



Appendix C

Biological Technical Report

STRUCK AVENUE PROJECT

February 2023

General Biological Technical Report

*United States Geological Survey 7.5-Minute Orange Topographic Quadrangle Map
Orange County, California*

Prepared By



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1.0 INTRODUCTION AND EXECUTIVE SUMMARY

NOREAS Inc. (NOREAS) is pleased to provide this General Biological Technical Report for the Struck Avenue Project (hereafter referred to as the “Project”). The Project is located at 534 Struck Avenue, Orange, California, 92687 (Assessor's Parcel Number 375-331-04, Figures 1 and 2). This document details the methods and results of baseline biological resources surveys and habitat assessments for the Project. The intended use of this document is to disclose and evaluate the Project’s biological conditions, and determine the potential for occurrence of common and special-status species¹ - and their habitats. For the purposes of this report, the “study area” includes the Project’s proposed ground disturbance footprint (hereafter referred to as the Project Site), and a buffer (Figure 2).

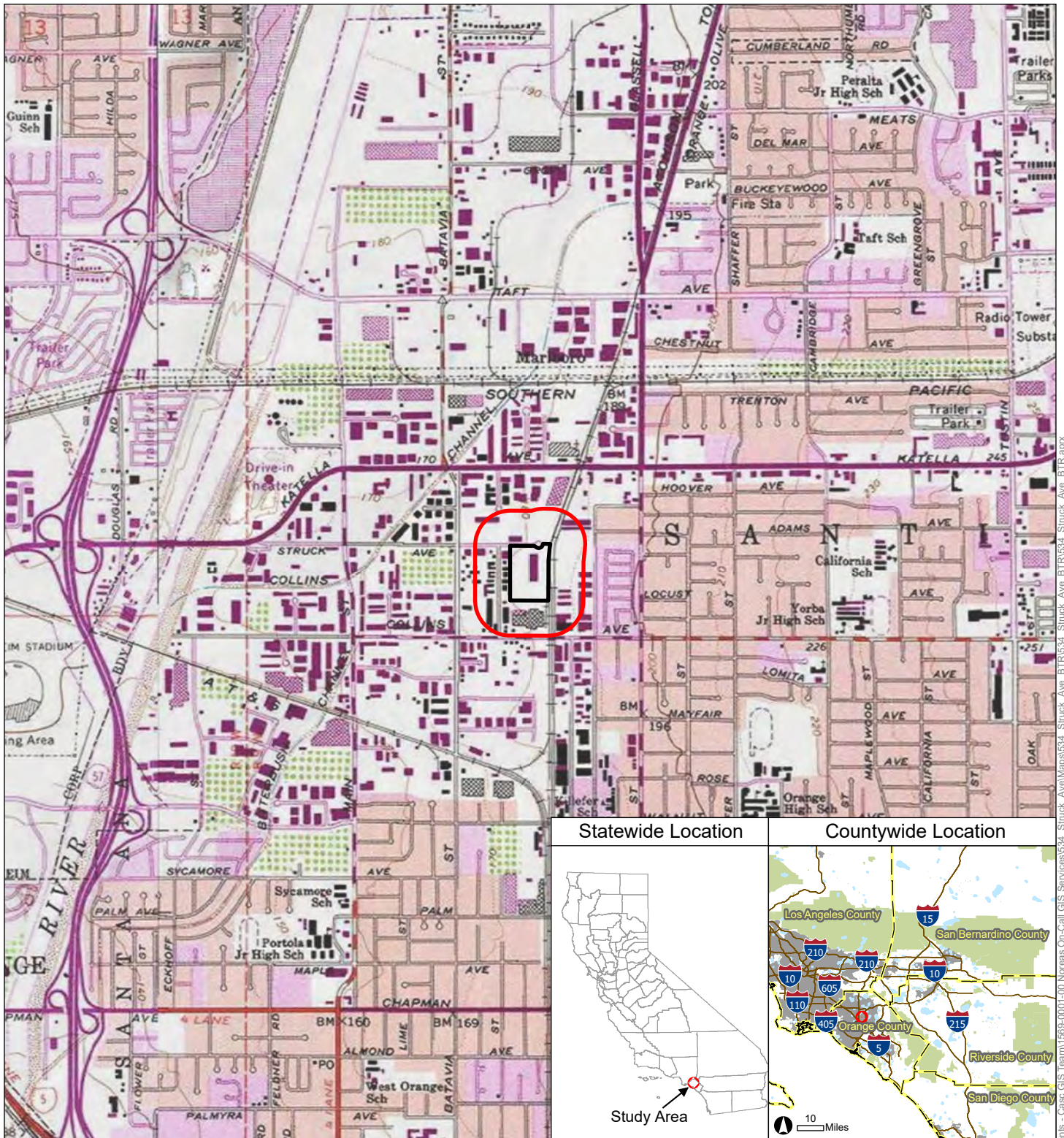
During pedestrian surveys in February of 2023, it was determined that greater than 99% of the Project Site was comprised of developed, disturbed and non-native land cover types. To that end, the Project is not collocated with any United States Fish and Wildlife Service (USFWS) designated critical habitat, nor were any special status species detected during the 2023 field surveys. No nesting birds, remnant raptor nests, or bat guano were detected within the Project Site either.

The Project Site’s developed and disturbed land cover has substantially decreased its value as suitable breeding / nesting, and foraging habitat for native species as well. Furthermore, the Project Site has limited – if any, value as a low-quality migration corridor, or overland dispersal habitat for wildlife, because it is severely movement constrained by the surrounding industrial and commercial developments, and public infrastructure.

¹ For the purposes of this analysis, “special-status species” refers to any species that has been afforded special protection by federal, state, or local resource agencies (e.g., U.S. Fish and Wildlife Service [USFWS], California Department of Fish and Wildlife [CDFW]) or resource conservation organizations (e.g., California Native Plant Society [CNPS], etc.). The term “special-status species” excludes those avian species solely identified under Section 10 of the Migratory Bird Treaty Act (MBTA) for federal protection. Nonetheless, MBTA Section 10 protected species are afforded avoidance and minimization protections per state and federal requirements.

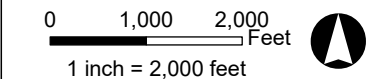
2.0 PROPERTY LOCATION

For the purposes of this report, the “study area” includes the Project’s proposed ground disturbance footprint (Project Site) and a buffer (Figures 1 and 2). The Project can be found on the Orange United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map (USGS 1987).



- Project Site
- Study Area
- County Boundary (inset)
- Urban Area (inset)
- Interstate or State Highway (inset)
- Water Body (inset)
- Park or National Forest (inset)

The Study Area is located in Orange County on the Orange USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 4 South, Range 9 West, Center coordinate (WGS 1984): 117.858°W 33.805°N



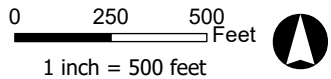
Data Sources:
 - Bureau of Land Management Cadastral GIS 2015
 - USGS 7.5-minute quadrangle map
 - ESRI US Topo Maps accessed Feb 2023
 Map Prepared: 2-13-23

Prepared by:
NOREAS
 Environmental Engineering and Science

Figure 1. Regional Location



- Project Site (9.84 acres)
- Study Area (59.04 acres)



Data Sources:
- Bing Maps Hybrid accessed Feb 2023

Map Prepared: 2-13-23



Figure 2. Site Vicinity

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3.0 FOCUSED STUDY/SPECIES OF CONCERN

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans, databases and relevant documents were reviewed to determine the locations and types of biological resources² that have the potential to exist within - and adjacent to the study area. Biological resources were evaluated within several miles of the Project.

The materials reviewed included - but were not limited to, the following:

- ✓ US Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2023a);
- ✓ USFWS National Wetlands Inventory database (USFWS 2023c);
- ✓ Regional South Coast Missing Linkages Project Report (South Coast Wildlands 2008);
- ✓ California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW) (CDFW 2023);
- ✓ Natural Resource Conservation Service, Soil Survey Geographic Database (SSURGO) (USDA-NRCS 2023a);
- ✓ California Native Plant Society (CNPS) Electronic Inventory (CNPS 2023); and
- ✓ Aerial Photographs (Microsoft Corporation 2023).

² For the purposes of this analysis, “biological resources” refers to the plants, wildlife, and habitats that occur - or have the potential to occur, within the study area.

4.0 METHODS

To support the analysis detailed within Section 3.0 above, pedestrian-based field surveys were performed to assess land cover, general and dominant vegetation communities, habitat types, and species present within communities. Community descriptions were based on observed dominant vegetation composition, and derived from the criteria and definitions of widely accepted vegetation classification systems (Holland 1986 and Sawyer et al. 2009).

Plants were identified to the lowest taxonomic level sufficient to determine whether the species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded according to Baldwin et al. (2012). The presence of a wildlife species was based on direct observation and/or detection of wildlife sign (e.g., tracks, burrows, nests, scat, skeletal remains or vocalization). Field data compiled for wildlife species included scientific name, and common name. Wildlife of uncertain identity were documented and subsequently identified from specialized field guides and related literature (Burt and Grossenheider 1980; Halfpenny 2000; Sibley 2000; Elbroch 2003 and Stebbins 2003).

Additionally, the Project Site was assessed for its potential to support special-status species based on habitat³ suitability comparisons with reported occupied habitats (Appendix A). The following potential for occurrence definitions were utilized within Appendix A:

- **Absent [A]** – Species distribution is restricted by substantive habitat requirements which do not occur – or are negligible within the Project Site, and no further survey or study is necessary to determine likely presence or absence of this species.
- **Habitat Present [HP]** – Species distribution is restricted by substantive habitat requirements which occur within the Project Site, and further study may be necessary to determine likely presence or absence of species.
- **Present [P]** – Species or species sign were observed within the Project Site, or historically has been documented within Project limits.
- **Critical Habitat [CH]** – The Project Site is located within a USFWS-designated critical habitat unit.

4.1 Evaluation of Wetlands and Waterways

Based on the aforementioned review of commercially available literature and a habitat assessment, the presence and/or absence of surface water conveyance features, riparian plant communities, riverine land cover types and wetlands - including vernal pools, was evaluated within the Project Site. Potential features were identified based on professional judgement, aerial photographic signatures, and the presence of a well-defined ordinary high-water mark, bed, bank, channel, and/or the limits of riparian habitats in the field – while showing deference to vegetation, soils, and observed hydrology.

³ A “habitat” is defined as the place - or type of locale, where a plant or animal naturally or normally lives and grows.

5.0 GENERAL BIOLOGICAL SURVEY RESULTS

Weather conditions during the February 2023 surveys included clear skies, temperatures ranging from 50 to 68 °F, and winds fluctuating from 0 to 05 miles per hour (mph). Representative photos of the study area are provided in Appendix B.

5.1 Vegetation Communities and Land Cover Types

One vegetation communities/land cover type was observed within the study area: Developed / Disturbed (Figure 3). This cover type is described below.

Developed / Disturbed lands within the study area include locales that have been paved, cleared, graded or otherwise altered by anthropogenic activities (i.e., access roads, ornamental landscaping, train tracks, industrial facilities, storage yards, commercial enterprises, and so forth). These lands also include areas with exposed soils, minimal vegetation, and moderate cover by various non-native annual grasses, and weeds (adapted for growth on substrates subject to disturbance). Common non-native plants species detected within this type include ripgut brome (*Bromus diandrus*), Sahara mustard (*Brassica Tournefortii*), Mexican fan palm (*Washingtonia Robusta*), Schismus (*Schismus barbatus*) cheese weed (*Malva neglecta*).

5.2 Wildlife

Wildlife species observed within the study area consisted of commonly-occurring species - including, but not limited to, rock pigeon (*Columba livia*), house finch (*Haemorhous mexicanus*), common raven (*Corvus corax*), and Western fence lizard (*Sceloporus occidentalis*). Wildlife detected during the surveys are identified in Appendix D.

5.3 Special-Status Plants

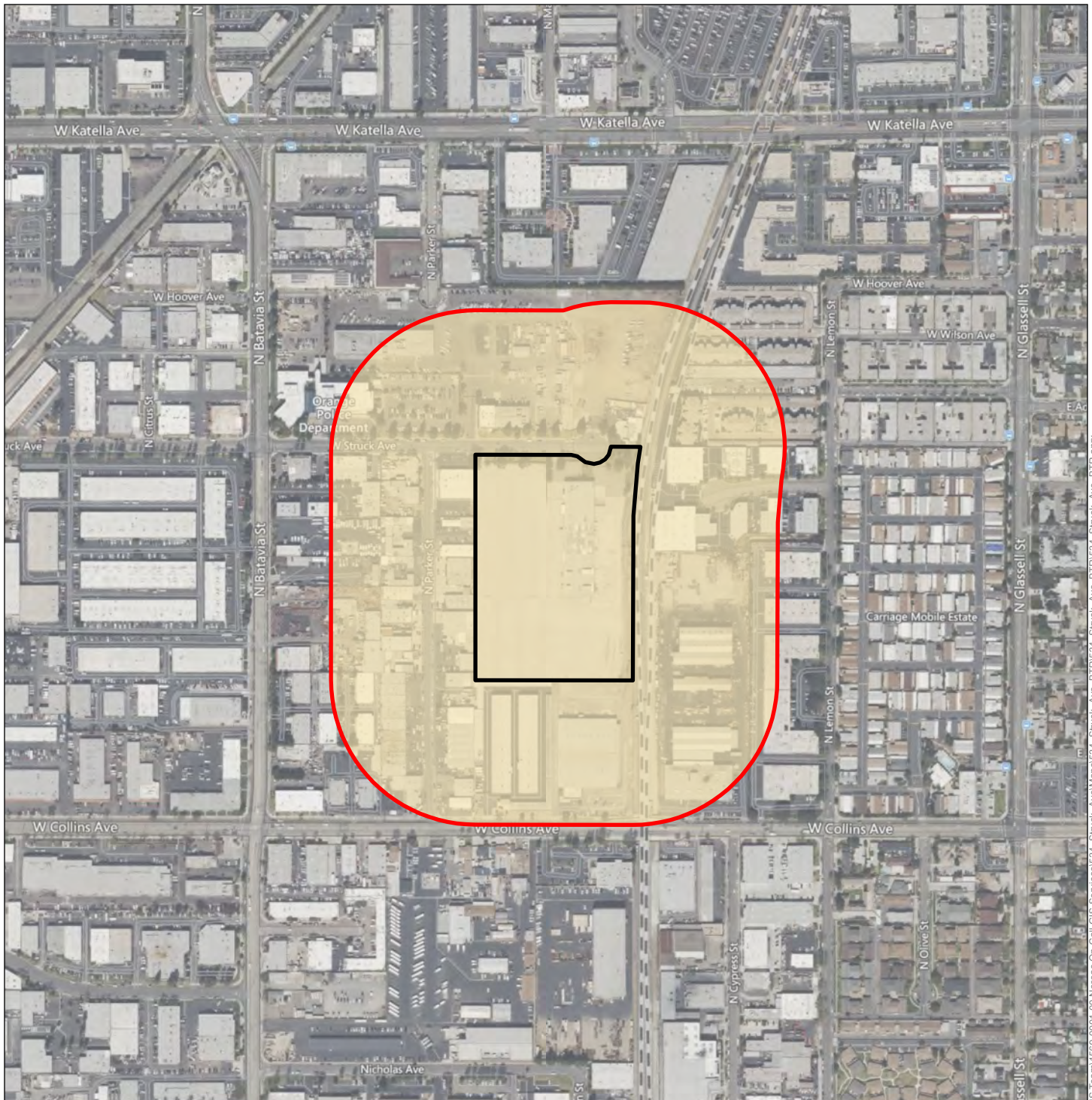
No Federal or State listed plant species were observed within the study area during the 2023 field surveys. Nonetheless, several have been documented within 10 miles of the Project (Figure 4). The study area includes no USFWS-designated critical habitat for plants (Figure 5), and the Project Site does not include the substantive habitat requirements necessary to support special-status flora. Special-status species known to occur within 10 miles of the Project, and their potential for occurrence within the Project Site are detailed within Appendix A, and Figure 4. Plant species observed during the surveys are listed in Appendix C.



5.4 Special-Status Wildlife


No special status wildlife species were observed within the study area during the 2023 field survey events. The study area includes no USFWS-designated critical habitat for wildlife (Figure 5), and the Project Site does not include the substantive habitat requirements necessary to support special-status wildlife. Special-status species known to occur within 10 miles of the Project, and their potential for occurrence within the Project Site are detailed within Appendix A, and Figure 4. Wildlife species detected during the surveys are listed in Appendix D.

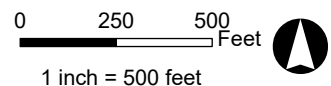
5.5 Wetlands and Waterways

The literature review and field survey data imply that it is appropriate to characterize the Project Site as an anthropogenically disturbed upland. As no riparian or riverine habitats - or obvious indicators of a well-defined water conveyance bed, bank or channel were detected within the Project Site. The topography suggests that the Project Site lacks waters which are typically subject to Clean Water Act, or Fish and Game Code Section 1600 jurisdiction. Furthermore, the National Wetland Inventory has no records of special aquatic resources within the Project Site (Figure 6).



-  Project Site (9.84 acres)
-  Study Area (59.04 acres)

- Vegetation Type**
-  Developed/Disturbed (59.04 acres)



Data Sources:
-Bing Maps Hybrid accessed Feb 2023

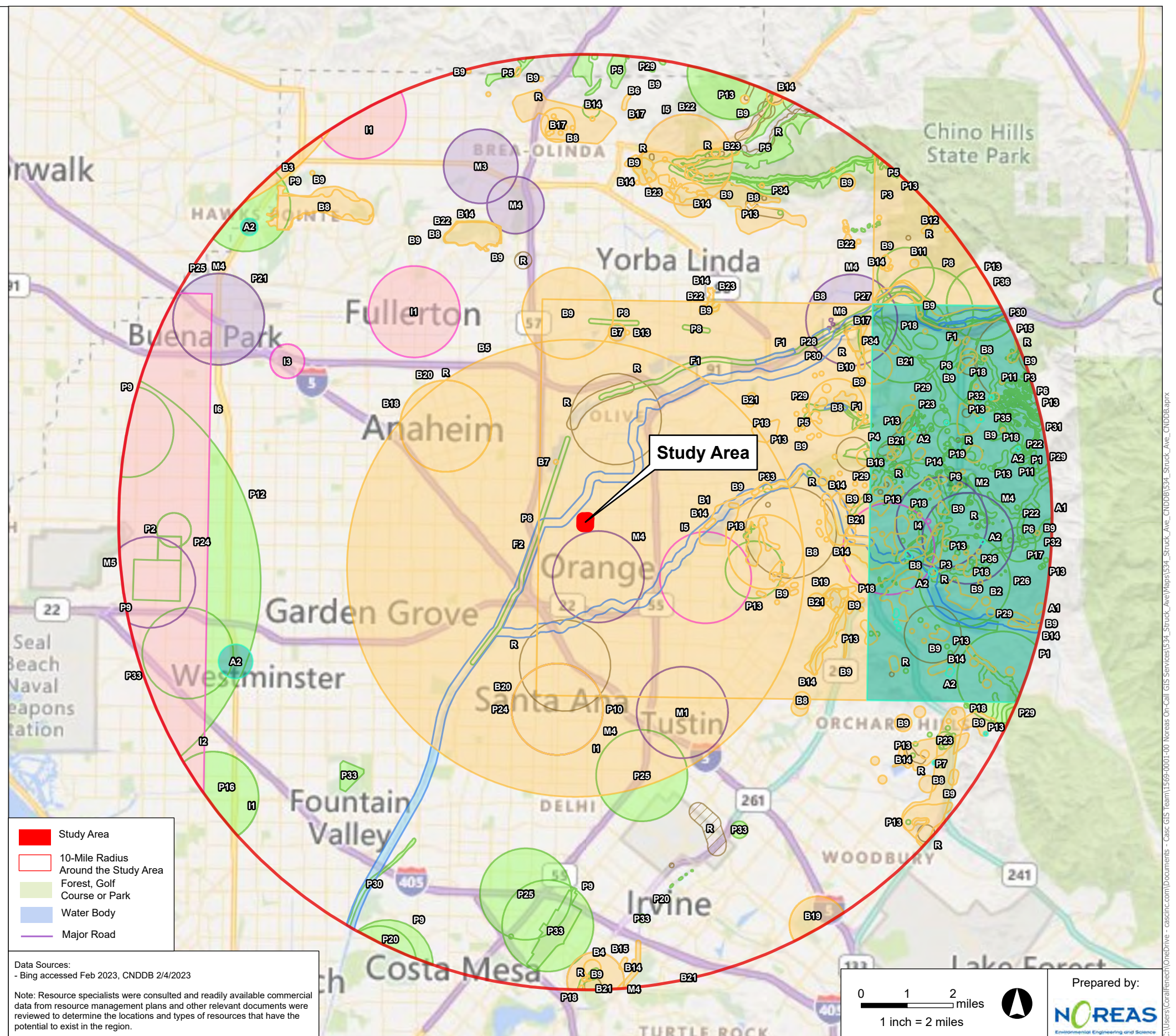
Map Prepared: 2-13-23

Prepared by:
NOREAS
Environmental Engineering and Science

Figure 3. Vegetation Communities and Land Cover Types

Special-Status Species Occurrences

Map Code	Common Name (Scientific Name)	
Plants		
P1	Allen's pentachaeta	<i>Pentachaeta aurea</i> ssp. <i>allenii</i>
P2	Brand's star phacelia	<i>Phacelia stellaris</i>
P3	Braunton's milk-vetch	<i>Astragalus brauntonii</i>
P4	California beardtongue	<i>Penstemon californicus</i>
P5	California Walnut Woodland chaparral nolina	<i>Nolina cismontana</i>
P6	chaparral ragwort	<i>Senecio aphanactis</i>
P7	chaparral sand-verbena	<i>Abronia villosa</i> var. <i>aurita</i>
P8	Coulter's goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>
P9	Gambel's water cress	<i>Nasturtium gambelii</i>
P10	heart-leaved pitcher sage	<i>Lepeschinia cardiophylla</i>
P11	Horn's milk-vetch	<i>Astragalus hornii</i> var. <i>hornii</i>
P12	intermediate mariposa-lily	<i>Calochortus weedii</i> var. <i>intermedius</i>
P13	intermediate monardella	<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>
P14	long-spined spineflower	<i>Chorizanthe polygonoides</i> var. <i>longispina</i>
P15	Los Angeles sunflower	<i>Helianthus nuttallii</i> ssp. <i>parishii</i>
P16	Malibu baccharis	<i>Baccharis malibuensis</i>
P17	many-stemmed dudleya	<i>Dudleya multicaulis</i>
P18	mesa horkelia	<i>Horkelia cuneata</i> var. <i>puberula</i>
P19	mud nama	<i>Nama stenocarpa</i>
P20	Parish's brittlescale	<i>Atriplex parishii</i>
P21	Plummer's mariposa-lily	<i>Calochortus plummerae</i>
P22	Robinson's pepper-grass	<i>Lepidium virginicum</i> var. <i>robinsonii</i>
P23	salt spring checkerbloom	<i>Sidalcea neomexicana</i>
P24	San Bernardino aster	<i>Symphotrichum defoliatum</i>
P25	San Fernando Valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>
P26	Santa Ana River woollystar	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>
P27	Southern California Arroyo Chub/Santa Ana Sucker Stream	<i>Southern California Arroyo Chub/Santa Ana Sucker Stream</i>
P28	Southern Coast Live Oak Riparian Forest	<i>Southern Coast Live Oak Riparian Forest</i>
P29	Southern Cottonwood Willow Riparian Forest	<i>Southern Cottonwood Willow Riparian Forest</i>
P30	Southern Interior Cypress Forest	<i>Southern Interior Cypress Forest</i>
P31	Southern Sycamore Alder Riparian Woodland	<i>Southern Sycamore Alder Riparian Woodland</i>
P32	southern tarplant	<i>Centromadia parryi</i> ssp. <i>australis</i>
P33	Southern Willow Scrub	<i>Southern Willow Scrub</i>
P34	Tecate cypress	<i>Hesperocyparis forbesii</i>
P35	white rabbit-tobacco	<i>Pseudognaphalium leucocephalum</i>
P36		
Invertebrates		
I1	Crotch bumble bee	<i>Bombus crotchii</i>
I2	monarch - California overwintering population	<i>Danaus plexippus plexippus</i> pop. 1
I3	quino checkerspot butterfly	<i>Euphydryas editha quino</i>
I4	San Diego fairy shrimp	<i>Branchinecta sandiegonensis</i>
I5	San Gabriel chestnut	<i>Glyptostoma gabrielense</i>
I6	western tidal-flat tiger beetle	<i>Habrosclimorpha gabbii</i>
Mammals		
M1	Mexican long-tongued bat	<i>Choeronycteris mexicana</i>
M2	paillard bat	<i>Antrozous pallidus</i>
M3	pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>
M4	western mastiff bat	<i>Eumops perotis californicus</i>
M5	western yellow bat	<i>Lasurus xanthinus</i>
M6	Yuma myotis	<i>Myotis yumanensis</i>
Birds		
B1	American peregrine falcon	<i>Falco peregrinus anatum</i>
B2	bald eagle	<i>Haliaeetus leucocephalus</i>
B3	bank swallow	<i>Riparia riparia</i>
B4	burrowing owl	<i>Athene cucularia</i>
B5	California black rail	<i>Lateralus jamaicensis coturniculus</i>
B6	California horned lark	<i>Eremophila alpestris actia</i>
B7	California least tern	<i>Sterna antillarum browni</i>
B8	coastal cactus wren	<i>Campylorhynchus brunneicapillus sandiegonensis</i>
B9	coastal California gnatcatcher	<i>Poliophtia californica californica</i>
B10	Cooper's hawk	<i>Accipiter cooperii</i>
B11	golden eagle	<i>Aquila chrysaetos</i>
B12	grasshopper sparrow	<i>Ammodramus savannarum</i>
B13	great blue heron	<i>Ardea herodias</i>
B14	least Bell's vireo	<i>Vireo bellii pusillus</i>
B15	light-footed Ridgway's rail	<i>Rallus obsoletus levipes</i>
B16	long-eared owl	<i>Asio otus</i>
B17	southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>
B18	Swainson's hawk	<i>Buteo swainsoni</i>
B19	tricolored blackbird	<i>Agelaius tricolor</i>
B20	western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>
B21	white-tailed kite	<i>Elanus leucurus</i>
B22	yellow-breasted chat	<i>Icteria virens</i>
B23	yellow warbler	<i>Setophaga petechia</i>
Reptiles		
R1	coast horned lizard	<i>Phrynosoma blainvillii</i>
R2	coast patch-nosed snake	<i>Salvadora hexalepis virgulata</i>
R3	coastal whiptail	<i>Aspidoscelis tigris stajnegeri</i>
R4	orange-throated whiptail	<i>Aspidoscelis hyparythra</i>
R5	red-diamond rattlesnake	<i>Crotalus ruber</i>
R6	Southern California legless lizard	<i>Anniella stebbinsi</i>
R7	two-striped gartersnake	<i>Thamnophis hammondi</i>
R8	western pond turtle	<i>Emys marmorata</i>
Amphibians		
A1	Coast Range newt	<i>Taricha torosa</i>
A2	western spadefoot	<i>Spea hammondi</i>
Fish		
F1	Santa Ana sucker	<i>Catostomus santaanae</i>
F2	steelhead - southern California DPS	<i>Oncorhynchus mykiss irideus</i> pop. 10



- Study Area
- 10-Mile Radius Around the Study Area
- Forest, Golf Course or Park
- Water Body
- Major Road

Data Sources:
 - Bing accessed Feb 2023, CNDDDB 2/4/2023

Note: Resource specialists were consulted and readily available commercial data from resource management plans and other relevant documents were reviewed to determine the locations and types of resources that have the potential to exist in the region.

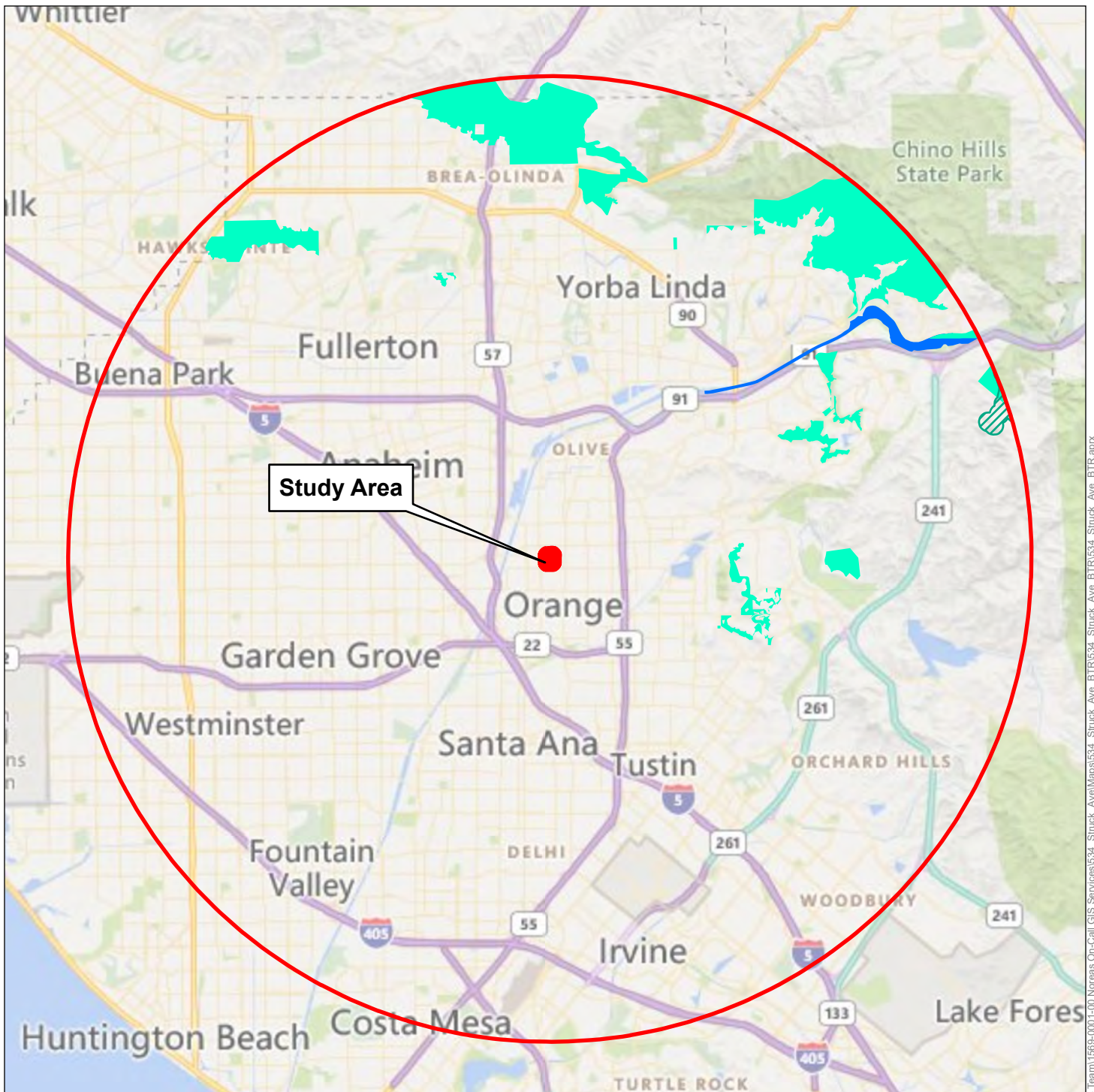
0 1 2 miles

1 inch = 2 miles

Prepared by:

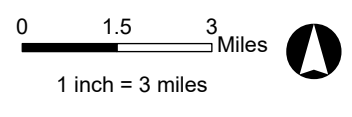
Environmental Engineering and Science

Figure 4. Literature Review



- Study Area
- 10-Mile Radius Around the Study Area
- Freeway
- Major Road
- Forest, Golf Course or Park
- Water Body

- Critical Habitat
- Branton's milk-vetch (*Astragalus brauntonii*)
 - Coastal California gnatcatcher (*Catostomus santaanae*)
 - Santa Ana sucker (*Catostomus santaanae*)



Data Sources:
 - Bing accessed Feb 2023
 - US Fish and Wildlife Service Critical Habitat data date: Jan 2023
 Map Prepared: 2-13-23

Prepared by:

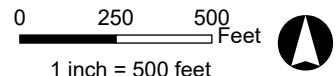
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Figure 5. Critical Habitat



- Project Site
- Study Area
- Riverine
- National Wetland Inventory (NWI)



Data Sources:
 - Bing Maps Hybrid accessed Feb 2023
 - US Fish and Wildlife Service
 National Wetland Inventory geodatabase
 data date: Dec 20201

Map Prepared: 2-13-23

Prepared by:



Figure 6. National Wetland Inventory

6.0 CONCLUSION AND RECOMMENDATIONS

In 2023, it was determined that greater than 99% of the Project Site was comprised of developed, disturbed or non-native habitats. Additionally, the Project is not collocated with any USFWS designated critical habitat, nor were any special status species detected during the 2023 field surveys. No nesting birds, remnant raptor nests, or bat guano were detected within the Project Site either. The Project Site's developed and disturbed land cover have substantially decreased its value as suitable breeding / nesting, and foraging habitat for native species as well. Furthermore, the Project Site has limited – if any, value as a low-quality migration corridor, or overland dispersal habitat for wildlife, because it is severely movement constrained by the surrounding industrial and commercial developments.

The following are recommended for implementation:

- Training of all field staff on applicable - or relevant, and appropriate local, state, and federal regulatory agency requirements, environmental laws, and regulations associated with working around biological resources.
- No personnel working within Project limits will “take” or destroy plants, animals, or active nests (or eggs) of birds that are protected under the Federal or State Endangered Species Acts and Migratory Bird Treaty Act (MBTA)
- No personnel working within Project limits will handle - or relocate, flora or fauna.
- In order to comply with Section 10 of the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code, any necessary vegetation clearing should take place outside of the typical avian nesting season (e.g., March 15th until September 1st).
 - If work needs to take place between March 15th and September 1st, a pre – activity clearance sweep for nesting birds should be completed prior to the onset of ground disturbance.
 - An activity exclusion buffer zone around occupied nests should be maintained during physical ground disturbing undertakings. Once nesting has ended, the buffer may be removed.

With the implementation of the measures recommended herein, there would be no presumption that the Project would result in the loss of individual species, nor that it would adversely affect local or regional populations of them.

REFERENCES

- Baldwin, J., D. Goldman, D. Keil, R. Patterson, and T. Rosatti. 2012. *The Jepson Manual: Higher Plants of California*. Berkeley: University of California Press.
- Burt, W. H. and R. P. Grossenheider. 1980. *A Field Guide to Mammals: North America; North of Mexico*. New York, NY: Houghton Mifflin Company.
- CDFW (California Department of Fish and Wildlife). 2023. RareFind. California Department of Fish and Game, Natural Diversity Database (CNDDDB). Sacramento, CA: California Department of Fish and Game, Biogeographic Data Branch.
- CNPS (California Native Plant Society). 2023. CNPS Electronic Inventory of Rare and Endangered Plants: CNPS.
- Elbroch, M. 2003. *Mammal Tracks & Sign, A Guide to North American Species*. Mechanicsburg, PA: Stackpole Books.
- Halfpenny, J.C. 2000. *Scats and Tracks of the Desert Southwest, A Field Guide to the Signs of 70 Wildlife Species*. Helena, MT: Falcon Publishing, Inc.
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California (California Department of Fish and Game, The Resources Agency, ed), p. 156. Sacramento, CA.
- Microsoft Corporation. 2023. Bing Maps Aerial Imagery. Redmond, WA
- Sawyer, J., T. Keeler-Wolf, and J. Evens. 2009. *A Manual of California Vegetation*. Sacramento, CA: California Native Plant Society.
- Sibley, D.A. 2000. National Audubon Society. *The Sibley Guide to Birds*. New York, NY: Alfred A. Knopf, Inc.
- Stebbins, R.C. 2003. *A Field Guide to Western Reptiles and Amphibians*. New York, NY: Houghton Mifflin.
- USGS (United States Geological Service). 1987 7.5-Minute Quadrangle Orange, California.
- USFWS (United States Fish and Wildlife Service). 2023a. Critical Habitat Portal. USFWS
- USFWS (United States Fish and Wildlife Service). 2023b. Orange County Fish and Wildlife Office. Endangered and Threatened Species List.

APPENDIX A
SPECIAL-STATUS SPECIES POTENTIAL FOR
OCCURRENCE WITHIN THE PROJECT SITE

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	CNPS list	Number of records within 10 miles	Year(s) sighted
A	American peregrine falcon (<i>Falco peregrinus anatum</i>)	Delisted	Delisted	-	1	2015
A	California black rail (<i>Laterallus jamaicensis coturniculus</i>)	None	Threatened	-	1	1986
A	Steelhead - southern California (<i>Oncorhynchus mykiss irideus</i>)	Endangered	Candidate Endangered	-	1	2013
A	Western mastiff bat (<i>Eumops perotis californicus</i>)	None	None	-	7	1949 - XXXX
A	Chaparral sand-verbena (<i>Abronia villosa var. aurita</i>)	None	None	1B.1	4	1924 - 1935
A	Coast horned lizard (<i>Phrynosoma blainvillii</i>)	None	None	-	12	1922 - XXXX
A	Santa Ana sucker (<i>Catostomus santaanae</i>)	Threatened	None	-	5	1987 - XXXX
A	California least tern (<i>Sternula antillarum browni</i>)	Endangered	Endangered	-	2	2016 - 2018
A	San Gabriel chestnut (<i>Glyptostoma gabriellense</i>)	None	None	-	2	193X - 1952
A	Southern California legless lizard (<i>Anniella stebbinsi</i>)	None	None	-	3	1916 - 2019
A	Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	Threatened	None	-	116	1900 - 2021
A	Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Endangered	Endangered	-	22	1996 - 2020
A	Swainson's hawk (<i>Buteo swainsoni</i>)	None	Threatened	-	1	1888
A	Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Threatened	Endangered	-	2	1918 - 19XX
A	Gambel's water cress (<i>Nasturtium gambelii</i>)	Endangered	Threatened	1B.1	1	1927
A	Salt spring checkerbloom (<i>Sidalcea neomexicana</i>)	None	None	2B.2	2	1929 - 1952
A	Crotch bumble bee (<i>Bombus crotchii</i>)	None	Candidate Endangered	-	4	1942 - 2020
A	Coastal cactus wren (<i>Campylorhynchus brunneicapillus sandiegensis</i>)	None	None	-	13	1989 - 2013
A	Intermediate mariposa-lily (<i>Calochortus weedii var. intermedius</i>)	None	None	1B.2	35	1927 - 2021
A	Many-stemmed dudleya (<i>Dudleya multicaulis</i>)	None	None	1B.2	29	1982 - 2016
A	Orange-throated whiptail (<i>Aspidoscelis hyperythra</i>)	None	None	-	11	1962 - 2005
A	Mexican long-tongued bat (<i>Choeronycteris mexicana</i>)	None	None	-	1	1995
A	Southern tarplant (<i>Centromadia parryi ssp. australis</i>)	None	None	1B.1	9	1933 - 2003
A	Great blue heron (<i>Ardea herodias</i>)	None	None	-	1	2004
A	White-tailed kite (<i>Elanus leucurus</i>)	None	None	-	8	2008 - 2020
A	San Bernardino aster (<i>Symphotrichum defoliatum</i>)	None	None	1B.2	3	1896 - 1927
A	yellow-breasted chat (<i>Icteria virens</i>)	None	None	-	4	2001 - 2016
A	Yellow warbler (<i>Setophaga petechia</i>)	None	None	-	3	2003 - 2016

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	CNPS list	Number of records within 10 miles	Year(s) sighted
A	Tricolored blackbird (<i>Agelaius tricolor</i>)	None	Threatened	-	2	2014
A	Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	Endangered	None	-	2	1930 - 1983
A	Western pond turtle (<i>Emys marmorata</i>)	None	None	-	9	1987 - XXXX
A	Coast Range newt (<i>Taricha torosa</i>)	None	None	-	2	1997 - 1999
A	Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	None	None	-	3	1999
A	Red-diamond rattlesnake (<i>Crotalus ruber</i>)	None	None	-	6	1995 - 2001
A	California beardtongue (<i>Penstemon californicus</i>)	None	None	1B.2	1	1981
A	Coast patch-nosed snake (<i>Salvadora hexalepis virgulata</i>)	None	None	-	3	1993 - 1999
A	Yuma myotis (<i>Myotis yumanensis</i>)	None	None	-	1	1998
A	Long-eared owl (<i>Asio otus</i>)	None	None	-	2	1968 - 1974
A	Cooper's hawk (<i>Accipiter cooperii</i>)	None	None	-	1	2002
A	Pallid bat (<i>Antrozous pallidus</i>)	None	None	-	1	1993
A	Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	None	None	-	3	2000 - 2008
A	Western spadefoot (<i>Spea hammondi</i>)	None	None	-	14	1952 - 2019
A	Santa Ana River woollystar (<i>Eriastrum densifolium ssp. sanctorum</i>)	Endangered	Endangered	1B.1	1	1927
A	Horn's milk-vetch (<i>Astragalus hornii var. hornii</i>)	None	None	1B.1	1	1896
A	pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	None	None	-	1	1989
A	San Fernando Valley spineflower (<i>Chorizanthe parryi var. fernandina</i>)	None	Endangered	1B.1	1	1902
A	San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>)	Endangered	None	-	1	2006
A	Braunton's milk-vetch (<i>Astragalus brauntonii</i>)	Endangered	None	1B.1	4	2012 - 2020
A	Chaparral nolina (<i>Nolina cismontana</i>)	None	None	1B.2	12	2000 - 2017
A	Coulter's goldfields (<i>Lasthenia glabrata ssp. coulteri</i>)	None	None	1B.1	5	1932 - 1965
A	Golden eagle (<i>Aquila chrysaetos</i>)	None	None	-	1	2007
A	Intermediate monardella (<i>Monardella hypoleuca ssp. intermedia</i>)	None	None	1B.3	1	2008
A	Robinson's pepper-grass (<i>Lepidium virginicum var. robinsonii</i>)	None	None	4.3	2	2008
A	Two-striped gartersnake (<i>Thamnophis hammondi</i>)	None	None	-	1	2000
A	Mesa horkelia (<i>Horkelia cuneata var. puberula</i>)	None	None	1B.1	1	2008
A	Parish's brittlescale (<i>Atriplex parishii</i>)	None	None	1B.1	1	1881
A	Western tidal-flat tiger beetle (<i>Habroscelimorpha</i>)	None	None	-	1	1998

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	CNPS list	Number of records within 10 miles	Year(s) sighted
	<i>gabpii</i>)					
A	mud nama (<i>Nama stenocarpa</i>)	None	None	2B.2	2	1998
A	Long-spined spineflower (<i>Chorizanthe polygonoides</i> var. <i>longispina</i>)	None	None	1B.2	1	2001
A	White rabbit-tobacco (<i>Pseudognaphalium leucocephalum</i>)	None	None	2B.2	2	1928 - 2008
A	Western yellow bat (<i>Lasiurus xanthinus</i>)	None	None	-	1	1990
A	Allen's pentachaeta (<i>Pentachaeta aurea</i> ssp. <i>allenii</i>)	None	None	1B.1	2	2000 - 2003
A	Plummer's mariposa-lily (<i>Calochortus plummerae</i>)	None	None	4.2	3	2000
A	Bald eagle (<i>Haliaeetus leucocephalus</i>)	Delisted	Endangered	-	1	2011
A	Brand's star phacelia (<i>Phacelia stellaris</i>)	None	None	1B.1	1	1932
A	Los Angeles sunflower (<i>Helianthus nuttallii</i> ssp. <i>parishii</i>)	None	None	1A	1	1924
A	Tecate cypress (<i>Hesperocyparis forbesii</i>)	None	None	1B.1	1	2010
A	Chaparral ragwort (<i>Senecio aphanactis</i>)	None	None	2B.2	1	1989
A	Light-footed Ridgway's rail (<i>Rallus obsoletus levipes</i>)	Endangered	Endangered	-	1	2020
A	California horned lark (<i>Eremophila alpestris actia</i>)	None	None	-	1	2008
A	Heart-leaved pitcher sage (<i>Lepechinia cardiophylla</i>)	None	None	1B.2	3	2003 - 2016
A	Malibu baccharis (<i>Baccharis malibuensis</i>)	None	None	1B.1	1	2008
A	Burrowing owl (<i>Athene cunicularia</i>)	None	None	-	1	1981
A	Grasshopper sparrow (<i>Ammodramus savannarum</i>)	None	None	-	1	2001
A	Bank swallow (<i>Riparia riparia</i>)	None	Threatened	-	1	1894

CNPS List Definitions

List 1A: Plants presumed extinct in California

List 1B.1: Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California

List 1B.2: Plants rare, threatened, or endangered in California and elsewhere, fairly threatened in California

List 1B.3: Plants rare, threatened, or endangered in California and elsewhere, not very threatened in California

List 2.1: Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California

List 2.2: Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California

Potential for Occurrence Definitions

Absent [A] – Species distribution is restricted by substantive habitat requirements, which do not occur – or are negligible within the Project Site, and no further survey or study is obligatory to determine likely presence or absence of this species.

Habitat Present [HP] – Species distribution is restricted by substantive habitat requirements, which occur within the Project Site, and further survey or study may be necessary to determine likely presence or absence of species.

Present [P] – Species or species sign were observed within the Project Site, or historically has been documented within Project limits

Critical Habitat [CH] – The Project Site is located within a USFWS-designated critical habitat unit.

**APPENDIX B
PHOTOGRAPH LOG**



Photograph 1. Facing South.



Photograph 2. Facing East.



Photograph 3. Facing West.



Photograph 4. Facing Southwest.

APPENDIX C
PLANT SPECIES OBSERVED WITHIN THE STUDY AREA

Scientific Name	Common Name
Amaryllidaceae (Amaryllis family)	
<i>Agapanthus sp.*</i>	Agapanthus
Amaranthaceae (Amaranth family)	
<i>Chenopodium murale*</i>	Nettle-leaved goosefoot
Anacardiaceae (Cashew family)	
<i>Schinus molle*</i>	Peruvian pepper
Arecaceae (Palm family)	
<i>Cycas revoluta*</i>	Sego palm
<i>Phoenix dactylifera</i>	Date palm
<i>Washingtonia Robusta*</i>	Mexican fan palm
Asteraceae (Aster family)	
<i>Centaurea melitensis*</i>	Maltese star-thistle
<i>Conyza canadensis</i>	Horseweed
<i>Heterotheca grandiflora</i>	Telegraphweed
<i>Oncosiphon piluliferum*</i>	Stinknet
<i>Taraxacum sp.</i>	Dandelion
Brassicaceae (Mustard family)	
<i>Brassica nigra</i>	Black mustard
<i>Brassica Tournefortii*</i>	Sahara mustard
<i>Sisymbrium irio *</i>	London rocket
Cannaceae (Canna family)	
<i>Canna indica*</i>	Indian shot
Cactaceae (Cactus family)	
<i>Opuntia ficus-indica</i>	Prickly pear
Chenopodiaceae (Goosefoot family)	
<i>Kali tragus*</i>	Prickly Russian thistle
Euphorbiaceae (Spurge family)	
<i>Ricinus communis*</i>	Caster bean
Fabaceae (Pea family)	
<i>Melilotus indicus*</i>	Sourclover
Geraniaceae (Geranium family)	
<i>Erodium cicutarium*</i>	Redstem stork's bill
Iridaceae (Iris family)	
<i>Diets grandiflora*</i>	Fairy iris
Malvaceae (Mallow family)	
<i>Malva neglecta*</i>	Cheeseweed
Myrtaceae (Myrtle family)	
<i>Eucalyptus sp*</i>	Eucalyptus
<i>Psidium sp.</i>	Guava

Scientific Name	Common Name
Nyctaginaceae (Four o'clock family)	
<i>Bougainvillea sp.*</i>	Bougainvillea
Pinaceae (Pine family)	
<i>Pinus sp.*</i>	Pine
Poaceae (Grass family)	
<i>Avena barbata*</i>	Wild oat
<i>Bromus diandrus *</i>	Ripgut brome
<i>Bromus madritensis subsp. Rubens *</i>	Red brome
<i>Cynodon dactylon*</i>	Bermuda grass
<i>Hordeum marinum subsp. Gussoneanum *</i>	Mediterranean barley
<i>Pennisetum sp.*</i>	Fountain grass
<i>Schismus barbatus*</i>	Schismus
Rosaceae (Rose family)	
<i>Raphiolepis Indica*</i>	Indian hawthorn
<i>Prunus serotina*</i>	Black cherry
Sapindaceae (Soapberry Family)	
<i>Cupaniopsis anacardioides*</i>	Carrotwood
Solanaceae (Nightshade family)	
<i>Datura stramonium*</i>	Jimsonweed

Nomenclature follows the Jepson Manual, Second Edition (Baldwin et al 2011).

* = naturalized, non- native plant species.

APPENDIX D
WILDLIFE SPECIES OBSERVED WITHIN THE STUDY AREA

Scientific name	Common name
Reptiles	
<i>Sceloporus occidentalis</i>	Western fence lizard
Birds	
<i>Calypte anna</i>	Anna's hummingbird
<i>Columba livia</i>	Rock Pigeon
<i>Carduelis psaltria</i>	Lesser goldfinch
<i>Corvus corax</i>	Common Raven
<i>Carpodacus mexicanus</i>	House Finch
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Mimus polyglottos</i>	Northern Mockingbird
<i>Sayornis nigrican</i>	Black phoebe
<i>Sturnus vulgaris</i>	European starling
<i>Tyrannus verticalis</i>	Western kingbird
<i>Zenaida macroura</i>	Mourning Dove
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel