

September 28, 2015

Ms. Esther Burkett
California Department of Fish and Wildlife
Wildlife Branch - Nongame Wildlife
1812 9th Street
Sacramento, CA 95811

RE: BURROWING OWL SURVEY SUMMARY REPORT FOR THE ENCINCA HUB PORTION OF THE PROPOSED SAN DIEGO GAS & ELECTRIC COMPANY SYCAMORE TO PEÑASQUITOS 230 KILOVOLT TRANSMISSION LINE PROJECT, SAN DIEGO COUNTY, CALIFORNIA

Ms. Burkett:

Busby Biological Services, Inc. (BBS) was contracted by Chambers Group, Inc. (Chambers) to conduct a focused habitat assessment and focused surveys for burrowing owl (*Athene cunicularia*) on behalf of San Diego Gas & Electric Company (SDG&E) for the Encina Hub portion of the proposed Sycamore to Peñasquitos 230 Kilovolt (kV) Transmission Line Project (Proposed Project) in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2). This survey summary report provides brief project background information, burrowing owl species and historical occurrence information, methods, and results/discussion.

1.0 PROJECT BACKGROUND INFORMATION

A brief summary of the Proposed Project and burrowing owl surveys are provided in this section.

1.1 Proposed Project Location and Description

The Encina Hub portion of the Proposed Project is in the southern portion of the U.S. Geological Survey (USGS) 7.5-minute San Luis Rey topographic quadrangle (USGS 1968) in the City of Carlsbad, San Diego County, California (Appendix A: Figures 1 and 2). The Encina Hub contains gently sloping to moderately sloping topography, with elevations ranging from approximately 240 feet above mean sea level (amsl) to 40 feet amsl. Land use within the Encina Hub consists primarily of undeveloped land and natural preserve lands. Adjacent land use includes a municipal golf course, hotels, agriculture, and additional undeveloped land and preserve lands. The Encina Hub is dominated by the following vegetation communities: Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, disturbed habitat, and bare ground. Other vegetation communities present in smaller proportions include southern riparian scrub, southern willow scrub, mulefat scrub, nonnative grassland, native grassland, ornamental, and developed lands.

The Proposed Project includes construction of a new, approximately 16.7-mile 230 kV transmission line between the existing SDG&E Sycamore Canyon and Peñasquitos

substations; the consolidation of two existing 69 kV power lines onto new double-circuit, steel structures that would replace existing, predominantly wood structures; and re-routing at the Encina and Mira Mesa Hubs. An existing San Luis Rey–Mission 230 kV transmission line would be removed from service at the Encina Hub to create an open position for the proposed new 230 kV transmission line. The following steps would occur to reconfigure the 230 kV transmission lines at Encina Hub portion of the Proposed Project:

- Remove jumpers between existing towers
- Transfer the existing conductor between towers
- Install jumpers from towers
- Install new conductor from tower between three existing towers
- Install dead ends assemblies, dampers and spacers on existing towers

All new transmission line facilities would be located within existing SDG&E Right-of-Way or within franchise position within existing public roadways, and the entire Proposed Project is located within San Diego County (Appendix A: Figures 1 and 2).

1.2 Brief Survey Area Explanation

Focused burrowing owl surveys were conducted for the Proposed Project within all suitable habitats within and adjacent to the current Proposed Project alignment. Because the Encina Hub is located in a geographically distinct location and is not within the immediate vicinity of the main Proposed Project alignment (Appendix A: Figure 1), two separate survey summary reports were prepared for the spring 2015 surveys: one for the burrowing owl surveys conducted at Encina Hub, and one for the surveys that were conducted along the main Proposed Project alignment. This report focuses on the results of the focused burrowing owl surveys conducted at the Encina Hub. The results of the spring 2015 burrowing owl surveys conducted within the main Proposed Project alignment will be contained in a separate report.

2.0 BURROWING OWL SPECIES & HISTORICAL OCCURRENCE INFORMATION

The burrowing owl is a California Department of Fish and Wildlife (CDFW) species of special concern and a *SDG&E Subregional Natural Community Conservation Plan* (NCCP)-covered, narrow endemic species. This section provides species-specific information about the burrowing owl range and migration patterns, habitat, breeding information, and population threats.

2.1 Burrowing Owl Range & Migration Patterns

The burrowing owl ranges from southwestern Canada and the western United States, south through Central America, and into the northernmost portion of South America as well as the southern half of South America. It can also be found on coastal islands off of Florida and Baja California, Mexico (Haug et. al. 1993). The northernmost populations of this species are almost completely migratory, and wintering birds can be found south to southern Mexico.

The western subspecies of burrowing owl (*A. c. hypugaea*) includes the populations that occur in southern Alberta, Canada, and within the western United States. In California, the western burrowing owl is found throughout the state, with the exception of the northern

coast and eastern Sierra Nevada Mountains (Shuford and Gardali 2008). This subspecies remains fairly common in the Imperial Valley, which is home to nearly 70 percent of the entire California population; however, this species is rapidly declining in the remainder of the California populations (Unitt 2004). While the northern populations are often migratory, southern California burrowing owls are only partially migratory as evidenced by reduced population sizes in winter, with some birds remaining on territories throughout the year.

The burrowing owl has disappeared and/or populations have declined in several southern California and San Francisco Bay area counties and in coastal areas throughout California, as they have in other regions throughout the United States and Canada (DeSante et al. 1997, Klute et al. 2003). During the late 1800's and early 1900's, the burrowing owl was widespread and common in San Diego County, primarily along the coast and into the grassy interior; however, by the 1970's, the burrowing owl was considered uncommon and declining in these areas (Unitt 2004; Bent 1961). The burrowing owl currently occupies some historical sites in San Diego County (e.g., Naval Air Station North Island, south San Diego coastal area, and Otay Mesa) in much reduced numbers and is believed to be absent from many developed areas that it formerly occupied (e.g., north-central San Diego County, coastal areas, and the area around the City of San Diego) (Unitt 2004; Lincer and Bloom 2007). Currently, an estimated 41 to 46 pairs breed and 148 to 168 local individuals winter within San Diego County (Lincer and Bloom 2007). During the winter, local wintering burrowing owls are joined by migratory wintering burrowing owls to form a total estimated wintering population of approximately 300 to 370 individuals (Lincer and Bloom 2007).

2.2 Burrowing Owl Habitat

The burrowing owl is a ground-dwelling raptor that requires open, relatively flat terrain with burrows for nesting, roosting, and cover (CDFW 2012). This species can be found in a variety of habitat types that contain suitable burrowing and foraging habitat, including – but not limited to – native and non-native grassland, shrub steppe, shrubland with low density shrub cover, desert, agricultural, golf courses, drainage ditches, earthen berms, pasturelands, fallow fields, and even ruderal areas and vacant lots (Gervais et al 2008, CDFW 2012, TLMA 2006). The burrowing owl is typically associated with areas containing well-drained, friable soils inhabited by fossorial mammals (Haug et al. 1993, CDFW 2012).

In California, the burrowing owl prefers habitat with short, sparse vegetation and few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993). In San Diego County, the burrowing owl typically inhabits coastal lowlands in grasslands, agricultural areas, and coastal dunes (Unitt 2004).

In addition to burrowing habitat, the burrowing owl requires ample foraging habitat surrounding its burrows. This species concentrates its foraging within approximately 2,000 feet of its burrow, which equates to an area of up to approximately 300 acres (Haug and Oliphant 1990, Rosenberg and Haley 2004); however, the burrowing owl is known to use much smaller patch sizes, especially when they are located adjacent to suitable breeding and/or foraging habitat. Preferred foraging habitat consists of dry, open, relatively flat expanses with short grasses and sparse shrub cover (Ehrlich et al. 1988).

Although the burrowing owl may dig its own burrows (Thomsen 1971, Barclay 2007), this opportunistic species usually modifies or enlarges existing burrows that were previously used by mammals. In California, the burrowing owl frequently uses burrows of California

ground squirrel (*Spermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*), but it may also use dens or holes dug by American badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (*Vulpes* spp.; Ronan 2002, CDFW 2012). In addition to earthen burrows, the burrowing owl may also use natural rock cavities, debris piles, culverts, openings beneath cement or asphalt pavement, and pipes (Rosenberg et al. 1998) as well as artificial burrows (Smith and Belthoff 2003) for nesting, roosting, and cover (CDFW 2012).

2.3 Burrowing Owl Breeding Information

Burrowing owl breeding behaviors include a wide range of activities associated with site selection by males; breeding pair formation; actual copulation; egg laying, incubation, and hatching; and care of the young during fledging and post-fledging. In California, the burrowing owl breeding season typically occurs between February 1 and August 31; however, breeding outside of this window has been documented under appropriate environmental conditions (CDFW 2012). The peak of the breeding season, when most burrowing owls have active nests, typically occurs between April 15 and July 15. In addition to its nest burrow, the burrowing owl may use satellite burrows to reduce predation and parasite infestation, particularly while caring for nestlings (CDFW 2012).

2.4 Burrowing Owl Population Threats

In California, the burrowing owl is threatened by a variety of factors, including habitat loss, control of burrowing rodents, and direct mortality. Population declines have been attributed to habitat loss, degradation, and fragmentation resulting most often from conversion of suitable habitat as a result of urbanization (Gervais et al. 2008). Burrowing rodent control programs, especially those targeting the California ground squirrel, threaten burrowing owl populations because ground squirrel burrows are the burrows most often utilized by burrowing owl for nesting and cover. Thus, elimination of burrowing rodents has led to both recent and historical declines of burrowing owl populations in California and nationwide (Klute et al. 2003). Direct mortality from vehicle collisions (Haug et al. 1993, Gervais et al. 2008), agricultural drain/ditch maintenance, discing in fallow fields (Rosenberg and Haley 2004, Catlin and Rosenberg 2006), and wind turbine collisions (Thelander et al. 2003) as well as exposure to pesticides (Klute et al. 2003, Gervais et al. 2008) have all added to the decline of the burrowing owl in California. In areas of remaining open habitat close to or surrounded by developed areas, disturbance from human activity (e.g., walking, jogging, off-road activity, dog walking) and loose and feral pets are likely factors deterring the burrowing owl from these areas (Wesemann and Rowe 1985, Millsap and Bear 2000).

3.0 METHODS

A focused burrowing owl habitat assessment was performed within the Encina Hub footprint and within a 500-foot buffer of the Encina Hub, and focused burrowing owl surveys were conducted in all suitable habitat identified during the habitat assessment. The methods used for the habitat assessment and focused surveys are presented in this section.

3.1 Habitat Assessment Methods

Prior to initiating the focused burrowing owl surveys at the Encina Hub, a qualified biologist conducted a focused habitat assessment in winter 2015 to identify locations of suitable habitat for the species both within the Encina Hub and within a 500-foot buffer of all Encina Hub work areas. The habitat assessment consisted of an analysis of historical occurrence data, a desktop evaluation of available site data and aerial imagery, and a field evaluation to further investigate and map suitable burrowing owl habitat. The following sections provide detail on the habitat assessment methods.

3.1.1 Historical Occurrence Data

BBS obtained historical burrowing owl occurrence data for the Encina Hub and an approximately 5-mile buffer from the SanBIOS database (County of San Diego 2014) and CDFW *California Natural Diversity Database* (CNDDDB; CDFW 2014a). BBS also reviewed other sensitive species resources, including the CDFW Special Animals list (CDFW 2014b); Proceedings of the California Burrowing Owl Symposium (Barclay et al. 2007); San Diego County Breeding Bird Atlas (Unit 2004); North American Breeding Bird Survey, Results Analysis 1966-2012 (Sauer et al. 2014); eBIRD (<http://ebird.org>); Gervais et al. (2008); the San Diego Natural History Museum (SDNHM) Bird Atlas Project (SDNHM 2014); and other regional and site-specific relevant information, data, and literature.

3.1.2 Focused Field Evaluation

BBS used the results of the historical occurrence database search along with other background research₁ in conjunction with a field survey₂ to evaluate the potentially suitable burrowing owl habitat within the burrowing owl habitat assessment area. BBS thoroughly evaluated the potentially suitable burrowing owl habitat located within the Encina Hub work areas and a 500-foot buffer of these work areas on foot to determine which polygons have the potential to support burrowing owl and, therefore, required focused burrowing owl surveys.

Areas of suitable burrowing owl habitat were drawn as polygons onto the map by hand in the field. In addition, photographs were taken of each polygon evaluated in the burrowing owl habitat assessment area.

To consistently and systematically evaluate each patch of potentially suitable habitat within the burrowing owl habitat assessment area for the potential to support the burrowing owl, BBS recorded data on the following criteria:

- polygon patch size
- dominant vegetation and land use within and adjacent to the polygon
- presence of adjacent foraging habitat
- vegetation height and shrub density within the polygon
- presence of friable soils within the polygon
- presence and quantity of burrows and burrow complexes within the polygon
- other evidence of fossorial animal use and burrow features within the polygon
- slope steepness within the polygon

BBS used this data to assess the overall potential of each potentially suitable burrowing owl habitat polygon to support the burrowing owl, taking into consideration the historical occurrence data and the evaluation criteria. Each habitat patch was either determined as not expected to support burrowing owl, or as having a low, moderate, or high potential to support burrowing owl.

3.2 Focused Burrowing Owl Survey Methods

Qualified BBS biologists conducted focused surveys for the burrowing owl in accordance with the current CDFW survey protocol, titled *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

A total of four protocol-level surveys, spaced at least three weeks apart, were conducted between February 15 and July 15: one survey was conducted within the survey window of February 15 and April 15, and three more were conducted within the survey window of April 15 and July 15, with at least one survey after June 15. The surveys were conducted between civil twilight and 10:00 am. Surveys were not conducted during adverse weather conditions (i.e. wind speeds greater than 20 kilometers per hour, rain, or dense fog). Surveyors walked straight-line transects spaced approximately 7 to 20 meters apart throughout the suitable habitat, based on the vegetation height and density. [Surveyors](#) scanned for burrowing owl every 100 meters with the aid of binoculars; watched for burrows, sign, and owls; and listened for burrowing owl calls. Surveyors took care not to flush burrowing owls.

If burrowing owl [was](#) detected, surveyors [recorded](#) the approximate location electronically using a hand-held Global Positioning Systems (GPS) device and by hand onto a high-resolution aerial image of the survey areas. Surveyors also [collected](#) data on the number of burrowing owl or nesting pairs at each location (by nestlings, juveniles, adults, and those of an unknown age), number of active burrows, burrowing owl sign at burrows, burrowing owl behavior, possible burrowing owl predators present and any evidence of predation on burrowing owl. In addition, surveyors [recorded](#) other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence.

4.0 RESULTS & DISCUSSION

The results of the habitat assessment and focused surveys for burrowing owl for the Encina Hub portion of the Proposed Project are presented in this section.

4.1 Habitat Assessment Results

This section provides a summary of the results of the historical occurrence data analysis as well as a result of the focused field evaluation.

4.1.1 Historical Burrowing Owl Occurrence within Vicinity of the Proposed Project

While a CNDDDB (CDFW 2014a) database search did not result in any historical burrowing owl occurrences within a 5-mile radius of the Encina Hub, several historical burrowing owl occurrences were found in the SanBIOS (County of San Diego 2014) database search. These data did not have any specific location or data attributes to them, so the exact location, date, and observational data associated with these points is not known. Therefore,

these points could be from breeding and/or wintering burrowing owls. Although breeding burrowing owls have very specific habitat requirements, migrant wintering burrowing owl can utilize a variety of habitats typically not suitable for breeding individuals.

4.1.2 Field Evaluation Results

On January 22, 2015, BBS biologist Laurie Gorman evaluated six polygons (approximately 7.04 acres) of potentially suitable burrowing owl habitat located within the Encina Hub and a 500-foot buffer of all proposed work areas (Appendix A: Figure 3: Polygons 1 through 6). Of the six polygons evaluated, four of the polygons (Appendix A: Figure 3: Polygons 1, 2, 4, and 5) – totaling approximately 2.99 acres – do not provide suitable burrowing owl habitat, and two of the polygons (Appendix A: Figure 3: Polygons 3 and 6) – totaling approximately 4.05 acres – provide potentially suitable burrowing owl habitat.

No burrowing owls or burrowing owl sign were observed during the focused habitat assessments conducted within the Encina Hub burrowing owl habitat assessment area. Brief descriptions of both the unsuitable and potentially suitable habitat polygons identified within the Encina Hub burrowing owl habitat assessment area are provided in this section. Appendix C contains representative photographs of both unsuitable and suitable burrowing owl habitat within the Encina Hub burrowing owl habitat assessment area.

Unsuitable Burrowing Owl Habitat Polygons

The four polygons that do not provide suitable burrowing owl habitat are described in this section. Because these polygons do not provide suitable habitat, the burrowing owl is not expected to occur in these polygons.

Polygon 1 is approximately 1.4 acres (Appendix A: Figure 3). The dominant vegetation within Polygon 1 consists of disturbed habitat, with revegetated coastal sage scrub, nonnative grassland, Diegan coastal sage scrub, and developed land immediately adjacent to the polygon. Polygon 1 contains compact soils with no small mammal burrows or burrow complexes and is contiguous with only a small patch of nonnative grassland foraging habitat. Polygon 1 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, and absence of burrows and burrow complexes.

Polygon 2 is approximately 0.46 acre (Appendix A: Figure 3; Appendix C: Photograph 1). The dominant vegetation within Polygon 2 consists of disturbed habitat, with active agriculture (tall and dense crops), southern mixed chaparral, Diegan coastal sage scrub, and developed land immediately adjacent to the polygon. Polygon 2 contains friable soils with a few small mammal burrows and a few burrow complexes, but there is no adjacent foraging habitat. Polygon 2 was classified as unsuitable for burrowing owl because of the small polygon size, high level of disturbance resulting from the adjacent active agricultural practices that do not support suitable burrowing owl foraging crops, and continued active development within the immediate vicinity.

Polygon 4 is approximately 0.78 acre and is located within an existing golf course (Appendix A: Figure 3; Appendix C: Photograph 2). The dominant vegetation within Polygon 4 consists of short, ornamental grasses associated with the golf course landscaping, with Diegan coastal sage scrub immediately adjacent to the polygon. Polygon 4 contains compact soils that are matted with ornamental grasses, and it does not support

any small mammal burrows or burrow complexes. The golf course provides adjacent foraging habitat. Polygon 4 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, absence of burrows and burrow complexes, and a high level of human activity associated with the golf course.

Polygon 5 is approximately 0.35 acre and is located within the same existing golf course as Polygon 4, above (Appendix A: Figure 3). The dominant vegetation within Polygon 5 consists of short, ornamental grasses associated with the golf course landscaping, with Diegan coastal sage scrub and mulefat scrub immediately adjacent to the polygon. Polygon 5 contains compact soils that are matted with ornamental grasses, and it does not support any small mammal burrows or burrow complexes. The golf course provides adjacent foraging habitat. Polygon 5 was classified as unsuitable for burrowing owl because of the small polygon size, compact soils, absence of burrows and burrow complexes, and a high level of human activity associated with the golf course.

Suitable Burrowing Owl Habitat Polygons

The two polygons that provide suitable burrowing owl habitat along with the potential for occurrence for the burrowing owl within the polygon are described in this section.

Polygon 3 is approximately 2.24 acres (Appendix A: Figure 3; Appendix C: Photograph 3). The dominant vegetation within Polygon 3 consists of nonnative grassland and Diegan coastal sage scrub, with Diegan coastal sage scrub, southern mixed chaparral, disturbed habitat, bare ground, and developed land immediately adjacent to the polygon. Polygon 3 contains friable soils with a low number of small mammal burrows and no small mammal burrow complexes. It is adjacent to a golf course and nonnative grassland that provide suitable foraging habitat. Based on the site conditions, BBS determined that there is a low potential for occurrence for burrowing owl within this polygon.

Polygon 6 is approximately 1.81 acres (Appendix A: Figure 3; Appendix C: Photograph 4). The dominant vegetation within Polygon 3 consists of nonnative grassland and disturbed coastal sage scrub, with Diegan coastal sage scrub, southern mixed chaparral, and nonnative grassland immediately adjacent to the polygon. Polygon 6 contains friable soils that have been compacted in some areas and also supports a low number of small mammal burrows and no small mammal burrow complexes. Openings in adjacent coastal sage scrub provide suitable foraging habitat. Based on the site conditions, BBS determined that there is a low potential for occurrence for burrowing owl within this polygon.

4.2 Focused Burrowing Owl Survey Results

Between March 17 and June 25, 2015, a total of four focused burrowing owl surveys were conducted within a total of approximately 4.05 acres in Polygons 3 and 6, identified as potentially suitable burrowing owl habitat during the focused habitat assessment (Appendix A: Figure 3). All surveys were conducted during appropriate weather conditions by BBS biologist Laurie Gorman. Appendix B provides a summary of survey conditions, including survey times and weather conditions. Appendix C contains representative photographs of both unsuitable and suitable burrowing owl habitat within the Encina Hub portion of the Proposed Project.

No burrowing owls or burrowing owl sign were detected during the 2015 focused burrowing owl surveys conducted at the Encina Hub. During the surveys, Laurie Gorman searched for suitable small mammal burrows and burrow complexes that were at least ground squirrel size or larger. Although several small mammal burrows were observed throughout Polygons 3 and 6, none of these burrows were of the appropriate size or structure to support burrowing owl during the time of the survey. In addition, most of the small mammal burrows were inactive, as indicated either by being caved in just past the opening or by the presence of spiders, spider webs, and other debris (e.g., vegetation, garbage) around the opening.

A total of 26 wildlife species were detected during the focused burrowing owl surveys. One of these 26 species, the coastal California gnatcatcher (*Polioptila californica californica*), is listed as federally threatened by the U.S. Fish and Wildlife Services and as a Species of Special Concern by CDFW. Because each of these individual coastal California gnatcatchers were also detected either during focused surveys for least Bell's vireo (*Vireo bellii pusillus*) or during access to and from the survey area during these surveys, the GPS locations of this incidentally-detected sensitive species is included in a separate report titled *Least Bell's Vireo Survey Summary Report for the Encina Hub Portion of the Proposed San Diego Gas & Electric Company Sycamore to Peñasquitos 230 kV Transmission Line Project, San Diego County, California* (BBS 2015). Appendix D provides a complete list of all wildlife species detected during the focused burrowing owl surveys.

SUMMARY

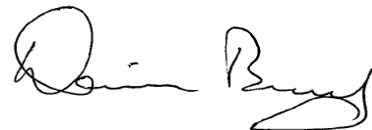
No burrowing owls were detected during the 2015 focused burrowing owl surveys conducted within the Encina Hub portion of the Proposed Project.

Please do not hesitate to contact Melissa Busby at melissa@busbybiological.com or 858.334.9507 or Darin Busby at darin@busbybiological.com or 858.334.9508 if you have any questions.

Sincerely,



Melissa Busby
Owner/Principal Biologist
Busby Biological Services, Inc.



Darin Busby
Owner/Principal Biologist
Busby Biological Services, Inc.

cc: Paul Morrissey, Chambers
Joshua Taylor, TRC
Elisha Back, TRC
Robert Fletcher, SDG&E

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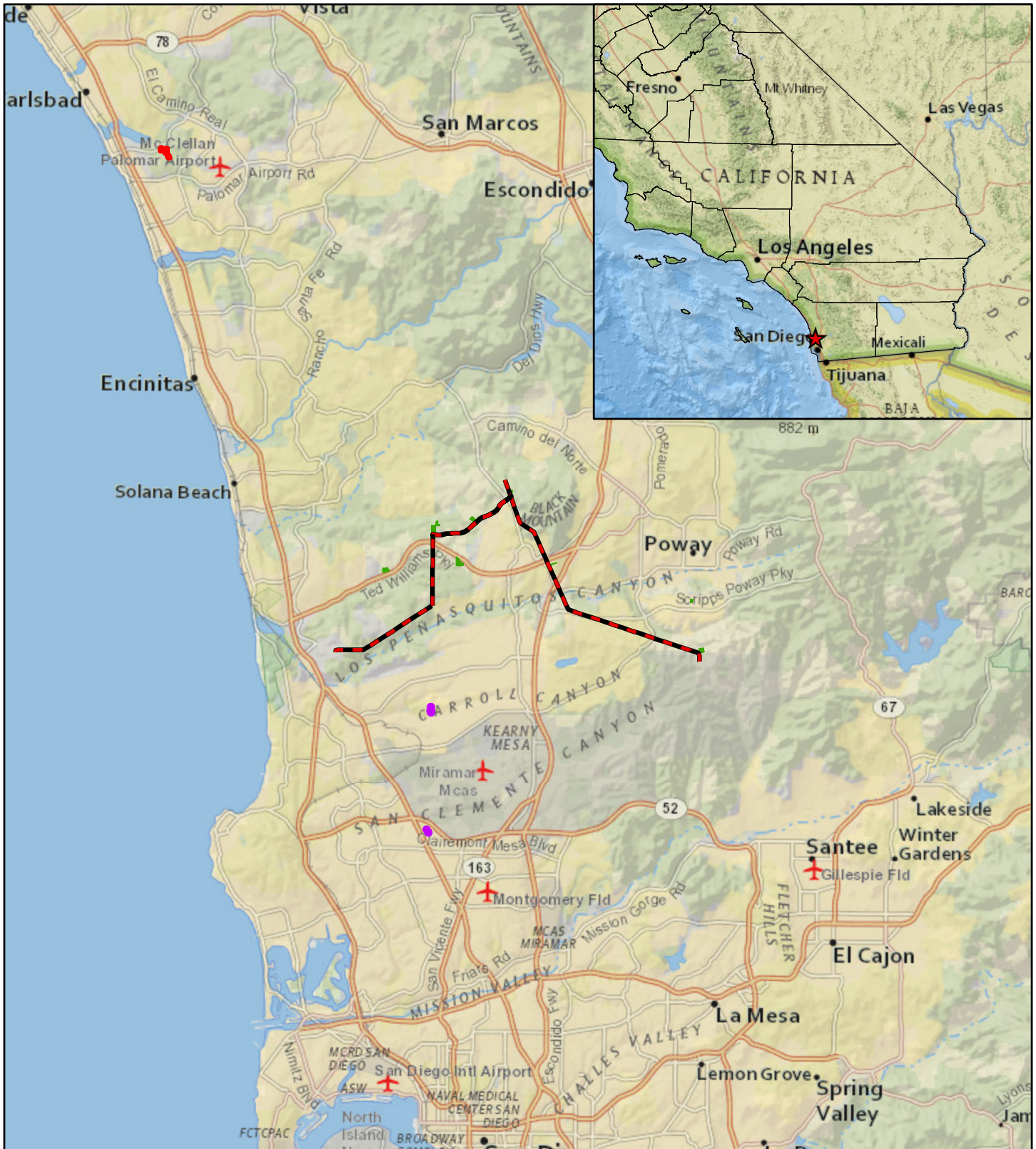
PROJECT BIOLOGIST SIGNATURE PAGE

All biologists performing focused, protocol-level, burrowing owl (*Athene cunicularia*) surveys for the Encina Hub portion of the proposed Sycamore to Peñasquitos Substation 230 kilovolt transmission line project (Proposed Project) were qualified to survey for this species. The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for burrowing owl conducted for the Proposed Project during spring 2015.



Laurie Gorman
Senior Biologist/Project Manager

APPENDIX A – Figures







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Sycamore to Peñasquitos 230 kV Transmission Line Project

Project Location Map

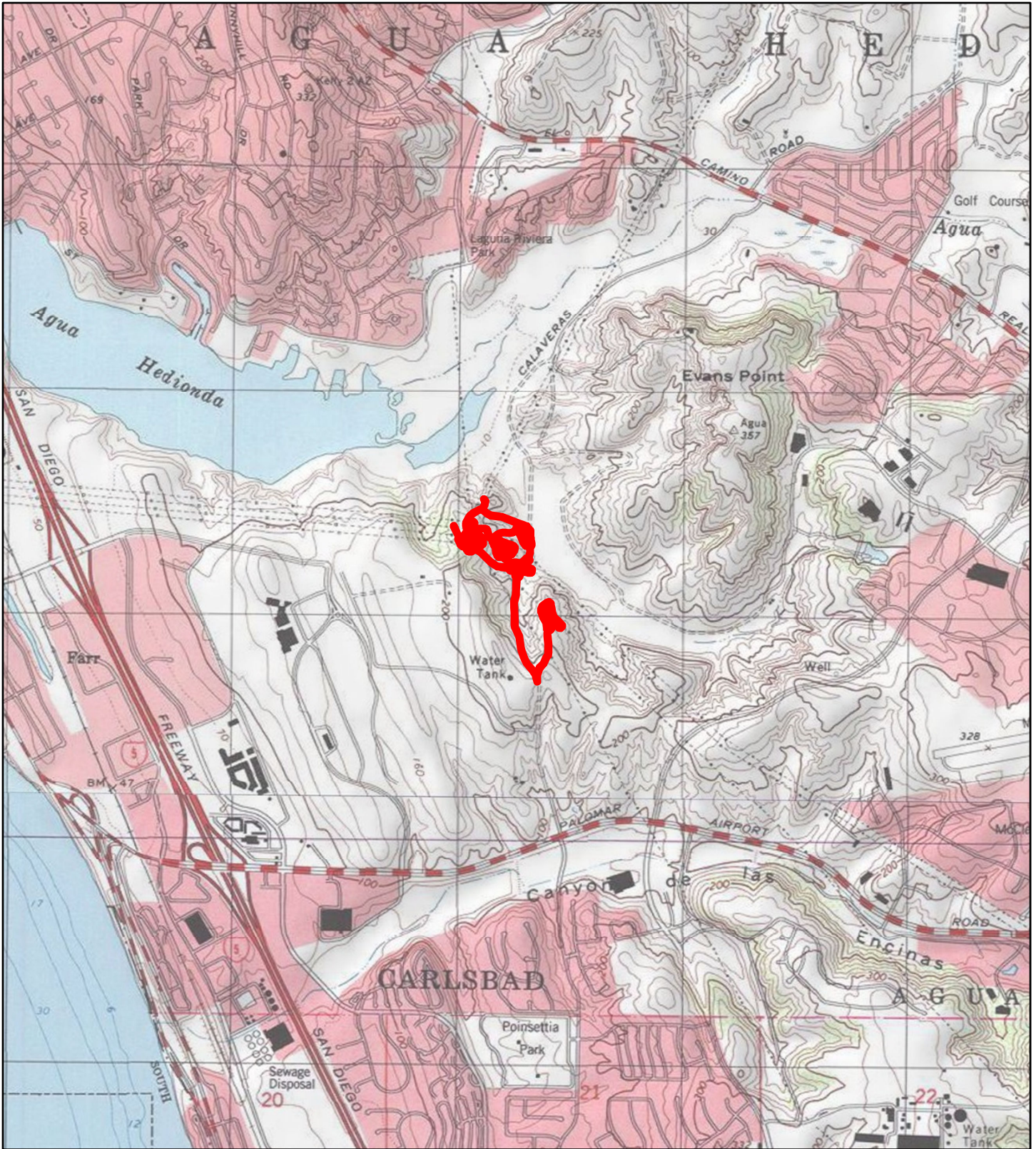
Figure 1

-  Proposed Project Route
-  Staging Yards
-  Encina Hub
-  Mira Mesa Hub



7/2/2015






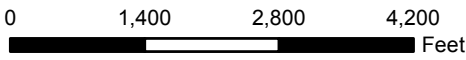
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Sycamore to Peñasquitos 230 kV Transmission Line Project

Encina Hub Project Area

Figure 2

 Encina Hub Project Area



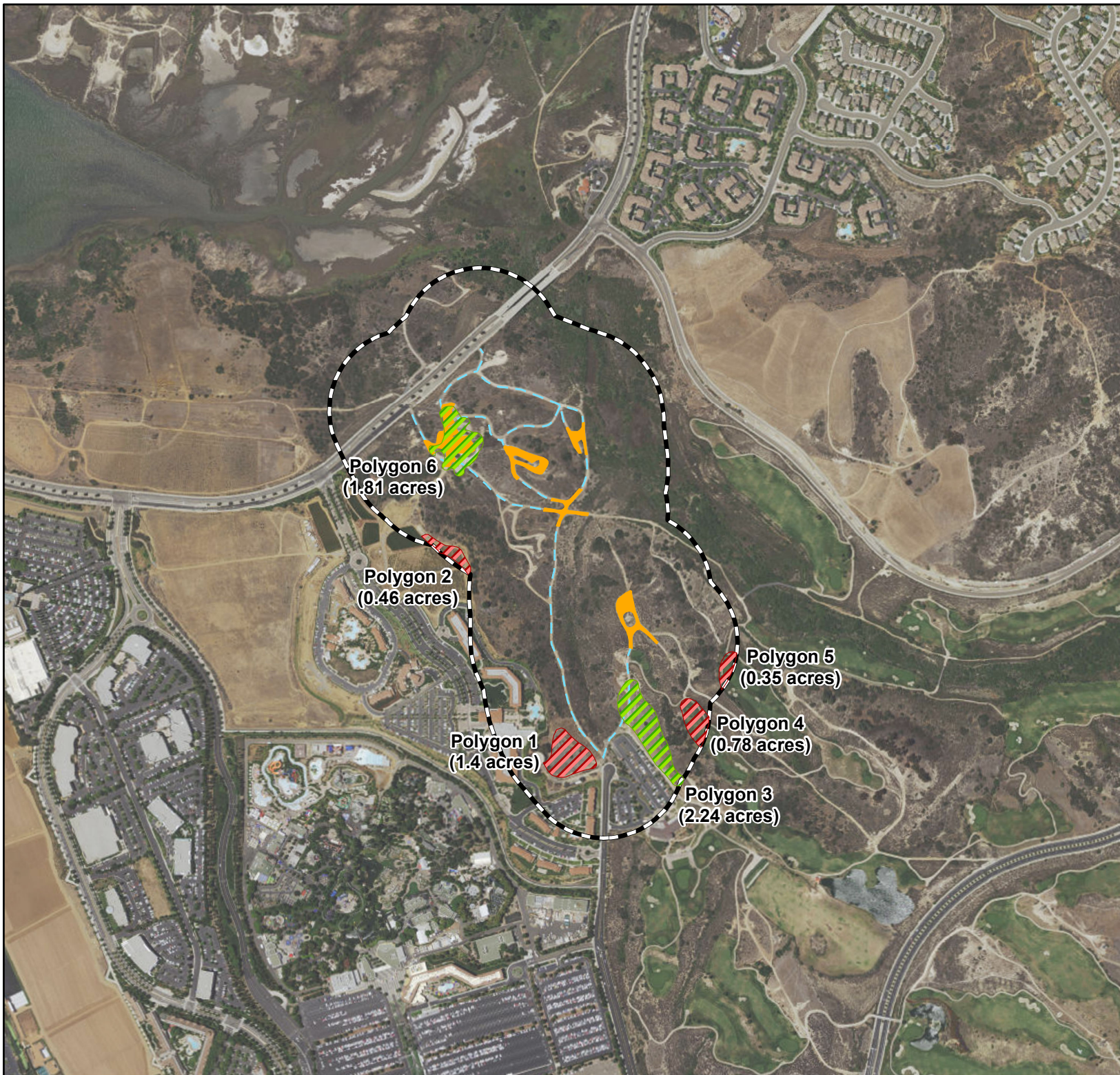
7/23/2015

A Sempra Energy utility

**Sycamore to Peñasquitos
230 kV Transmission Line
Project**

**Burrowing Owl Habitat
Assessment and Survey
Results**

Figure 3



- Project Access Roads
- Encina Hub Work Areas
- 500-foot Buffer from Work Areas
- Potential for Occurrence**
- Not Expected to Occur within Polygon
- Potential to Occur within Polygon



8/13/2015
0 420 840 1,260 Feet



Sources: TRC, 2015; SDG&E, 2015; ESRI, HERE, DeLorme, USGS, NRCAN, METI, ICP, GeoBase, GetMapping, GEBCO, NatGeo, UNEP-WCMC

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APPENDIX B – Survey Conditions

Appendix B – Survey Conditions

Survey #	Date	Time		Weather				Surveyor(s)
				Temp (°F)	Wind (mph)	Clouds (%)	Precip	
1	3/17/15	Start	0905	70	1-3	60	0	Laurie Gorman
		End	1000	72	1-4	60	0	
2	4/24/15	Start	0615	59	0-2	100	0	Laurie Gorman
		End	0800	60	0-1	100	0	
3	5/22/15	Start	0610	58	0-3	95	0	Laurie Gorman
		End	0700	61	1-4	92	0	
4	6/25/15	Start	0600	67	0-1	100	0	Laurie Gorman
		End	0720	71	0-1	100	0	

APPENDIX C – Site Photographs



Photograph 1. View of Polygon 2 on January 22, 2015. Classified as unsuitable for burrowing owl based on small polygon size, high level of disturbance resulting from the adjacent active agricultural practices, and continued active development within the immediate vicinity.



Photograph 2. View of Polygon 4 on January 22, 2015. Classified as unsuitable for burrowing owl based on small polygon size, compact soils, absence of small mammal burrows and burrow complexes, and a high level of human activity associated with the golf course.



Photograph 3. View of Polygon 3 on January 22, 2015. Classified as a low potential for burrowing owl based on presence of friable soils, low number of small mammal burrows, and suitable foraging habitat within and adjacent to polygon.



Photograph 4. View of Polygon 6 on January 22, 2015. Classified as a low potential for burrowing owl based on presence of friable soils, low number of small mammal burrows, and suitable foraging habitat within and adjacent to polygon.

APPENDIX D – Wildlife Species Detected

Appendix D - Wildlife Species Detected

INVERTEBRATES		
Class: Aves		Birds
Order Galliformes		Gallinaceous Birds
Family Odontophoridae		New World Quail
	<i>Callipepla californica</i>	California Quail
Order Ciconiiformes		Herons, Ibises, Storks, American Vultures, and Allies
Family Accipitridae		Hawks, Kites, Eagles, and Allies
	<i>Buteo jamaicensis</i>	Red-tailed Hawk
Order Apodiformes		Swifts and Hummingbirds
Family Apodidae		Swifts
	<i>Aeronautes saxatalis</i>	White-throated Swift
Family Trochilidae		Hummingbirds
	<i>Calypte anna</i>	Anna's Hummingbird
Order Passeriformes		Perching Birds
Family Tyrannidae		Tyrant Flycatchers
	<i>Sayornis nigricans</i>	Black Phoebe
	<i>Tyrannus vociferans</i>	Cassin's Kingbird
Family Corvidae		Crows and Jays
	<i>Aphelocoma californica</i>	Western Scrub-Jay
	<i>Corvus brachyrhynchos</i>	American Crow
	<i>Corvus corax</i>	Common Raven
Family Aegithalidae		Bushtits
	<i>Psaltriparus minimus</i>	Bushtit
Family Troglodytidae		Wrens
	<i>Thryomanes bewickii</i>	Bewick's Wren
Family Sylviidae		Gnatcatchers
	<i>Polioptila californica californica</i>	Coastal California Gnatcatcher
Family Timaliidae		Babblers
	<i>Chamaea fasciata</i>	Wrentit
Family Mimidae		Mockingbirds and Thrashers
	<i>Mimus polyglottos</i>	Northern Mockingbird
	<i>Toxostoma redivivum</i>	California Thrasher
Family Emberizidae		Emberizids
	<i>Pipilo maculatus</i>	Spotted Towhee
	<i>Pipilo crissalis</i>	California Towhee
	<i>Melospiza melodia</i>	Song Sparrow
	<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
Family Fringillidae		Fringilline and Cardueline Finches and Allies
	<i>Carpodacus mexicanus</i>	House Finch
	<i>Carduelis psaltria</i>	Lesser Goldfinch

Appendix D - Wildlife Species Detected (Continued)

Class: Mammalia		Mammals
Order Lagomorpha		Rabbits, Hares, and Pikas
Family Leporidae		Rabbits and Hares
	<i>Sylvilagus audubonii</i>	Desert Cottontail
Order Rodentia		Rodents
Family Sciuridae		Squirrels and Chipmunks
	<i>Spermophilus beecheyi</i>	California Ground Squirrel
Order Carnivora		Carnivores
Family Canidae		Dogs and foxes
	<i>Canis familiaris</i>	Domestic Dog
	<i>Canis latrans</i>	Coyote
Family Procyonidae		Raccoons and Relatives
	<i>Procyon lotor</i>	Raccoon