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Progress & Preservation

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July 7, 2020

City of Corona
Attn: Barry Ghaemi
400 S. Vicentia Ave, #210
Corona, CA 92882

RE: BIOLOGICAL RESOURCES ASSESSMENT - JURISDICTIONAL WATERS DELINEATION
WESTERN RIVERSIDE MSHCP CONSISTENCY ANALYSIS
MAGNOLIA AVENUE BRIDGE WIDENING
CITY OF CORONA PROJECT NO. 2015-15
FEDERAL AID PROJECT NO. STPL-5104 (046)
CORONA, RIVERSIDE COUNTY, CA

Dear Mr. Ghaemi

Jericho Systems, Inc. (Jericho) is pleased to provide this Biological Resources Assessment (BRA), Jurisdictional Delineation (JD), and Western Riverside Multi-Species Habitat Conservation Plan (MSHCP) consistency analysis prepared for the Magnolia Avenue Bridge Widening Project (Project) located in the City of Corona along Magnolia Avenue in Riverside County, California. The Project is proposing to create improvements that include 1) sidewalks, curbs, gutters, and ADA compliance, 2) an additional travel lane in each direction, 3) widen the bridge over Temescal Creek Channel to accommodate improvements, and 4) ultimate build-out of the roadway as planned by the City of Corona.

PROJECT LOCATION

Project improvements will occur on Magnolia Avenue between El Camino Avenue to 1,000 feet east of All American Way, or to approximately the intersection of the eastbound lane to Leeson Lane, approximately 150 feet past Trademark Circle. Magnolia Avenue is accessible from the I-15 Freeway. The Temescal Creek Channel, a rectangular concrete channel in this location, crosses under Magnolia Avenue in a north-south direction. The Project is located within the *Corona South* U.S. Geological Survey (USGS) 7.5-minute topographical map in Section 32, Township 3 South, Range 6 West San Bernardino Meridian (Figures 1 and 2).

PROJECT UNDERSTANDING

The City of Corona is proposing to widen the Magnolia Avenue Bridge over Temescal Wash Channel and Magnolia Avenue from El Camino Avenue to 1,000 feet east of the All American Way generally to increase the number of travel lanes and place sidewalk and curb and gutter. Improvements will include restriping for three, 12-foot-wide lanes in each direction, a 12-foot-wide median, 5-foot-wide shoulders, and 6-foot-wide sidewalks/curb and gutter in locations that currently lack sidewalk/curb/gutter. The total roadway width would be increased to approximately 100 feet, curb to curb, throughout the alignment, and right-of-way would be consistently approximately 120 feet wide throughout the alignment.

The work will include the following:

- Roadway widening including drainage improvements;
- Modification to street signs, street lighting, and landscaping;
- Pavement rehabilitation where required;
- Modifying the existing roadway striping;
- Installing new curbs and gutters and sidewalks in the missing sections;
- Re-striping and or replacing the existing BNSF railroad crossing (crossing arms may be relocated depending on final design);
- Widening and rehabilitating the concrete bridge over the Temescal Creek Channel;
- Relocating utilities that conflict with the planned improvements;
- Provide ADA compliant access ramps at all intersections.

As a part of the bridge construction, the abutment would be extended on each end of the bridge, along with one pier within the Temescal Creek Channel.

Additionally, a number of mature trees will be removed and relocated within the existing landscaped buffer areas on the south side of Magnolia Avenue between 1460 Magnolia Avenue (adjacent to the Corona Auto Parts business) and 1560 Magnolia Avenue (at Leeson Lane). In this section, a sidewalk exists in the City's portion of the right-of-way. Within the private property immediately adjacent to the sidewalk exists landscaped buffer areas that separate the sidewalk from the customer parking for the businesses along this section. The landscaped buffer areas range from approximately 11 feet wide at 1480 Magnolia Avenue to approximately 27 feet wide at 1560 Magnolia Avenue.

SCOPE OF BIOLOGICAL ASSESSMENT

The scope of Jericho's biological assessment included a general biological assessment of the entire Project alignment within the projected roadway width with up to a 200-foot buffer where accessible, a presence-absence survey for bats under the Temescal Canyon Creek bridge, and a consistency analysis with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

The City of Corona is a signatory to the MSHCP which requires that a project comply with the MSHCP policies identified in Section 6 of the MSHCP. The Project alignment is located in the Temescal Canyon Area Plan of the MSHCP. The site is not located in within any MSHCP designated criteria cell, cell group, or area identified for conservation, nor in an area that requires surveys for amphibian, criteria area species, mammals, burrowing owl, or narrow endemic plants. Jericho's assessment for the Project alignment therefore consisted of a biological resource assessment and MSHCP Riparian/Riverine resources (MSHCP section 6.1.2) consistency analysis.

The site was also evaluated for the presence of jurisdictional waters, subject to the federal Clean Water Act (CWA), Porter-Cologne (Porter-Cologne) and California Fish and Game Code (FGC) regulations. Jurisdictional resources subject to the CWA regulations include non-wetland waters and wetland waters of the U.S. (WoUS) whereas jurisdictional resources subject to Porter-Cologne include non-wetland waters and waters of the State (WoS). The California FGC encompasses the resources that constitute a stream or river, including associated riparian vegetation and floodplain.

The results of Jericho's field surveys are intended to provide sufficient baseline information to the County and, if required, to federal and State regulatory agencies, including U.S. Fish and Wildlife Service

(USFWS) and California Department of Fish and Wildlife (CDFW), respectively, to determine if impacts will occur, quantify those impacts and to identify mitigation measures to offset any impacts.

METHODS

Prior to the field investigation reference materials and databases relevant to the Project alignment were reviewed for the *Corona South* 7.5-minute USGS quadrangle as well as the *Corona North* quadrangle due to its proximity to the site (less than one mile away). The sources reviewed included:

- California Natural Diversity Database (CNDDB) *Rarefind 5*;
- CNDDB Biogeographic Information and Observation System (BIOS);
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers;
- Google Earth Pro historic aerial imagery (1994-2018);
- County/City habitat conservation plans and other sensitive resource policies; and
- RCA MSHCP Information Map.

General biological field surveys were conducted on March 3, 2020, by Jericho biologist Christian Nordal. Mr. Nordal has a M.S. degree in Biology with an emphasis in bat acoustic surveys and multiple years of experience surveying for biological resources throughout Southern California. Mr. Nordal conducted the systematic and comprehensive pedestrian survey during calm weather between the hours of 8:30 am and 10:00 am.

On March 26, 2020, between the hours of 7 pm and 10 pm, Mr. Nordal also conducted an acoustic bat survey for the Magnolia Bridge to determine if the bridge is being utilized as a roost. The survey included an emergence count and recorded acoustics (if bats are detected) for species or genus identification. The bat survey was conducted in similar methodology to the literature[1] and began approximately 30 minutes prior to sunset and continued for approximately one hour after sunset or until occupation of the bridge was confirmed. The surveyor utilized the Titley Anabat Walkabout, a detector that records the echolocation bats emit and displays them on a sonogram in real time.

Table 1
Weather Data for Bat Survey

Date	Time of Survey	% Cloud Cover	Wind (BFT)	Temperature (° F)	Precipitation
03/26/2020	6:30 pm	20	4	54	0

[1] Brooks, R. T., & Ford, W. M. 2005. Bat activity in a forest landscape of central Massachusetts. Northeastern Naturalist, 12:447-462.

Brooks, R. T. 2009. Habitat-associated and temporal patterns of bat activity in a diverse forest landscape of southern New England, USA. Biodiversity and Conservation, 18:529-545.

Ford, W. M., Menzel, J. M., Menzel, M. A., Edwards, J. W., & Kilgo, J. C. 2006. Presence and absence of bats across habitat scales in the upper coastal plain of South Carolina. Journal of Wildlife Management, 70:1200-1209.

Francl, K. E., Ford, W. M., & Castleberry, S. B. 2004. Bat activity in central Appalachian wetlands. Georgia Journal of Science, 62(2), 87.

Francl, K. E. 2008. Summer bat activity at woodland seasonal pools in the northern Great Lakes region. Wetlands, 28:117-124.

Johnson, J. B., & Gates, J. E. (2008). Bats of assateague Island national seashore, Maryland. The American Midland Naturalist, 160(1), 160-170

Riverine/Riparian Areas

Mr. Nordal also assessed the Project alignment for Riverine/Riparian and Vernal Pool habitat subject to Section 6.1.2 of the MSHCP. As defined by the MSHCP, Riverine/Riparian areas contain habitat dominated by tress, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year. Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season.

The methods used to determine any riparian/riverine or vernal pool areas are based on Corps' regulations and technical guidance issued by the USACE including, the *USACE Wetlands Research Program Technical Report Y-87-1 (on-line edition), Wetlands Delineation Manual, Environmental Laboratory, 1987 (Wetland Delineation Manual)*, *USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, December 2008 (Arid West Supplement)* and *USACE A Guide to Ordinary High Water Mark (OHWM) Delineation Arid West Region of the United States, 2010,* as well as other soils evaluations and vegetation classification literature. This is because an area may be characterized as riparian based on its vegetative composition, but not meet the criteria of being federal or state jurisdictional water.

Jurisdictional Waters

Jurisdictional waters, i.e. WoUS are regulated by the USACE and RWQCB. The potential for federal jurisdictional waters followed the regulations set forth in 33CFR part 328 and the USACE guidance documents.

Evaluation of FGC Section 1600 Streambed Waters followed guidance in the FGC and the *MESA Field Guide* pursuant to which CDFW claims jurisdiction beyond traditional stream banks and the outer edge of riparian habitat. Under *MESA*, the term stream is defined broadly to include "a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic regime [i.e., 'circa 1800 to the present'], and where the width of its course can reasonably be identified by physical or biological indicators." Other data recorded included bank height and morphology, substrate type, and vegetation within and adjacent to the low flow streambed.

A variety of reference materials relevant to the project site were reviewed during the course of this delineation, including historical and current aerial imagery, Federal Emergency Management Agency (FEMA) flood insurance rate maps (FIRM), National Oceanic & Atmospheric Administration (NOAA) climate data, USFWS National Wetland Inventory (NWI) and EPA Water Program "My Waters" data layers and United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) web soil survey. The data provided in the Web Soil Survey provides a standard basis for the soil textures and types that are assigned a hydric indicator status of "hydric" or "non-hydric" by the National Technical Committee for Hydric Soils.

RESULTS

Regional Setting

According to the EPA Regional map, the Project site is located in the Inland Valleys (85k) ecoregion. An ecoregion is a regional area that has similar ecosystems in terms of type, quality, and quantity of environmental resources. The Inland Valleys ecoregion is influenced less by marine processes, and more by alluvial processes. The ecoregion consists of alluvial fans and basin floors at the base of the San Bernardino and San Gabriel mountains and the San Jacinto and Perris Valleys in the south. The region was historically composed of Riversidean coastal sage scrub, valley grasslands, and riparian woodlands. The ecoregion is now heavily urbanized with some remaining agriculture.

Hydrologically, the Project site is located within the Middle Santa Ana River hydrologic area, in the 35,737-acre Temescal hydrologic sub-area (HSA 801.25) within the Temescal watershed (HUC 180702030605).

The City of Corona is located in northwestern Riverside County between the Temescal Mountains and Santa Ana Mountains, just north of the Temescal Valley. Corona extends approximately two miles north of State Highway 91, the Santa Ana mountain range on the southwest, and the Temescal mountain range to the southeast. The general climate of Corona is described as warm, dry summers and mild winters and is characterized as warm-summer Mediterranean with average temperatures ranging from 93 in the summer to 40 degrees Fahrenheit in the winter and an average annual rainfall of 12 inches. The Project site sits at the northwestern base of the Temescal mountain range along the northeastern boundary of the city limits.

Literature Review

Per the CNDDB, CNPSEI, and other relevant literature and databases, 54 sensitive species (22 plant species, 32 animal species) and have been documented in the *Corona South* and *Corona North* USGS 7.5-minute series quadrangles (Figure 3).

Of the 54 sensitive species, there are 15 State- and/or federally-listed species documented within the *Corona South* and *Corona North* quads. Of the 15 State- and/or federally-listed species, only the following two have been documented within approximately 1 mile of the Project alignment:

- Coastal California gnatcatcher (*Polioptila californica californica*)
- Least Bell's vireo (*Vireo bellii pusillus*)

An analysis of the likelihood for occurrence of all sensitive species documented in the *Corona South* and *Corona North* quads is provided in a table in Attachment 3. This analysis considers species' range as well as documentation within the vicinity of the project area and includes the habitat requirements for each species and the potential for their occurrence on the site, based on required habitat elements and range relative to the current site conditions.

Attachment 3 lists sensitive species and habitats for any State- and/or federally-listed threatened or endangered species, California Fully Protected species, CDFW designated Species of Special Concern (SSC), and otherwise Special Animals. "Special Animals" is a general term that refers to all the taxa the

CNDDB is interested in tracking, regardless of their legal or protection status. This table is also referred to as the list of "species at risk" or "special status species." The CDFW considers the taxa on this list to be those of greatest conservation need.

Existing Site Conditions

The project alignment is an existing road with associated structures and a concrete-lined channel at an elevation of approximately 650 feet above mean sea level (refer to photos in Attachment 2).

Soils along the alignment are either graded and compacted or are covered by existing infrastructure. Soils within the alignment consist of Cortina sandy loam, 0 to 3 percent slopes, dry, MLRA 19 (CoA) and Cortina gravely sandy loam, 0 to 2 percent slopes (CpA) (refer to Figure 4).

Plant Communities

Plant species identified in barren ground surrounding the concrete channel were ruderal and mowed or ornamental. Ruderal species observed were limited to mustard (*Hirschfeldia incana*) and Russian thistle (*Salsola tragus*).

Ornamental tree species along the south side of Magnolia Avenue were limited to pine (*Pinus ssp.*), Mexican fan palm (*Washingtonia robusta*), and African sumac (*Searsia lancea*). There are eight African sumac trees with a DBH of approximately 6 inches that will be removed and replaced. The project is classified as "Urban/Developed" per the MSHCP Vegetation Layer (2016) is consistent with conditions currently found on site.

General Wildlife and Birds

Wildlife was observed in the trees of the landscaped areas on both sides of Magnolia during the general biological survey. The wildlife primarily included include house sparrow (*Passer domesticus*), house finch (*Haemorhous mexicanus*), black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), and yellow-rumped warbler (*Setophaga coronate*).

Sensitive Bats

The structure of the bridge does not allow for roosting habitat for bats. Expansion joints that form crevices are utilized by many bat species, and these joints have been filled and sealed to prevent occupation and retain structure integrity. No bats were observed exiting the bridge at sunset, and no bats were detected during acoustic surveys. The Magnolia Bridge at the time of surveys is thereby considered unoccupied by bats.

Sensitive Species

The Project alignment is not within or adjacent to any critical habitat for any listed or candidate species. Due to the highly urbanized nature of the Project alignment, coastal scrub habitat necessary for California gnatcatcher or riparian scrub habitat necessary for least Bell's vireo are not found anywhere along the Project alignment or within the Temescal Creek Channel, therefore, there is little to no potential for either species to occur.

Riverine/Riparian Areas and Jurisdictional Waters

The Temescal Creek Bridge crosses a concrete-lined section of the Temescal Creek Channel. The channel consists of concrete vertical slopes approximately 20 feet high and a concrete invert approximately 67 ft wide.

The section of the Temescal Creek Channel impacted by the Project is void of vegetation and therefore does not contain Riverine/Riparian areas as defined by the MSHCP. No vernal pools exist within or near the channel.

The Temescal Creek Channel flows seasonally/ephemerally and is a tributary to the Santa Ana River from Lake Elsinore. As such, the Temescal Creek Channel to be impacted by the Project alignment is a watercourse subject to CWA and FGC under the jurisdictions of USACE, RWQCB, and CDFW. The extent of the jurisdictional waters to be impacted could not be assessed for this report. Once the final bridge design is completed, a jurisdictional delineation will be performed to quantify impacts to the jurisdictional concrete-lined channel. The impacts are anticipated to include bridge abutments along the bank and one support pier.

CONCLUSIONS AND RECOMMENDATIONS

There are no sensitive species or critical habitat within or adjacent to the Project alignment. Bats were not found to be roosting or utilizing the Temescal Creek Bridge, and the bridge does not support the potential for bat habitat.

However, vegetation suitable for nesting birds does exist within and adjacent to the Project alignment, primarily within the trees along the south side of Magnolia Avenue. The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711) provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered a take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Most birds are protected by the MBTA. The following recommendation is made to avoid or minimize impacts to nesting birds:

- Bird nesting season generally extends from February 1 through September 15 in Southern California and specifically, April 15 through August 31 for migratory passerine birds. In general, Projects should be constructed outside of this time to avoid impacts to nesting birds. If a Project cannot be constructed outside of nesting season, the project site shall be surveyed for nesting birds by a qualified avian biologist prior to initiating the construction activities. If active nests are found during the pre-construction nesting bird surveys, a Nesting Bird Plan (NBP) will be prepared and implemented. At a minimum, the NBP will include guidelines for addressing active nests, establishing buffers, monitoring, and reporting. The NBP will include a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect

impact. The size and location of all buffer zones, if required, shall be determined by the biologist, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field, within which no vegetation clearing or ground disturbance shall commence until the qualified biologist has determined the young birds have successfully fledged or that the nest has otherwise become inactive.

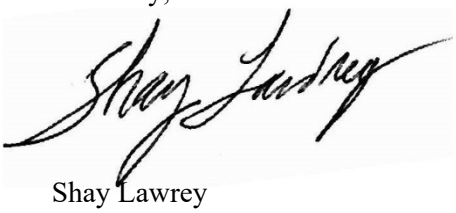
The section of the Temescal Creek Channel impacted by the Project is void of vegetation and therefore does not contain Riverine/Riparian areas as defined by the MSHCP. No vernal pools exist within or near the channel. As a signatory to the MSHCP, the City of Corona is not required, but may choose to, schedule an informational meeting with the Western Riverside County Regional Conservation Authority (RCA) which oversees MSHCP Compliance. The RCA committee includes members from the CDFW, RWQCB and Corps.

Jurisdictional Drainages

Even though the section of the Temescal Creek Channel to be impacted is concrete, it considered a jurisdictional stream subject to the CWA and FGC under the jurisdictions of Corps, RWQCB, and CDFW, respectively. Any proposed permanent of temporary impacts to this drainage will require a Streambed Alteration Agreement from the CDFW, as well as CWA Sections 401/404 permits from the RWQCB and Corps, respectively. Once specific site plans have been developed, a Jurisdictional Delineation will be conducted to determine the specific impacts of the development as part of the permit process.

Thank you for this opportunity to provide information on this important Project. Please contact me if you have questions or need further information:

Sincerely,



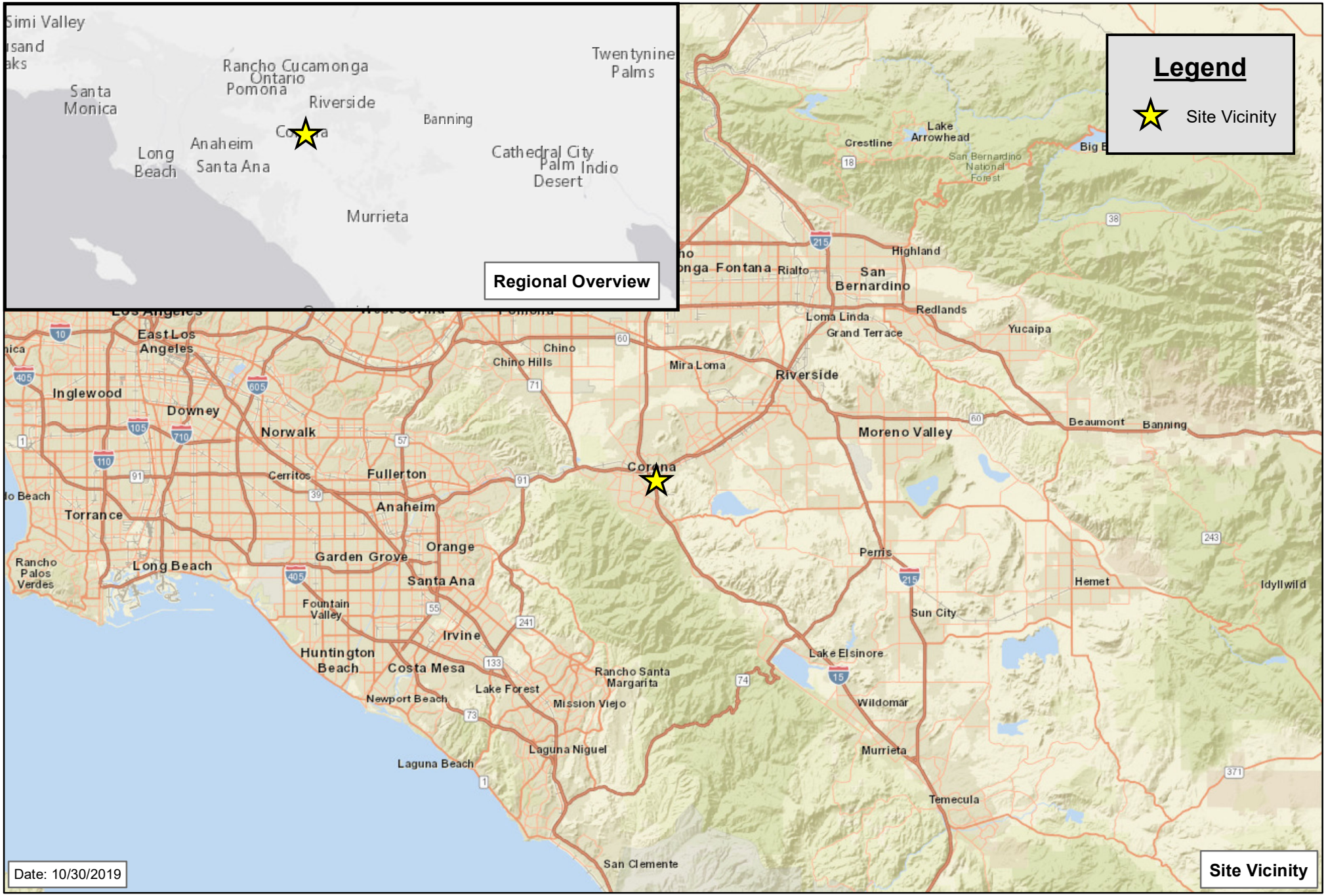
Shay Lawrey
President

Attachment 1: Figures
Figure 1 – Site Vicinity
Figure 2 – Project Location
Figure 3 – 1-mile CNDDB Occurrences
Figure 4 – Soils

Attachment 2: Photo Log

Attachment 3: Species List

Attachment 1:
Figures



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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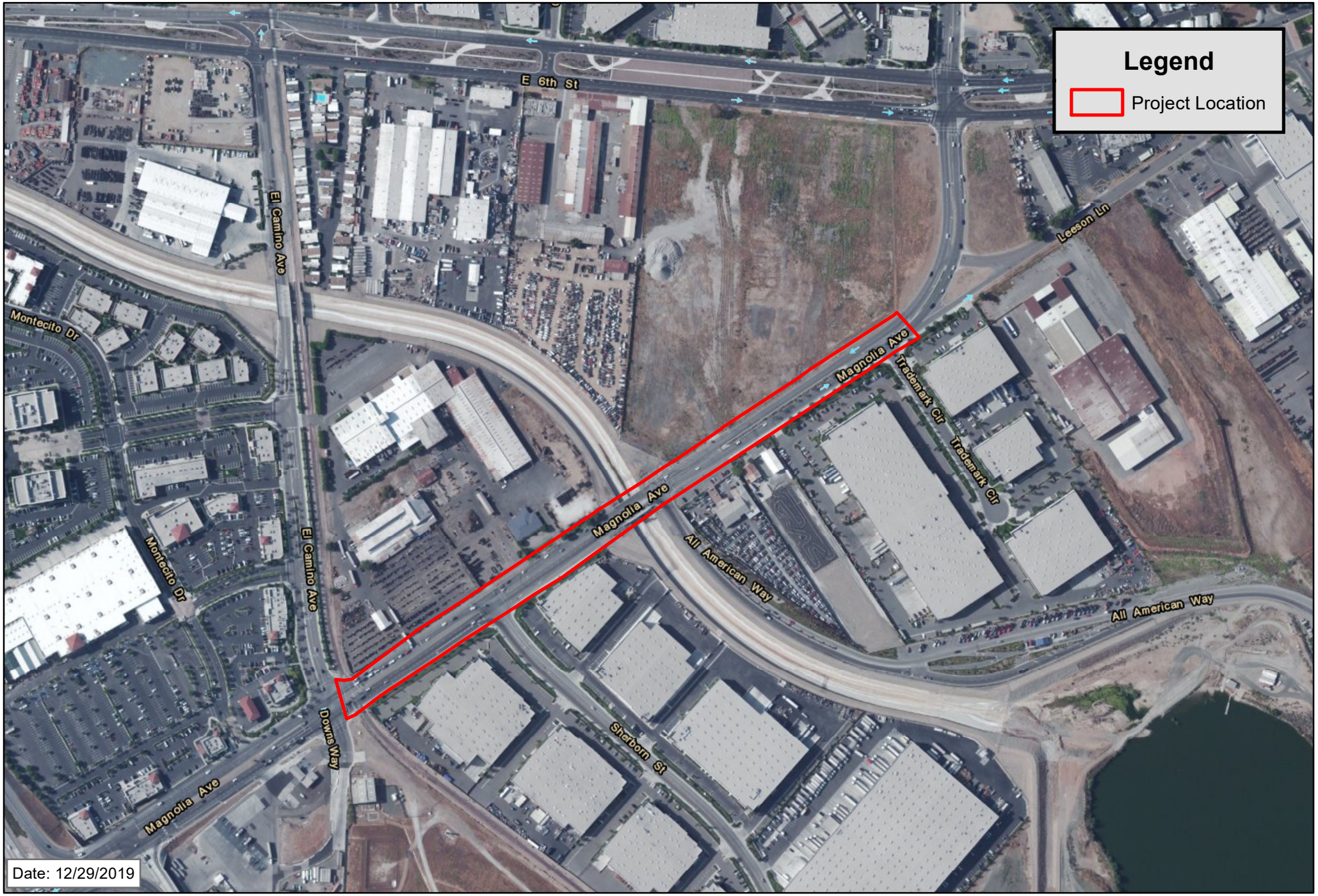
Figure 1 - Regional Overview Site Vicinity

Magnolia Ave Bridge Widening
City of Corona



0 0.04 0.08 0.16 0.24 0.32 Miles

Imagery Date: 1/15/2015

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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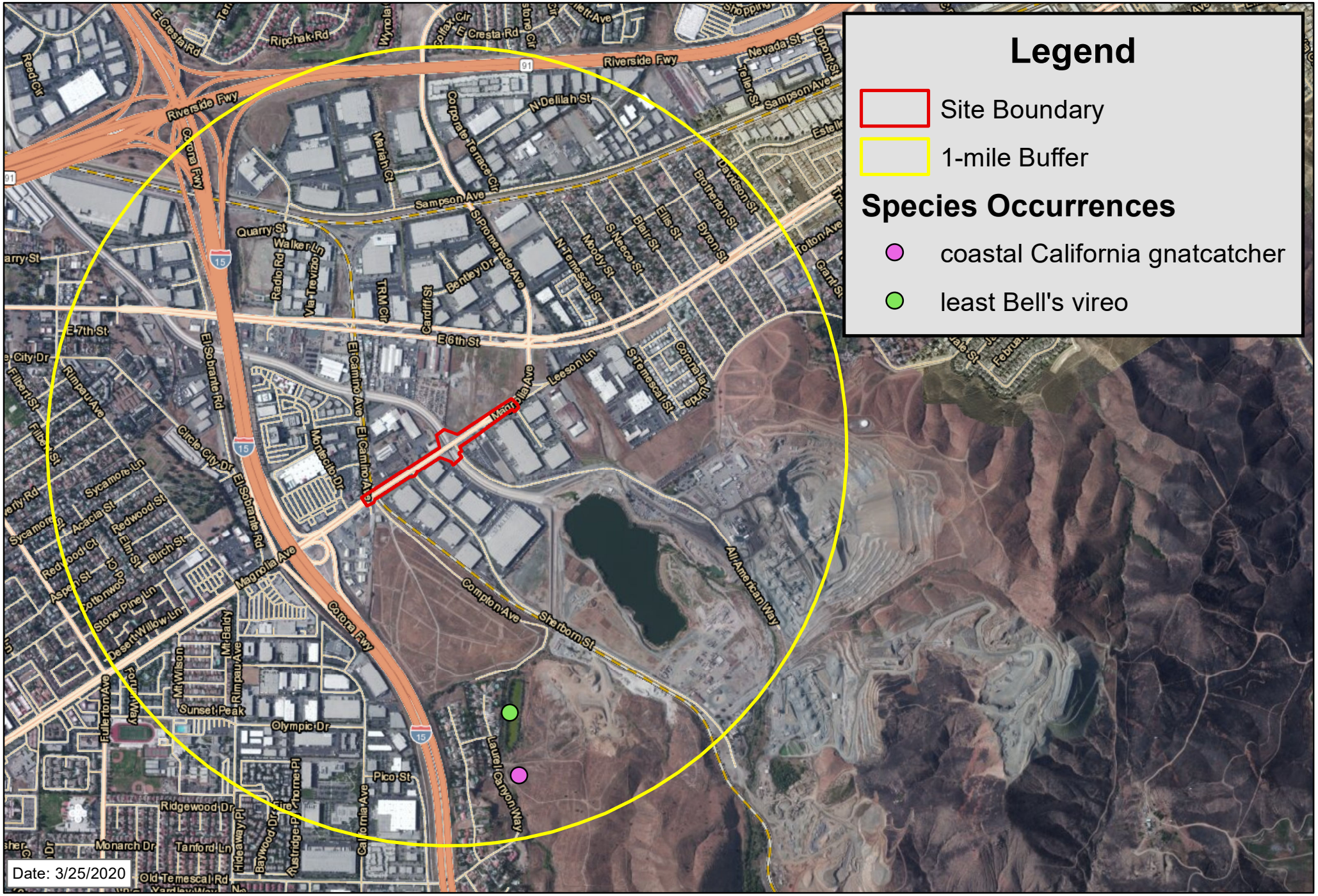
1 inch = 417 feet

Figure 2
Project Location

Magnolia Ave Bridge Widening
City of Corona



Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 1,622 feet

Figure 3
1-Mile CNDDB Occurrences

Magnolia Ave Bridge Widening
City of Corona

0 0.0275 0.055 0.11 0.165 0.22 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 292 feet

Figure 4
Soils

Magnolia Ave Bridge Widening
City of Corona

0 0.0275 0.055 0.11 0.165 0.22 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 292 feet

Figure 5
National Hydrography Dataset (NHD)
Blueline Streams & Waterbodies

Magnolia Ave Bridge Widening
City of Corona

Attachment 2:
Photo Log

Photo 1. Looking west down Magnolia Avenue.

Photo 2. Looking east down Magnolia Avenue.

Photo 3. Looking west from the northern side of the concrete wash.

Photo 4. Looking north at ornamental trees on site.

Photo 5. Looking north down in the concrete wash.

Photo 6. Showing sealed joint in the wash, which would prevent bats from roosting.

Attachment 3:
Species List

Sensitive Species Potential To Occur

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
Plants				
Abronia villosa var. *aurita*	chaparral sand-verbena	None None G5T2? S2 1B.1 BLM: Sensitive USFS: Sensitive	Chaparral, coastal scrub, desert dunes. Sandy areas. -60-1570 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Allium munzii	Munz's onion	Endangered Threatened G1 S1 1B.1	Chaparral, coastal scrub, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Heavy clay soils; grows in grasslands & openings within shrublands or woodlands. 375-1040 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Ambrosia pumila	San Diego ambrosia	Endangered None G1 S1 1B.1	Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Calochortus catalinae	Catalina mariposa lily	None None G3G4 S3S4 4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, 15-700 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Calochortus plummerae	Plummer's mariposa-lily	None None G4 S4 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Calochortus weedii var. *intermedius*	intermediate mariposa-lily	None None G3G4T2 S2 1B.2 USFS: Sensitive	Coastal scrub, chaparral, valley and foothill grassland. Dry, rocky calcareous slopes and rock outcrops. 60-1575 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Centromadia pungens ssp. *laevis*	smooth tarplant	None None G3G4T2 S2 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Chorizanthe leptotheca	Peninsular spineflower	None None G3 S3 4.2	Chaparral, Coastal scrub, Lower montane coniferous forest, alluvial fan, granitic 300-1900 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	None None G4T3 S3 1B.2	Coastal scrub (alluvial fans), Mojavean desert scrub, Pinyon and juniper woodland sandy or gravelly 300-1200 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Deinandra paniculata	paniculate tarplant	None None G4 S4 4.2	Coastal scrub, Valley and foothill grassland, Vernal pools usually vernally mesic, sometimes sandy 25-940 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Dudleya cymosa ssp. *ovatifolia*	Santa Monica Mountains Dudleya	Threatened None G5T1 S1 1B.1	Chaparral, coastal scrub. In canyons on volcanic or sedimentary substrates; primarily on north-facing slopes. 150-335 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Dudleya multicaulis	many-stemmed dudleya	None None G2 S2 1B.2 BLM: Sensitive USFS: Sensitive	Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. 1-910 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	Endangered Endangered G4T1 S1 1B.1	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Erythranthe diffusa	Palomar monkeyflower	None None G4 S3 4.3	Chaparral, Lower montane coniferous forest, sandy or gravelly soils, 1220-1830 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Hesperocyparis forbesii	Tecate cypress	None None G2 S2 1B.1	Closed-cone coniferous forest, Chaparral, clay soils, gabbroic or metavolcanic, 80-1500 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Lepechinia cardiophylla	heart-leaved pitcher sage	None None G3 S2S3 1B.2 USFS: Sensitive	Closed-cone coniferous forest, chaparral, cismontane woodland. 115-1345 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None None G5T3 S3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
		4.3		
Monardella hypoleuca ssp. *intermedia*	intermediate monardella	None None G4T2? S2? 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes). Often in steep, brushy areas. 195-1675 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Nolina cismontana	chaparral nolina	None None G3 S3 1B.2 USFS: Sensitive	Chaparral, coastal scrub, ultramafic (igneous rocks). Primarily on sandstone and shale substrates; also known from gabbro. 140-1100 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Phacelia keckii	Santiago Peak phacelia	None None G1 S1 1B.3 USFS: Sensitive	Closed-cone coniferous forest, chaparral. Open areas, sometimes along creeks. 545-1525 m.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Polygala cornuta var. *fishiae*	Fish's milkwort	None None G5T4 S4 4.3	Chaparral, Cismontane woodland, Riparian woodland, 100-1000 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Romneya coulteri	Coulter's matilija poppy	None None G4 S4 4.2	Chaparral, Coastal scrub Often in burns, 20-1200 m	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Birds				
Agelaius tricolor	tricolored blackbird	None Threatened G2G3 S1S2 BLM: Sensitive CDFW: Species of Special Concern IUCN: Endangered NABCI: Red Watch List USFWS: Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland, Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None None G5T3 S3	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
		CDFW: Watch List		
Artemisiospiza belli belli	Bell's sage sparrow	None None G5T2T3 S3 CDFW: Watch List USFWS: Birds of Conservation Concern	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Athene cunicularia	burrowing owl	None None G4 S3 BLM: Sensitive CDFW: Species of Special Concern IUCN: Least Concern USFWS: Birds of Conservation Concern	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Buteo swainsoni	Swainson's hawk	None Threatened G5 S3 BLM: Sensitive IUCN: Least Concern USFWS: Birds of Conservation Concern	Great Basin grassland | Riparian forest | Riparian woodland | Valley & foothill grassland Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened Endangered G5T2T3 S1 BLM: Sensitive NABCI: Red Watch List USFS: Sensitive USFWS: Birds of Conservation Concern	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Coturnicops noveboracensis	yellow rail	None None G4 S1S2	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
		CDFW: Species of Special Concern IUCN: Least Concern NABCI: Red Watch List USFS: Sensitive USFWS: Birds of Conservation Concern		
Empidonax traillii extimus	southwestern willow flycatcher	Endangered Endangered G5T2 S1 NABCI: Red Watch List	Riparian woodlands in Southern California.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Eremophila alpestris actia	California horned lark	None None G5T4Q S4 CDFW: Watch List IUCN: Least Concern	Marine intertidal & splash zone communities, Meadows & seeps Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Icteria virens	yellow-breasted chat	None None G5 S3 CDFW: Species of Special Concern IUCN: Least Concern	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Laterallus jamaicensis coturniculus	California black rail	None Threatened G3G4T1 S1 BLM: Sensitive CDFW: Fully Protected IUCN: Near Threatened NABCI: Red Watch List USFWS: Birds of Conservation Concern	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Polioptila californica californica	coastal California gnatcatcher	Threatened None	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California.	The project site consists of already developed land. Remnant vegetation consists of ornamental

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
		G4G5T2Q S2 CDFW: Species of Special Concern NACBI: Yellow Watch List	Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	trees and ruderal annual species. Occurrence potential is **low**.
Setophaga petechia	yellow warbler	None None G5 S3S4 CDFW: Species of Special Concern USFWS: Birds of Conservation Concern	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Vireo bellii pusillus	least Bell's vireo	Endangered Endangered G5T2 S2 IUCN: Near Threatened NACBI: Yellow Watch List	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Mammals				
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None None G5T3T4 S3S4 CDFW: Species of Special Concern	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Dipodomys stephensi	Stephens' kangaroo rat	Endangered Threatened G2 S2 IUCN: Endangered	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Eumops perotis californicus	western mastiff bat	None None G5T4 S3S4 BLM: Sensitive CDFW: Species of Special Concern WBWG: High Priority	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Lasiurus xanthinus	western yellow bat	None None	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	The project site consists of already developed land. Remnant vegetation consists of ornamental

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
		G5 S3 CDFW: Species of Special Concern IUCN: Least Concern WBWG: High Priority	Roosts in trees, particularly palms. Forages over water and among trees.	trees and ruderal annual species. Occurrence potential is **low**.
Nyctinomops femorosaccus	pocketed free-tailed bat	None None G4 S3 CDFW: Species of Special Concern IUCN: Least Concern WBWG: Medium Priority	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Reptiles				
Anniella stebbinsi	southern California legless lizard	None None G3 S3 CDFW: Species of Special Concern USFS: Sensitive	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Aspidoscelis hyperythra	orange-throated whiptail	None None G5 S2S3 CDFW: Watch List IUCN: Least Concern USFS: Sensitive	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Aspidoscelis tigris stejnegeri	coastal whiptail	None None G5T5 S3 CDFW: Species of Special Concern	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Coleonyx variegatus abbotti	San Diego banded gecko	None None G5T3T4 S1S2 CDFW: Species of Special Concern	Coastal & cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
Crotalus ruber	red-diamond rattlesnake	None None G4 S3 CDFW: Species of Special Concern USFS: Sensitive	Chaparral, Mojavean desert scrub, Sonoran desert scrub, Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Emys marmorata	western pond turtle	None None G3G4 S3 BLM: Sensitive CDFW: Species of Special Concern IUCN: Vulnerable USFS: Sensitive	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Phrynosoma blainvillii	coast horned lizard	None None G3G4 S3S4 BLM: Sensitive CDFW: Species of Special Concern IUCN: Least Concern	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Amphibians				
Anaxyrus californicus	arroyo toad	Endangered None G2G3 S2S3 CDFW: Species of Special Concern IUCN: Endangered	Desert wash, Riparian scrub, Riparian woodland, South coast flowing waters, South coast standing waters, Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Spea hammondii	western spadefoot	None None G3 S3 BLM: Sensitive CDFW: Species of Special Concern IUCN: Near Threatened	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Fish				
Catostomus santaanae	Santa Ana sucker	Threatened None G1	Aquatic, South coast flowing waters, Endemic to Los Angeles Basin south coastal streams.	Drainage channel is seasonal flow. Habitat does not occur on site. Occurrence potential is **low.**

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
		S1 AFS: Threatened IUCN: Vulnerable	Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	
Gila orcuttii	arroyo chub	None None G2 S2 AFS: Vulnerable CDFW: Species of Special Concern USFS: Sensitive	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave & San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	Drainage channel is seasonal flow. Habitat does not occur on site. Occurrence potential is **low**.
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Endangered None G5T1Q S1 AFS: Endangered	Aquatic, South coast flowing waters Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	Drainage channel is seasonal flow. Habitat does not occur on site. Occurrence potential is **low**.
Insects				
Bombus crotchii	Crotch bumble bee	None Candidate Endangered G3G4 S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	The project site consists of already developed land. Remnant vegetation consists of ornamental trees and ruderal annual species. Occurrence potential is **low**.
Habitats				
Southern Interior Cypress Forest		None None G2 S2.1	Closed-cone coniferous forest	Habitat does not occur on site.
Southern California Arroyo Chub/Santa Ana Sucker Stream		None None GNR SNR		Drainage channel is seasonal flow. Habitat does not occur on site.
Southern Coast Live Oak Riparian Forest		None None G4 S4	Riparian forest	Habitat does not occur on site.
Southern Cottonwood Willow Riparian Forest		None None G3 S3.2	Riparian forest	Habitat does not occur on site.
Southern Riparian Forest		None None G4 S4	Riparian forest	Habitat does not occur on site.
Southern Sycamore Alder Riparian Woodland		None None	Riparian woodland	Habitat does not occur on site.

Scientific Name	Common Name	Federal Status State Status Other Statuses	Habitats	Potential To Occur
		G4 S4		
Southern Willow Scrub		None None G3 S2.1	Riparian scrub	Habitat does not occur on site.

Note: See Status Key on next page

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

Global Rankings (Species or Natural Community Level):
G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure – Common; widespread and abundant.

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank**)** attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa.* The T-rank refers only to the global condition of ssp. *phaea*.

State Ranking:
S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):
1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
1B = Plants rare, threatened, or endangered in California and elsewhere.
2A = Plants presumed extirpated in California, but common elsewhere.
2B = Plants rare, threatened, or endangered in California, but more common elsewhere.
3 = Plants about which more information is needed; a review list.
4 = Plants of limited distribution; a watch list.

Threat Ranks:
.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)