

**STEP I HABITAT ASSESSMENT, STEP II, PART A FOCUSED BURROW
SURVEY AND STEP II, PART B FOCUSED BURROWING OWL SURVEY
FOR TENTATIVE TRACT NO. 37803 A 53.15-ACRE PROPERTY LOCATED
IN THE CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA**

Assessor Parcel Numbers: 311-080-033, 311-080-035, 311-090-009, 311-090-016, 311-090-020

Located within Section 30, Township 4 South
Range 3 West of the Perris, California Quadrangle

Prepared for:

City of Perris

and

UCI Property Development Inc.
17700 Castleton Street, Suite 128
City of Industry, California 91748

Prepared by:

TERACOR Resource Management, Inc.
27393 Ynez Road, Suite 253
Temecula, California 92591
Office: (951) 694-8000
Fax: (951) 694-8035

Surveys Conducted By:
S. Reed, Principal
on 07 April, 11 April, 20 June, 19 July, 26 July 2019



13 September 2019

TABLE OF CONTENTS

1.0 Introduction..... 1
2.0 Methods.....4
3.0 Results.....6
4.0 Conclusion and Recommendations.....9

Appendix A – Faunal Species Observed A - 1
Appendix B – Floral Species Observed..... B – 1
Appendix C – G.P.S. Locations C – 1
Appendix D – References..... D – 1

LIST OF TABLES AND APPENDED EXHIBITS

Table 1 – Meteorological Data..... 6
Table 2 – Soil Types..... 8

Exhibit 1 – USGS Topographic Map..... attached in order
Exhibit 2 – Suitability and Transect Map – 2018 Aerial Photograph..... attached in order
Exhibit 3 – Vegetation Communities – 2018 Aerial Photograph..... attached in order
Exhibit 4 – Burrowing Owl CNDDDB Locations attached in order
Exhibit 5 – Potential Owl Burrow Locations – 2018 Aerial Photograph attached in order
Exhibit 6 – Site Photographs attached in order

1.0 INTRODUCTION

PURPOSE

Step I Habitat Assessment and Step II, Part A Focused Burrow Survey

TERACOR Resource Management, Inc. ("TERACOR") initially conducted a focused habitat suitability assessment on 07 April 2019 to evaluate the biological resources on-site to determine if: 1) suitable burrowing owl (*Athene cunicularia*) ("BUOW") habitat is present on the 53.15-acre site, and 2) determine if any burrows on-site could potentially be utilized by BUOW.

Due to the presence of some suitable habitat on the project site, TERACOR conducted a Step II, Part A Focused Burrow Survey on the subject property on the same date to locate and mapped California ground squirrel (*Otospermophilus beecheyi*) burrows on-site which were within areas considered suitable for BUOW, as this owl is known to opportunistically utilize ground squirrel burrows. Additionally, TERACOR examined the outer structure of each burrow encountered and mapped for evidence of BUOW occupation. We concluded that a number of potentially-occupiable burrows were present on-site, but that all potentially suitable burrows lacked any BUOW diagnostic sign. Due to the presence of potentially suitable BUOW burrows and the relatively high mobility of the organism, TERACOR recommended focused surveys be conducted throughout a broad range of the survey season.

For purposes explained in the Background section of this report, hilly areas where boulder outcrops and dense scrub vegetation occur across the property were excluded from surveys. We based this exclusion on the unsuitability of this habitat type to support the target organism. Large numbers of ground squirrels and their burrows were noted in these steeper, rocky outcrop zones. Steeper, rocky zones also supported a dense sage scrub community which is not a habitat that BUOW can utilize. Therefore, there was no reason to explore these densely-vegetated rocky slopes and thus these areas were excluded from surveys.

Step II, Part B Focused Burrowing Owl Survey

After conducting the habitat assessment on 07 April, TERACOR proceeded with focused surveys on the subject property on 11 April, 20 June 2019, July 26 July 2019. These surveys were performed to determine the following:

1. Confirm the geographic extent of any suitable BUOW habitat present on the 53.15-acre site.
2. Assess whether burrows detected on-site showed any evidence of utilization by BUOW;
3. Detect and record all parameters of occupation of BUOW if detected; and
4. Establish the number of BUOW individuals if encountered on-site.

Information contained herein is based on known BUOW life history parameters as described in MSHCP documentation and information published by the California Department of Fish and Wildlife, our field reconnaissance over several months in Spring and Summer in 2019, and other pertinent information. As required by the Survey Guidelines for the Plan Area, we visually scanned areas within 150 meters of the

subject property, but we made no intentional entry into adjoining lands as we did not have permission from property owners to do so. On-site, we conducted transect surveys across suitable areas. We scanned these areas from a distance with 10x42 Ziess binoculars and continued to scan off-site areas as we proceeded with on-site investigations

PROPERTY LOCATION AND DESCRIPTION

The property is located within the **City of Perris** ("City"), California. The property is bounded by Metz Road to the north, San Jacinto Avenue to the south, undeveloped open, rocky ridges to the west and existing residential housing (manufactured units) to the east. The property is geographically located within Section 30 of Township 4 South, Range 3 West of the *Perris, California 7.5 Minute Series U.S.G.S. Topographic Quadrangle*, as depicted in the attached *Exhibit 1 - USGS Topographic Map*.

The subject site is comprised of five (5) parcels totaling 53.15 acres; Assessor Parcel No's. 311-080-033, 311-080-035, 311-090-009, 311-090-016, 311-090-020. Elevations on-site range from approximately 1560 feet above mean sea level (msl) on the western-most edge of the site, to 1485 feet msl at the northeast corner of the property at the intersection of Metz Road and Indian Avenue. There is vertical fall of approximately 75 feet across the site. The highest hill in the center of the approximate center of property is about 1570 feet msl.

The topography of the site generally slopes from west to east. Site terrain is punctuated by numerous granitic boulder hilltops with shallow sandy soils and intervening saddles. Lower more level areas on the property appeared to have relatively deeper soils. These more level areas and saddles between hillocks are the type of structural habitat that BUOW can occupy, when sparsely vegetated. The northeast corner of the property consists of a disked field, presumably once used for dryland agricultural production as was much of the Perris Valley in decades past. To the south of this former agricultural area, substantive human mechanical modifications were observed. It appeared that modifications had were undertaken in years past, based on the establishment of native vegetation and lack of recent mechanical scaring. Sizeable boulders several feet in diameter were moved and put into irregular piles and formations. These rock piles encircle the existing residential neighborhood east of the project site for reasons not clear to site investigators.

The site is currently vacant. Lower elevation areas are comprised of annual grassland and wildflower fields. These flatter grassland and field areas were structurally suitable in terms of slope, soils types, and vegetation. These fields and lower-lying areas are, however, routinely disked and maintained, presumably for weed abatement and fire protection purposes. There are also a few patches of elderberry scrub, a few scattered scrubby red willow trees mixed with tree tobacco, and ornamental vagrant vegetation (primarily pepper trees) that has become established at the south end of the project site, in areas that have been previously graded, and/or mechanically-gouged. We found these areas to be especially common in the south area where overland sheet flow drainage is discombobulated and incoherently located due to prior disturbances.

PROJECT DESCRIPTION

Tentative Tract No. 37803 proposes the subdivision of the 53.15 acre property into 145 residential lots, along with associated street rights-of-way, detention basins, and open space areas. The primary rock outcrop

which is centrally located in the project area will be conserved.

BACKGROUND

BUOW is a California Department of Fish and Wildlife ("CDFW") "Species of Special Concern – Second Priority." Both the federal and some state resource agencies have declined to list the species as endangered or threatened based on abundance of the species in some California locations and other western states. The Western Riverside County Multiple Species Habitat Conservation Plan ("MSHCP", or Plan) affords special consideration to BUOW due largely to localized declines. The Plan requires evaluations as to their potential presence within specified survey areas across the Plan Area. BUOW can inhabit grasslands, deserts, and open scrublands characterized by low-growing vegetation.

Independent of the MSHCP, the CDFW has undertaken a statewide effort to identify and protect occupied burrowing owl habitat. In its "Staff Report on Burrowing Owl Mitigation" (07 March 2012) the CDFW described preferred habitat for the species as follow:

"The burrowing owl is ... well adapted to open, relatively flat expanses. In California, preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils..... owls may occur in some agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable and there are useable burrows and foraging habitat in proximity"

Burrows are an essential component of BUOW habitat, which provide protection, shelter, and nests for BUOW (Henny and Blus 1981). BUOW typically utilize burrows made by fossorial mammals, such as California ground squirrels and/or even more secretive mammals such as American badger (*Taxidea taxus*). BUOW are also known to utilize man-made structures, such as cement culverts, pipes, asphalt or wood debris piles, and in openings beneath cement or asphalt pavement (*Burrowing Owl Survey Instructions*, Riverside County Environmental Planning Department ["EPD"], 29 March 2006).

BUOW may utilize a site for breeding, wintering, foraging, and/or migration stopovers. BUOW often exhibit high site fidelity, reusing burrows year after year (Rich 1984, Feeney 1992, Consortium Guidelines). The Guidelines also state a site may be assumed "occupied" if at least one (1) BUOW has been observed occupying a burrow within the last three (3) years, although recent observations of widespread absence locally within the Plan Area suggests it may not be prudent to assert "active occupation" by this species if determined not currently present within a shorter timeframe.,

Occupation status of suitable BUOW habitat can also be verified at a site by observation of at least one BUOW, or, alternatively, its molted feathers, cast pellets with characteristic prey remains, prey remains, eggshell fragments, or excrement at or near a burrow entrance (*Burrowing Owl Consortium, Occupied Burrowing Owl Habitat*). Other occupation indicators can include Orthoptera (grasshoppers, katydids, and crickets) and Coleoptera (beetles) exoskeletal material when in proximity of the burrow.

2.0 METHODS

BURROWING OWL SURVEY METHODS

There are no federal or state-adopted survey requirements for BUOW, however, the **County of Riverside** adopted the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (Environmental Programs Department [“EPD”], 2006) (“Survey Instructions”). The Survey Instructions were published to replace the *Burrowing Owl Consortium Guidelines* to address consistency with:

- 1) Specific conservation requirements of the MSHCP for BUOW, and
- 2) Ensure direct mortality of BUOW is avoided through implementation of preconstruction surveys.

Step I: Habitat Assessment: is the first step in the survey process to assess the presence/absence of BUOW, specifically BUOW habitat, on the project site. TERACOR conducts physical walkovers of individual sites to determine if BUOW habitat, as described above, is present on-site. If suitable habitat is found on-site, then walkovers of an approximate 150 meter (500 feet) buffer zone surrounding the project is required. If permission to access surrounding private properties has not been granted, then TERACOR field personnel visually inspect surrounding properties utilizing 10x42 or 8x32 binoculars.

Further, if BUOW habitat is present on-site, TERACOR subsequently conducts a Step II: Locating Burrows and Burrowing Owls Survey. Step II surveys must be conducted during the breeding season (March 1 to August 31), and must be comprised of a minimum of one (1) site visit. Moreover, all Step II surveys are to be performed during weather that is conducive to observing owls outside of burrow complexes, and are not accepted if they are conducted during rain, high winds (>20 mph), dense fog, or temperatures over 90°F. BUOW sign may not be detectable if surveys are conducted within five days following rain.

Step II surveys are comprised of two (2) components; *Part A: Focused Burrow Surveys* and *Part B: Focused Burrowing Owl Surveys*.

Part A: Focused Burrow Surveys consist of a systematic survey for burrows by walking through suitable habitat areas. Suitable habitat areas are walked at maximum transect intervals spaced at approximately 30 meters (100 feet), with transect interval variations to accommodate terrain, vegetation density, and ground surface visibility. Project sites of 100 acres or more are generally transected by two (2) or more TERACOR field personnel. Burrow Surveys are physical inspections of burrows located within suitable habitat or potential foraging habitat on-site. If BUOW burrows or BUOW are recorded during surveys, BUOW and BUOW burrow locations are mapped using a hand-held G.P.S. unit and on aerial or topographic mapping. In contrast, if no potential burrows are observed during burrow surveys then no further surveys are required.

Part B: Focused Burrowing Owl Surveys are conducted if burrows which could potentially support BUOW are determined to be present during Part A: Focused Burrow Surveys. Part B surveys are conducted on four (4) separate survey dates, though the first may be conducted concurrently with the Focused Burrow Survey. Initially, these surveys are performed by scanning all suitable habitat areas, mapped burrows, owl sign, and owls both on-site and within the 150 meter buffer zone utilizing 10x42 or 8x32 binoculars.

Subsequently, TERACOR field personnel conduct walkovers at maximum transect intervals spaced at approximately 30 meters (100 feet), with transect interval variations to accommodate terrain, vegetation density, and ground surface visibility. During field surveys, TERACOR field personnel minimize disturbance near occupied burrows.

Step III: Reporting Requirements: states that once the appropriate surveys have been completed, a report shall be submitted to EPD and the **Western Riverside County Regional Conservation Authority Monitor Program Administrator**, which outlines the survey methodologies, transect width, duration, conditions, and results of the survey. The property, however, is located within the City; therefore the report will be submitted to the City. Further, appropriate maps showing BUOW burrow locations and/or individual BUOW sightings must be included in the report.

Preconstruction Surveys: must be conducted on all subject properties containing burrows or suitable habitat (based on Step I: Habitat Assessment) whether owls were detected or not within 30 days prior to ground disturbance to avoid direct take of BUOW (MSHCP Species – Specific Objective 6).

CNDDDB QUERY

The State of California maintains the *Natural Diversity Data Base* (“CNDDDB”), which is a computerized inventory of information on the location of California rare, threatened, endangered, and otherwise sensitive plants, animals, and natural communities. Updates to the CNDDDB are issued monthly. Valuable information regarding the species occurrence, population numbers, observers, occurrence dates and potential threats to the organism(s) are included for each occurrence record. TERACOR queried the *Perris and Steele Peak Quadrangles* specifically for BUOW location records. The results of that query are presented below in Section 3.0.

SOIL ANALYSIS

In accordance with the MSHCP, all biological surveys must include a description of soils present on-site. TERACOR, therefore, based our soil survey analysis on the **Natural Resources Conservation Service** (“NRCS”) Web Soil Survey of the Western Riverside Area, California mapped soils on the property. Soil types present on the property are presented below in Section 3.0.

VEGETATION CLASSIFICATIONS

Literature reviewed from which plant names and identifications, vegetation communities and associations, and relevant descriptions were derived include: *The Jepson Manual, Vascular Plants of California - Second Edition* (Baldwin et. al. 2012), the CDFW’s *California Natural Community List* (2018), and *A Manual of California Vegetation - Second Edition* (Sawyer, Keeler-Wolf and Evens 2009). A complete list of references has been included as Appendix D.

FIELD VISITS

TERACOR Principal Biologist S. Reed conducted a Step II, Part A Focused Burrow Survey on 07 April 2019 to obtain G.P.S. locations of all potentially suitable burrows and map any areas which would be excluded

from surveys. TERACOR field personnel conducted a Step II, Part B Focused Burrowing Owl Survey on the following dates: 11 April, 20 June, 19 July, and 26 July 2019. Weather conditions during the survey dates were favorable for detection of the species and are presented in *Table 1 - Meteorological Data*, presented below.

Table 1 - Meteorological Data

Date	Surveyors	Time of Survey		Temperature (°F)		Percent Cloud Cover		Wind Speed (mph)		Annual Precipitation to Date (inches)
		Start	End	Start	End	Start	End	Start	End	
11 April 2019	S. Reed	0630	0830	61	70	80%	40%	3 - 7	3 - 7	13.82
20 June: 2019	S. Reed	0630	0830	69	73	clear	clear	Calm	2 - 5	13.82
19 July 2019	S. Reed	0630	0830	66	74	Clear - Distant haze	clear	2- 5	5 - 7	0.24
26 July 2019	S. Reed	0600	0800	72	79	clear	clear	calm	2 - 5	0.24

Source: TERACOR field investigators
 *Annual precipitation data was obtained from <http://weathercurrents.com/perris> The annual precipitation season extends from July 1 to June 30.

Fieldwork was conducted on foot through the entire site at transects spaced no greater than 30 meters (approximately 100 feet). *Exhibit 2 – Suitability and Transect Map – 2018 Aerial Photograph*, attached, depicts TERACOR field personnel’s approximate transects. Faunal and floral species present were identified in the field and recorded by S. Reed and M. Long. Open fields and sparsely vegetated saddles between rugged outcrops comprised the potentially-suitable habitat on-site. Rocky or brushy areas were excluded from surveys due to the non-suitability of such habitat types for BUOW.

3.0 RESULTS

FAUNA

TERACOR field personnel detected and recorded various avian, mammal and reptilian species incidentally during focused surveys on-site.

Avian species detected included, but were not limited to, mourning dove (*Zenaida macroura*), California towhee (*Pipilo crissalis*), Bewick’s wren (*Thryomanes bewickii*), western meadowlark (*Sturnella neglecta*), lark sparrow (*Chondestes grammacus*), spotted towhee (*Pipilo maculatus*), song sparrow (*Melospiza melodia*), western kingbird (*Tyrannus verticalis*), lesser goldfinch (*Carduelis psaltria*), rock wren (*Salpinctes obsoletus*), American pipit (*Anthus rubescens*), red-shouldered hawk (*Buteo lineatus*) and Costa’s hummingbird (*Calypte costae*).

Mammals detected included California ground squirrel, desert cottontail (*Sylvilagus audubonii*) and coyote (*Canis latrans*). In the rocky outcrops we noted several woodrat (*Neotoma* sp.) nests but the species was indeterminate as no live-trapping was performed.

Reptiles detected included, western fence lizard (*Sceloporus occidentalis*), as well as a robust population of granite spiny lizard (*Sceloporus orcutti*) inhabiting all rocky outcrop areas.

A complete list of faunal species detected on-site is provided in Appendix A – Faunal Species Observed.

VEGETATION

Geographically, the property is located within the California Floristic Province Southwestern California region, specifically in the South Coast subregion. The South Coast subregion extends along the Pacific Coast from Point Conception to Mexico.

The site is primarily composed of two major vegetation community types: annual non-native grassland/wildflower field in the more level and gently sloping areas, and a sage scrub series dominated by brittlebush (*Encelia farinosa*) and California buckwheat (*Ericogonum fasciculatum*) in the rocky, sloped, more densely-vegetated granite outcrops. Vegetation communities were closely matched with descriptions of alliances of plants contained in the *Manual of California Vegetation* (Sawyer, Keeler-Wolfe, 2nd edition).

Only sparsely vegetated scrub and annual grassland areas would be occupiable by BUOW, because this ground-dwelling organism depends heavily on its' ability to see approaching predators and to forage freely for very small prey on the ground.

The pattern of disking in flatter areas suggests it has been performed for fire suppression purposes. In fact, a brush fire occurred on-site between the 2nd and 3rd interval BUOW surveys and burned a small area in the middle of the property. A review of historic aerial photography by TERACOR suggests the northeast portion of the property was under agricultural production into the 1970's and possibly 1980's, but that was discontinued as Perris continued to urbanize. The balance of the property in the 1970's and 1980's appears to have been vegetated in sage scrub. Mechanical disturbances since the 1990's have resulted in fragmentation and degradation of the sage scrub community at this site, and invasion by non-native nuisance plants and trees (primarily California pepper trees and tree tobacco) has subsequently occurred. Additionally, the mechanical disturbances interrupted overland sheet-flow patterns which has given rise to small patches two or three small inclusions of scattered elderberry shrubs and scrubby red willow shrubs.

Designations for each community type and its' respective California Natural Community Codes ("CaCodes") have been assigned as described below. Vegetation community boundaries are depicted in the attached *Exhibit 3 - Vegetation Communities - 2018 Aerial Photograph*.

Brittlebush Scrub (*Encelia farinosa*) (CaCode 32.040.01) and California Buckwheat Scrub (*Eriogonum fasciculatum*) (CaCode 32.040.02) are the two co-dominant plants on the site, with brittlebush somewhat more dominant depending on aspect and degree of slope. Other common species which are present within the scrub vegetation on-site include California sagebrush (*Artemisia californica*), California-aster (*Corethrogyne filaginifolia*), white sage (*Salvia apiana*) and black sage (*Salvia mellifera*).

Annual Non-native Grassland and Wildflower Field – Located throughout the property in former agricultural fields and saddles between rocky outcrops, this designation is a weedy catch-all term and is comprised of multiple alliances under the Sawyer-Keeler-Wolf classification system. These alliances include **Wild Oat Grassland (*Avena barbata*) (CaCode 44.150.01)**, **Fiddleneck Field (*Amsinkia intermedia*) (CaCode 42.110.03)**, **(Mustard Semi-Natural Herbaceous Stand (*Hirchfeldia incana*) (CaCode 42.011.05)**, **Red Brome Semi-Natural Herbaceous Stand (*Bromus rubens*) (CaCode 42.026.11)** - Non-native species

identified include stink net (*Oncosiphon piluliferum*), short-pod mustard (*Hirschfeldia incana*), Maltese star thistle (*Centaurea melitensis*), riggut grass (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), wild oat (*Avena* sp.), wall barley (*Hordeum murinum*) and redstem filaree (*Erodium cicutarium*).

Native species are also present in this landscape type and include paniculate tarplant (*Deinandra paniculata*), vinegar weed (*Trichostema lanceolatum*), common sunflower (*Helianthus annuus*), common fiddleneck (*Amsinckia intermedia*), buffalo gourd (*Cucurbita foetidissima*), doveweed (*Croton setiger*) and lupine (*Lupinus* sp.).

Several very small patches of **Blue elderberry scrub** (*Sambucus nigra*) (CaCode 63.410.01) and scattered individual **red willow scrubs** (*Salix laevigata*) (CaCode 61.205.01) and **mulefat scrub** (*Baccharis salicifolia*) (CaCode 63.510.00) are present at the south end of the site where there has been substantial modification of substrates. These shrubs were so infrequent and small that they were really not mappable, though an attempt was made to do so. The disorganized and haphazard placement of boulders and piles of dirt has created a condition where rainwater can seep into the ground rather than sheetflowing across the property as was the natural condition. Additionally, there are approximately 3 or 4 patches of Ornamental vegetation comprised mainly of California pepper trees (*Schinus molle*) that were identified and mapped as Ornamental in the southern portion of the property near W. San Jacinto Avenue.

CNDDDB QUERY RESULTS

The CNDDDB query of the resulted in seven nearby historic recorded sightings of BUOW from 1980 to 2017, on the east side Interstate 215. As discussed previously, the terrain west of the project site is very rugged and comprised of rocky ridgelines and outcrops where BUOW does not occur. The sightings, therefore, tend to be on level areas east of the 215. These detection sightings are depicted in the attached *Exhibit 4 – Burrowing Owl CNDDDB Locations*.

SOIL ANALYSIS RESULTS

The property is historically comprised of four (4) soil series with six (6) soil types, according to the NRCS *Web Soil Survey: Western Riverside Area, California*. The soils historically present on the property are as follows:

Table 2 - Soil Types

CODE	SOIL TYPE	PROPERTY LOCATION
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	Central saddle area between hilly outcrops
HcC	Hanford course sandy loam, 2 to 8 percent slopes	North Central saddle area between outcrops
CkF2	Cieneba rocky sandy loam, 15 to 50% slopes, eroded	Existing and former rock outcrop areas
RaB2	Ramona sandy loam, 2 to 5 percent slopes, eroded	Northeast corner in the former agricultural field

All four soils within the property are considered structurally suitable for occupation by BUOW and other burrowing organisms based on the sandy loam composition of each soil. The Cieneba rocky sandy loam, however, is on slopes of 15% to 50% which are generally considered too steep for BUOW to occupy.

No BUOW were observed during the course of the four (4) focused surveys. TERACOR detected numerous California ground squirrel burrows and burrow complexes on the property, especially in the rocky outcrops. Because rocky outcrops do not constitute suitable burrowing owl habitat, we excluded these burrows (many dozens in number) from the survey grid, as depicted in the attached *Exhibit 5 – Potential Owl Burrow Locations*. Burrows and burrow complexes were concentrated in the central and northern portion of the subject site. No BUOW utilization sign, however, was detected within or near any of these burrows.

TERACOR also detected numerous other small mammal burrows throughout the property. These burrows appeared to be utilized by deer mice (*Peromyscus* sp.), pocket mice (*Chaetodipus* sp.) or kangaroo rats (*Dipodomys* sp.) and were considered too small to be utilized by BUOW. The G.P.S. locations of the potential owl burrows detected are presented in Appendix C – G.P.S. Locations.

Off-Site: TERACOR did not obtain permission to transect the surrounding properties for BUOW. TERACOR field personnel did, however, scan the 150 meter off-site survey zone utilizing 10 x 42 binoculars as appropriate. Residential properties were adjacent to the east and south. Properties to the west were mostly too rocky to support BUOW. The property to the north is open and undeveloped, but we saw no owls in this area during surveys.

4.0 CONCLUSION AND RECOMMENDATIONS

We detected no primary or secondary/evidence on the property which suggested that BUOW inhabit the area. No BUOW were observed during TERACOR's field surveys.

In accordance with MSHCP requirements TERACOR recommends conducting a pre-construction survey within 30 days prior to ground disturbance since suitable habitat is present on-site.

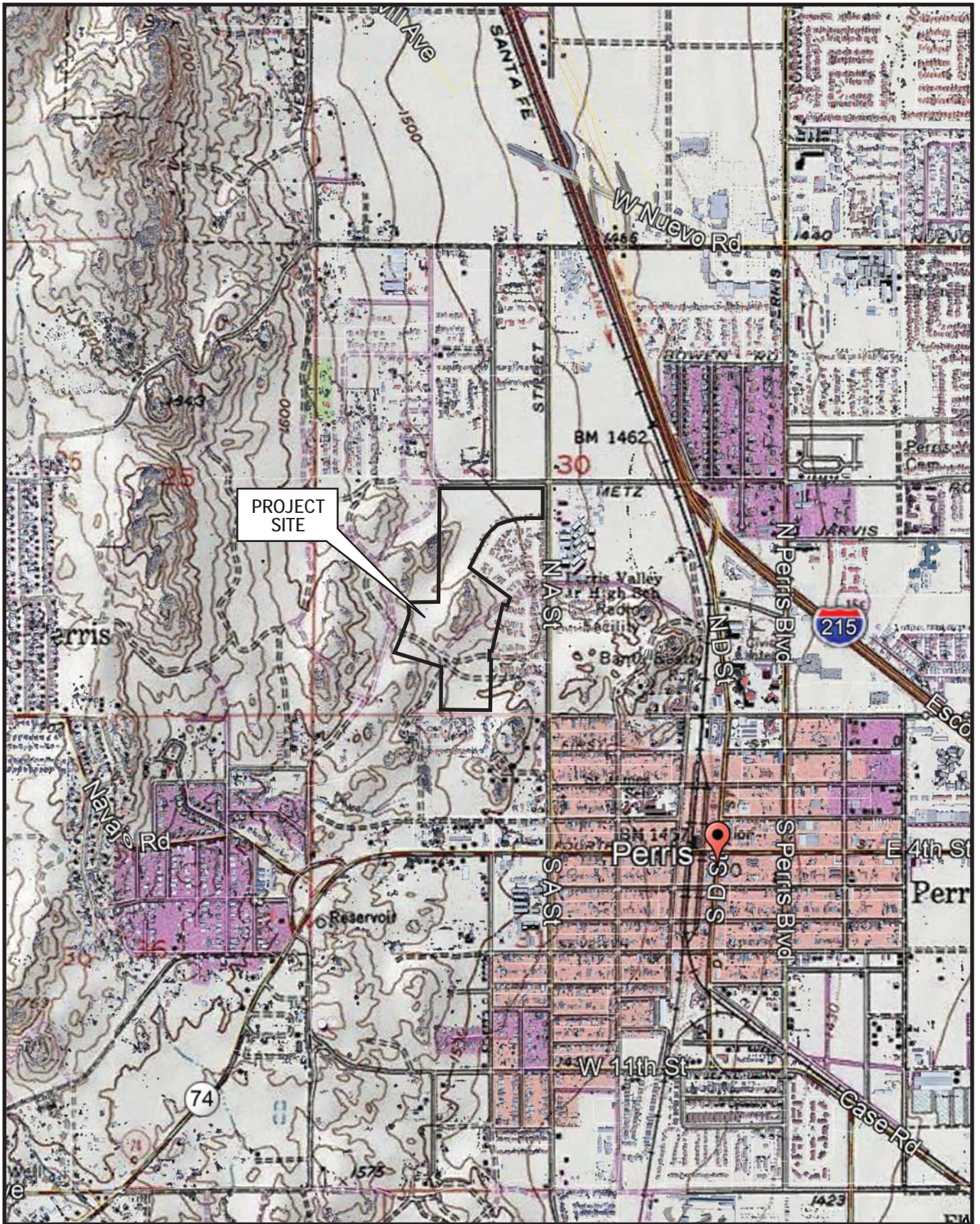
A list of references is presented in Appendix D – References.

CERTIFICATION: I hereby certify that the statements and exhibits contained in this report present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge.



Samuel Reed, Principal
U.S. Fish & Wildlife Service Recovery Permit No. **839896-6**

13 September 2019
Date





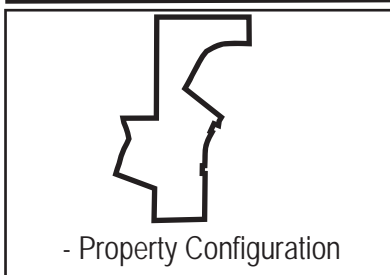
LEGEND

- - Approximate TERACOR Transect
- BUOW Excluded Area



Google Earth

© 2018 Google



LEGEND

Vegetation Alliance	Acres
AG - Annual Grassland/Wildflower Field Alliance	22.9
BB/BW - Brittlebush/Buckwheat Alliance	29.8
E - Elderberry Alliance	0.2
M - Mulefat Alliance	0.05
O - Ornamental Trees	0.15
W - Red Willow Alliance	0.05
TOTAL	53.15

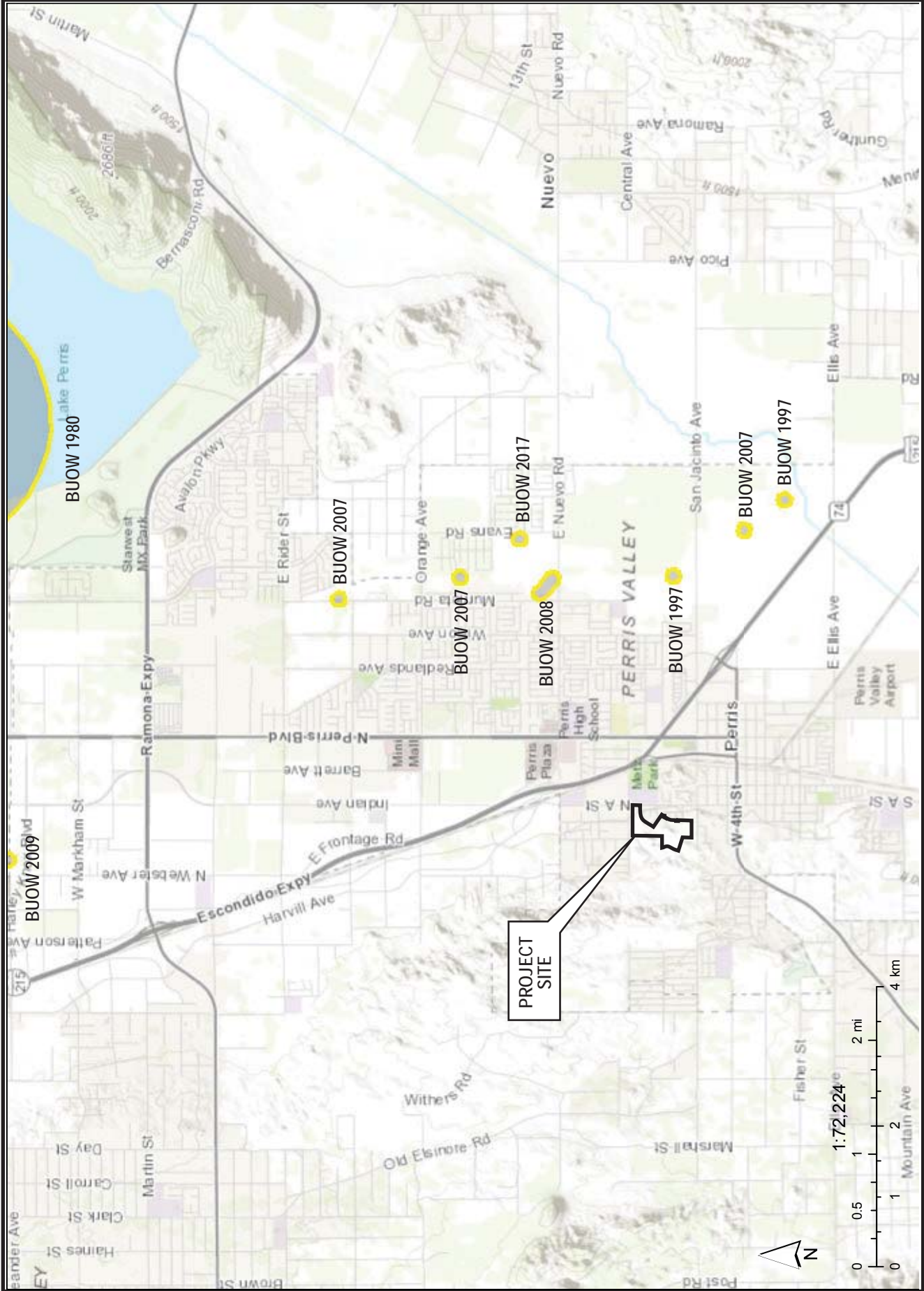


Exhibit 4
 Burrowing Owl
 CNDDDB Locations

ABA BUILDERS - PERRIS
 REPORT DATE: SEPTEMBER 2019
 SOURCE: CNDDDB





LEGEND

- Bu - Burrow
- BuC - Burrow Complex
- BUOW Excluded Area



Photo 1 - This early-April photo depicts the different landscapes on the site; rugged outcrops interspersed with grasslands and wildflower fields between topographic rises.



Photo 2 - North-facing photo of grasslands with wildflower fields and sage scrub on and surrounding granite outcrops.



Photo 3 - North end of site facing east. The surveyor examined and disassembled 3 raptor pellets found on the boulder in this photo. One was small enough for burrowing owl, but had no invertebrate exoskeletal remains in it; the other larger pellets were too big and contained mammal remains too large for burrowing owl.



Photo 4 - A low lying boulder outcrop in the northerly area of the project site would be a site characteristic favorable to burrowing owl, however, none were observed over the course of focused surveys.



Photo 5 - This boulder pile was dozed into place and left along the east property line. This portion of the property burned between BUOW survey's 2 and 3.



Photo 6 - South facing view over southern portion of project property. The property had a small brush fire occur between the 2nd and 3rd focused surveys.

APPENDIX A FAUNAL COMPENDIUM

BIRDS

Birds were observed with 10x42 binoculars. Birds were identified following The Sibley Field Guide to Birds of Western North America (2003), and updated to conform to changes in nomenclature consistent with the most recent American Ornithological Society checklist. Species observed on the subject property are noted by a bold dot (●). Bird species not observed but could occur foraging on the subject site, or as a migratory stopover have also been included. Non-native species have been noted below with an asterisk (*) following the scientific name.

SCIENTIFIC NAME	COMMON NAME
Accipitridae	Hawks, Eagles, Kites
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Accipiter striatus</i>	sharp-shinned hawk
<i>Aquila chrysaetos</i>	golden eagle
<i>Buteo jamaicensis</i> ●	red-tailed hawk
<i>Buteo lineatus</i>	red-shouldered hawk
<i>Buteo regalis</i>	ferruginous hawk
<i>Buteo swainsoni</i>	Swainson's hawk
<i>Circus cyaneus</i>	northern harrier
<i>Elanus leucurus</i>	white-tailed kite
Aegithalidae	Bushtits
<i>Psaltriparus minimus</i> ●	bushtit
Alaudidae	Larks
<i>Eremophila alpestris actia</i> ●	California horned lark
Apodidae	Swifts
<i>Aeronautes saxatalis</i>	white-throated swift
Bombycillidae	Waxwings
<i>Bombycilla cedrorum</i>	cedar waxwing
Caprimulgidae	Nightjars, Goatsuckers
<i>Phalaenoptilus nuttallii</i>	common poorwill

SCIENTIFIC NAME	COMMON NAME
Cardinalidae	Cardinals
<i>Passerina caerulea</i>	blue grosbeak
<i>Pheucticus melanocephalus</i>	black-headed grosbeak
Cathartidae	American Vultures
<i>Cathartes aura</i>	turkey vulture
Charadriidae	Plovers
<i>Charadrius vociferus</i> ●	killdeer
Columbidae	Pigeons, Doves
<i>Columba livia</i> *●	rock pigeon
<i>Columbina passerina</i>	common ground-dove
<i>Patagioenas fasciata</i>	band-tailed pigeon
<i>Streptopelia decaocto</i> *	Eurasian collared-dove
<i>Zenaida macroura</i> ●	mourning dove
Corvidae	Crows, Jays
<i>Aphelocoma californica</i> ●	California scrub-jay
<i>Corvus brachyrhynchos</i> ●	American crow
<i>Corvus corax</i> ●	common raven
Cuculidae	Cuckoos and Roadrunners
<i>Geococcyx californianus</i> ●	greater roadrunner
Falconidae	Falcons
<i>Falco columbarius</i>	merlin
<i>Falco mexicanus</i>	prairie falcon
<i>Falco sparverius</i> ●	American kestrel
Fringillidae	Finches
<i>Haemorhous mexicanus</i> ●	house finch
<i>Haemorhous purpureus</i>	purple finch
<i>Spinus lawrencei</i>	Lawrence's goldfinch
<i>Spinus psaltria</i> ●	lesser goldfinch
<i>Spinus tristis</i>	American goldfinch
Hirundinidae	Swallows, Martins
<i>Hirundo pyrrhonota</i> ●	cliff swallow
<i>Hirundo rustica</i> ●	barn swallow
<i>Stelgidopteryx serripennis</i> ●	northern rough-winged swallow
<i>Tachycineta bicolor</i> ●	tree swallow

SCIENTIFIC NAME	COMMON NAME
Icteridae	Blackbirds
<i>Euphagus cyanocephalus</i> ●	Brewer's blackbird
<i>Icterus bullockii</i> ●	Bullock's oriole
<i>Icterus cucullatus</i>	hooded oriole
<i>Quiscalus mexicanus</i>	great-tailed grackle
<i>Molothrus ater</i> ●	brown-headed cowbird
<i>Sturnella neglecta</i> ●	western meadowlark
Laniidae	Shrikes
<i>Lanius ludovicianus</i>	loggerhead shrike
Mimidae	Mockingbirds, Thrashers
<i>Mimus polyglottos</i> ●	northern mockingbird
<i>Toxostoma redivivum</i>	California thrasher
Parulidae	Wood Warblers
<i>Geothlypis trichas</i>	common yellowthroat
<i>Oreothlypis celata</i>	orange-crowned warbler
<i>Setophaga coronata</i>	yellow-rumped warbler
Passerellidae	New World Sparrows
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow
<i>Ammodramus savannarum</i>	grasshopper sparrow
<i>Amphispiza bellii bellii</i>	Bell's sage sparrow
<i>Chondestes grammacus</i>	lark sparrow
<i>Junco hyemalis</i>	dark-eyed junco
<i>Melospiza lincolni</i>	Lincoln's sparrow
<i>Melospiza melodia</i>	song sparrow
<i>Melospiza crissalis</i> ●	California towhee
<i>Passerculus sandwichensis</i> ●	savannah sparrow
<i>Pipilo maculatus</i>	spotted towhee
<i>Pooecetes gramineus</i>	vesper sparrow
<i>Spizella passerina</i>	chipping sparrow
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow
<i>Zonotrichia leucophrys</i> ●	white-crowned sparrow
Passeridae	Old World Sparrows
<i>Passer domesticus</i> *●	house sparrow
Phasianidae	Pheasant Family
<i>Callipepla californica</i> ●	California quail

SCIENTIFIC NAME	COMMON NAME
Picidae	Woodpeckers
<i>Colaptes auratus</i>	northern flicker
<i>Picoides nuttallii</i> ●	Nuttall's woodpecker
Poliophtilidae	Gnatcatchers
<i>Poliophtila caerulea</i>	blue-gray gnatcatcher
<i>Poliophtila californica</i>	California gnatcatcher
Ptiliognatidae	Silky Flycatchers
<i>Phainopepla nitens</i> ●	phainopepla
Strigidae	Typical Owls
<i>Asio flammeus</i>	short-eared owl
<i>Asio otus</i>	long-eared owl
<i>Athene cunicularia</i>	burrowing owl
<i>Bubo virginianus</i>	great horned owl
<i>Megascops kennicottii</i>	western screech-owl
Sturnidae	Starlings
<i>Sturnus vulgaris</i> *●	European starling
Trochilidae	Hummingbirds
<i>Archilochus alexandri</i>	black-chinned hummingbird
<i>Calypte anna</i> ●	Anna's hummingbird
<i>Calypte costae</i>	Costa's hummingbird
<i>Selasphorus sasin</i>	Allen's hummingbird
Troglodytidae	Wrens
<i>Catherpes mexicanus</i>	canyon wren
<i>Salpinctes obsoletus</i> ●	rock wren
<i>Thryomanes bewickii</i> ●	Bewick's wren
<i>Troglodytes aedon</i> ●	house wren
Turdidae	Thrushes
<i>Sialia mexicana</i>	western bluebird
<i>Turdus migratorius</i>	American robin
Tyrannidae	Tyrant Flycatchers
<i>Contopus cooperi</i>	olive-sided flycatcher
<i>Contopus sordidulus</i>	western wood pewee
<i>Empidonax oberholseri</i>	dusky flycatcher
<i>Sayornis nigricans</i> ●	black phoebe
<i>Sayornis saya</i> ●	Say's phoebe

SCIENTIFIC NAME	COMMON NAME
<i>Tyrannus verticalis</i> ●	western kingbird
<i>Tyrannus vociferans</i> ●	Cassin's kingbird
Tytonidae	Barn Owls
<i>Tyto alba</i>	barn owl

MAMMALS

Records included herein were derived from TERACOR field observations and peer-reviewed literature. Species seen or otherwise detected are noted with a bold dot (●). Nomenclature follows *Peterson Field Guides: Mammals of North America* (Reid 2006). Non-native species have been noted below with an asterisk (*) following the scientific name.

SCIENTIFIC NAME	COMMON NAME
Canidae	Coyotes, Dogs, Foxes, Jackals, and Wolves
<i>Canis latrans</i> ●	coyote
Cricetidae	Hamsters, Voles, New World Rats and Mice
<i>Microtus californicus</i>	California vole
<i>Mus musculus</i> *	house mouse
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat
<i>Neotoma macrotis</i>	big-eared woodrat
<i>Onychomys torridus ramona</i>	southern grasshopper mouse
<i>Peromyscus californicus</i>	California mouse
<i>Peromyscus maniculatus</i>	American deer mouse
<i>Rattus norvegicus</i> *	Norway rat
<i>Rattus rattus</i> *	black rat
<i>Reithrodontomys megalotis</i>	western harvest mouse
Didelphidae	American Opossums
<i>Didelphis virginiana</i> *	Virginia opossum
Felidae	Cats
<i>Felis silvestris catus</i> *	domestic cat
<i>Lynx rufus</i>	bobcat
Geomyidae	Pocket Gophers
<i>Thomomys bottae</i> ●	Botta's pocket gopher

SCIENTIFIC NAME	COMMON NAME
Heteromyidae	Pocket Mice and Kangaroo Rats
<i>Chaetodipus californicus</i>	California pocket mouse
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse
<i>Dipodomys simulans</i>	Dulzura kangaroo rat
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse
Leporidae	Rabbits and Hares
<i>Lepus californicus bennettii</i> ●	San Diego black-tailed jackrabbit
<i>Sylvilagus audubonii</i> ●	Audubon's cottontail
<i>Sylvilagus bachmani</i>	brush rabbit
Mephitidae	Skunks and Stink Badgers
<i>Mephitis mephitis</i>	striped skunk
<i>Spilogale gracilis</i>	western spotted skunk
Molossidae	Free-Tailed Bats
<i>Eumops perotis californicus</i>	western mastiff bat
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat
<i>Nyctinomops macrotis</i>	big free-tailed bat
<i>Tadarida brasiliensis</i>	Brazilian free-tailed bat
Mustelidae	Badgers, Otters, Weasels, and Relatives
<i>Mustela frenata</i>	long-tailed weasel
<i>Taxidea taxus</i>	American badger
Procyonidae	Raccoons and Relatives
<i>Procyon lotor</i>	northern raccoon
Sciuridae	Squirrels, Chipmunks and Marmots
<i>Ostospermophilus beecheyi</i> ●	California ground squirrel
Soricidae	Shrews
<i>Sorex ornatus</i>	ornate shrew
Vespertilionidae	Vesper Bats
<i>Antrozous pallidus</i>	pallid bat
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat
<i>Eptesicus fuscus</i>	big brown bat
<i>Euderma maculatum</i>	spotted bat
<i>Lasionycteris noctivagans</i>	silver-haired bat
<i>Lasiurus blossevillii</i>	western red bat
<i>Lasiurus cinereus</i>	hoary bat

SCIENTIFIC NAME	COMMON NAME
<i>Lasiurus xanthinus</i>	western yellow bat
<i>Myotis californicus</i>	California myotis
<i>Myotis ciliolabrum</i>	western small-footed myotis
<i>Myotis evotis</i>	long-eared myotis
<i>Myotis velifer</i>	cave myotis
<i>Myotis yumamensis</i>	Yuma myotis
<i>Parastrellus hesperus</i>	canyon bat

AMPHIBIANS AND REPTILES

Identification of amphibians and reptile species were made visually, with nomenclature following R.C. Stebbins (2003) *A Field Guide to Western Reptiles and Amphibians*, third edition, updated to conform to the most recent changes in nomenclature utilizing The Center for North American Herpetology. Species seen or otherwise detected are noted with a bold dot (●).

SCIENTIFIC NAME	COMMON NAME
AMPHIBIANS	
Frogs and Toads	
Bufonidae	True Toads
<i>Anaxyrus boreas</i>	western toad
Hylidae	Treefrogs and Allies
<i>Pseudacris regilla</i>	Pacific treefrog
Salamanders	
Plethodontidae	Lungless Salamanders
<i>Batrachoseps major major</i>	garden slender salamander
<i>Ensatina eschscholtzii eschscholtzii</i>	Monterey ensatina
REPTILES	
Lizards	
Anguidae	Glass Lizards and Alligator Lizards
<i>Elgaria multicarinata webbia</i>	San Diego alligator lizard

SCIENTIFIC NAME	COMMON NAME
Anniellidae	North American Legless Lizards
<i>Anniella stebbinsi</i>	southern California or San Diegan legless lizard
Phrynosomatidae	Zebra-tailed, Fringe-toed, Spiny, Tree, Side-Blotched, and Horned Lizards
<i>Phrynosoma blainvillii</i>	coast horned lizard
<i>Sceloporus occidentalis</i> ●	western fence lizard
<i>Uta stansburiana</i> ●	common side-blotched lizard
<i>Sceloporus orcutti</i>	granite spiny lizard
Scincidae	Skinks
<i>Plestiodon gilberti rubricaudatus</i>	western red-tailed skink
<i>Plestiodon skiltonianus skiltonianus</i>	Skilton's skink
Teiidae	Whiptails and Allies
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail
<i>Aspidoscelis tigris stejnegeri</i> ●	coastal whiptail
Snakes	
Boidae	Boas
<i>Charina umbratica</i>	southern rubber boa
<i>Lichanura trivirgata</i>	rosy boa
Colubridae	Harmless Egg-Laying Snakes
<i>Arizona elegans occidentalis</i>	California glossy snake
<i>Coluber constrictor mormon</i>	western yellow-bellied racer
<i>Lampropeltis californiae</i>	California kingsnake
<i>Masticophis flagellum piceus</i>	red racer
<i>Masticophis lateralis lateralis</i>	California striped racer
<i>Pituophis catenifer annectens</i>	San Diego gophersnake
<i>Rhinocheilus lecontei</i>	long-nosed snake
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake
<i>Tantilla planiceps</i>	western black-headed snake
Crotalidae	Pitvipers
<i>Crotalus oreganus helleri</i>	southern Pacific rattlesnake
<i>Crotalus ruber</i>	red diamond rattlesnake
Dipsadidae	Rear-Fanged Snakes
<i>Diadophis punctatus modestus</i>	San Bernardino ring-necked snake
<i>Hypsiglena ochrorhyncha</i>	coast nightsnake

SCIENTIFIC NAME	COMMON NAME
Leptotyphlopidae	Threadsnakes
<i>Rena humilis humilis</i>	southwestern threadsnake
Natricidae	Harmless Live-Bearing Snakes
<i>Thamnophis hammondi</i>	two-striped gartersnake

APPENDIX B FLORAL COMPENDIUM

VEGETATION LIST

The species listed below were detected within the subject property during the 16 April 2018 field survey and over the past twelve (12) years. Field identifications are a composite list prepared by TERACOR personnel and M. Long, Biologist. Scientific names follow *The Jepson Manual, Vascular Plants of California - Second Edition*, 2012, and have been updated following the Jepson Online Interchange for California Floristics database (2014). Non-native species have been noted below with an asterisk (*) following the scientific name.

SCIENTIFIC NAME	COMMON NAME
Adoxaceae	Muskroot Family
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry
Amaranthaceae	Amaranth Family
<i>Amaranthus albus</i> *	tumbleweed
Anacardiaceae	Sumac Family
<i>Schinus molle</i> *	pepper tree
Arecaceae	Palm Family
<i>Washingtonia robusta</i> *	Mexican fan palm
Asteraceae	Sunflower Family
<i>Ambrosia acanthicarpa</i>	Annual bur-sage
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	mule fat
<i>Carthamus tinctorius</i> *	safflower
<i>Centaurea benedicta</i>	blessed thistle
<i>Corethrogyne filaginifolia</i>	common sandaster
<i>Deinandra fasciculata</i>	fascicled tarplant
<i>Deinandra paniculata</i>	paniculate tarplant
<i>Encelia farinose</i>	brittle bush
<i>Erigeron canadensis</i>	horseweed
<i>Helianthus annuus</i>	common sunflower
<i>Heterotheca grandiflora</i>	Telegraph weed
<i>Isocoma menziesii</i>	Menzies' goldenbush
<i>Lactuca serriola</i> *	prickly lettuce
<i>Lasthenia gracilis</i>	goldfields
<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>	cliff aster

SCIENTIFIC NAME	COMMON NAME
<i>Matricaria discoidea</i>	pineapple weed
<i>Oncosiphon piluliferum*</i>	stinknet
<i>Pseudognaphalium californicum</i>	California everlasting
<i>Sonchus asper*</i>	prickly sow thistle
<i>Taraxacum officinale*</i>	common dandelion
<i>Uropappus lindleyi</i>	silver puffs
<i>Xanthium strumarium</i>	cocklebur
Boraginaceae	Borage Family
<i>Amsinckia intermedia</i>	common fiddleneck
<i>Amsinckia menziesii</i>	small-flowered fiddleneck
<i>Cryptantha intermedia</i>	popcorn flower (common)
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	alkali heliotrope
<i>Pectocarya linearis</i> ssp. <i>ferocula</i>	slender combbur
<i>Phacelia cicutaria</i> ssp. <i>hispida</i>	caterpillar phacelia
<i>Phacelia distans</i>	distant phacelia
<i>Phacelia minor</i>	Canterbury bells
<i>Plagiobothrys collinus</i>	California popcorn flower
Brassicaceae	Mustard Family
<i>Brassica nigra*</i>	black mustard
<i>Hirschfeldia incana*</i>	short-pod mustard
<i>Raphanus sativus*</i>	radish
<i>Sisymbrium irio*</i>	London rocket
Cactaceae	Cactus Family
<i>Opuntia parryi</i>	cane cholla
Chenopodiaceae	Goosefoot Family
<i>Chenopodium album*</i>	Lamb's quarters
<i>Salsola tragus*</i>	Russian thistle
Convolvulaceae	Morning-glory Family
<i>Calystegia macrostegia</i>	morning-glory
<i>Convolvulus arvensis</i>	field bindweed
<i>Cuscuta californica</i> var. <i>californica</i>	California dodder
Crassulaceae	Crassila Family
<i>Crassula connata</i>	sand pygmy-stonecrop
Cucurbitaceae	Gourd Family
<i>Cucurbita foetidissima</i>	buffalo gourd

SCIENTIFIC NAME	COMMON NAME
<i>Marah macrocarpus</i>	wild cucumber
Euphorbiaceae	Spurge Family
<i>Croton setiger</i> (formally <i>Eremocarpus</i>)	doveweed
<i>Euphorbia polycarpa</i>	smallseed sandmat
Fabaceae	Legume Family
<i>Acmispon glaber</i>	deerweed
<i>Cercidium sp.*</i>	Palo Verde
<i>Lupinus bicolor</i>	miniature lupine
<i>Melilotus officinalis*</i>	yellow sweetclover
Geraniaceae	Geranium Family
<i>Erodium cicutarium*</i>	redstem filaree
Hydrophyllaceae	Water Leaf Family
<i>Nemophila menziesii</i>	baby blue eyes
Lamiaceae	Mint Family
<i>Marrubium vulgare*</i>	horehound
<i>Salvia columbariae</i>	chia
<i>Salvia mellifera</i>	black sage
<i>Trichostemma lanceolatum</i>	vinegar weed
Liliaceae	Lily Family
<i>Dichelostemma capitatum</i>	bluedicks
Malvaceae	Mallow Family
<i>Malva parviflora*</i>	cheeseweed
Moraceae	Mulberry Family
<i>Ficus carica*</i>	edible fig
Nyctaginaceae	Four O'Clock Family
<i>Mirabilis laevis var. crassifolia</i>	wishbone bush
Onagraceae	Evening Primrose Family
<i>Camissoniopsis bistorta</i>	southern sun cup
Papaveraceae	Poppy Family
<i>Eschscholzia californica</i>	California poppy

SCIENTIFIC NAME	COMMON NAME
Phrymaceae	Monkeyflower Family
<i>Diplacus aurantiacus</i>	bush monkeyflower
Poaceae	Grass Family
<i>Avena barbata</i> *	slender wild oat
<i>Bromus diandrus</i> *	ripgut grass
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	red brome
<i>Distichlis spicata</i>	salt grass
<i>Elymus triticoides</i>	beardless wild rye
<i>Festuca myuros</i> *	rattail sixweeks grass
<i>Festuca perennis</i> *	rye grass
<i>Hordeum murinum</i> *	wall barley
<i>Melica imperfecta</i>	smallflowered Melic grass
<i>Muhlenbergia californica</i>	California Muhly
<i>Schismus barbatus</i> *	common Mediterranean grass
<i>Triticum aestivum</i> *	cultivated wheat
Polemoniaceae	Phlox Family
<i>Gilia anelensis</i>	Los Angeles Gilia
<i>Navarretia atractyloides</i>	No common name
Polygonaceae	Buckwheat Family
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat
<i>Rumex crispus</i> *	curly dock
Portulacaceae	Purslane Family
<i>Calandrinia ciliata</i>	redmaids
Salicaceae	Salix Family
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
Scrophulariaceae	Figwort Family
<i>Antirrhinum nuttallianum</i> ssp. <i>nuttallianum</i>	Nuttall's snapdragon
<i>Nuttallanthus texanus</i> (formally <i>Lanaria canadensis</i>)	blue toad flax
Solanaceae	Nightshade Family
<i>Datura wrightii</i>	jimson weed
<i>Nicotiana glauca</i> *	tree tobacco
<i>Solanum xanti</i>	chaparral nightshade
Tamaricaceae	Tamarisk Family

SCIENTIFIC NAME	COMMON NAME
<i>Tamarix</i> sp.*	tamarisk
Urticaceae	Nettle Family
<i>Urtica urens</i> *	dwarf nettle
Zygophyllaceae	Caltrop Family
<i>Tribulus terrestris</i> *	common puncture vine

APPENDIX C
G.P.S. LOCATIONS

UTM coordinates were obtained utilizing a *Garmin GPSmap 64s* handheld unit.

Feature	No. of Burrows	Datum/UTM Zone	Easting	Northing
Burrows				
Burrow No. 1	1	NAD83 11S	477905	3738883
Burrow No. 2	1	NAD83 11S	477904	3738883
Burrow No. 3	1	NAD83 11S	477892	3738839
Burrow No. 4	1	NAD83 11S	477884	3738870
Burrow No. 5	1	NAD83 11S	477911	3738637
Burrow No. 6	1	NAD83 11S	477766	3738821
Burrow Complexes				
Burrow Complex No. 1	7	NAD83 11S	478036	3739208
Burrow Complex No. 2	4	NAD83 11S	477956	3739204
Burrow Complex No. 3	5	NAD83 11S	477790	3738842
Burrow Complex No. 4	5	NAD83 11S	478078	3739222

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