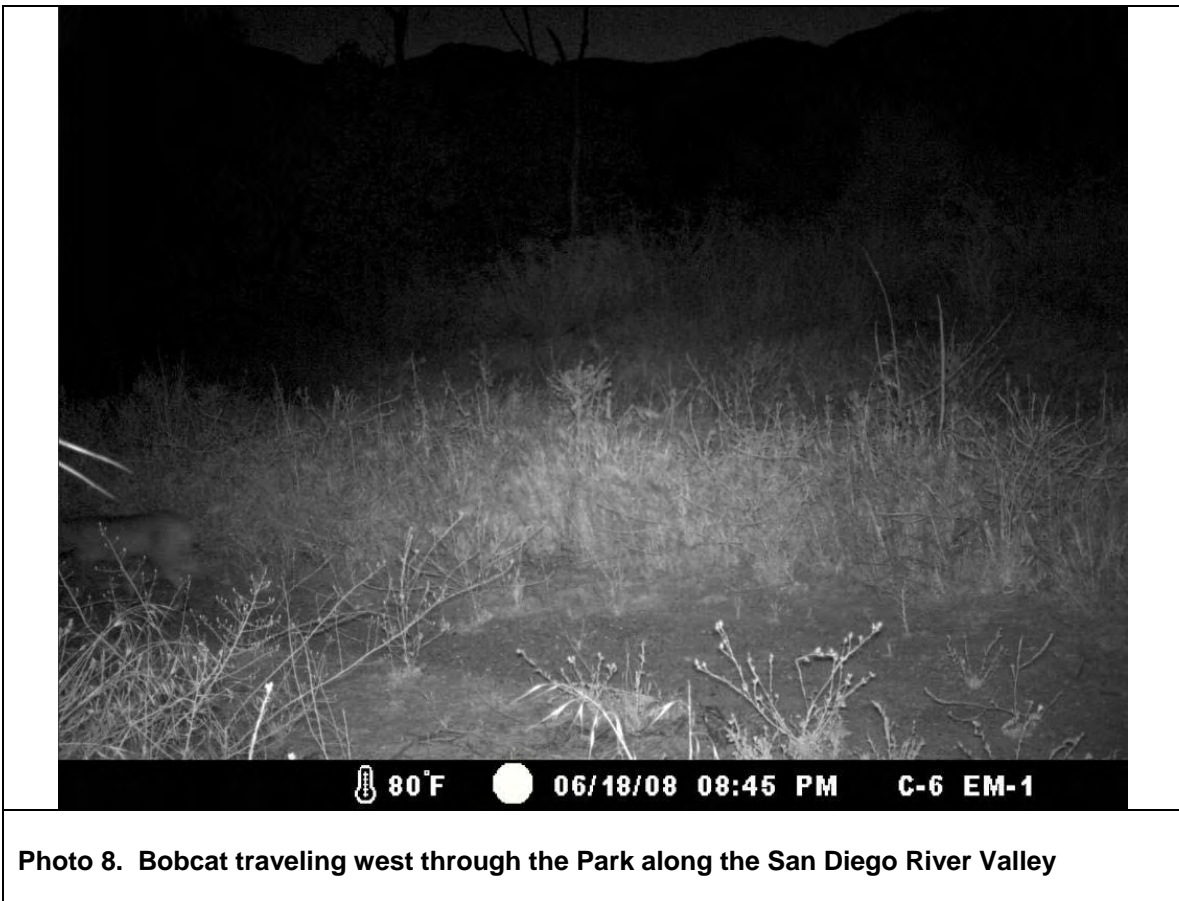


**Photo 6. Pallid Bat captured during active bat surveys**





**Photo 7. Coyote traveling through the Park along the San Diego River Valley**



**Photo 8. Bobcat traveling west through the Park along the San Diego River Valley**