Appendix B:
Biological Resources Assessment Proposed SD Homes Complex – Alabama and Orange Avenue City of Redlands, CA

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Redlands, CA 92373-4601
(909) 915-5900

March 23, 2018

Cheryl A. Tubbs, Vice President
Lilburn Corporation
1905 Business Center Drive
San Bernardino, CA 92408

RE: BIOLOGICAL RESOURCES ASSESSMENT
PROPOSED SD HOMES COMPLEX - ALABAMA AND ORANGE AVENUE
CITY OF REDLANDS, SAN BERNARDINO COUNTY, CALIFORNIA

Dear Ms. Tubbs,

Jericho Systems, Inc. (Jericho) is pleased to provide the Lilburn Corporation with this biological resources assessment (BRA) for the proposed multi-family residential development SD Homes Complex Project (Project). The Project proposes to construct a new multifamily complex comprising approximately 15 acres on Orange Street, between Alabama Street and Iowa Street, in the City of Redlands. The Assessor's Parcel Numbers associated with the Project are APN 292-167-08, -11, -12, -13, -18, and -25 as well as 0292-168-03, -16, -21, and -22. The purpose of this BRA is to identify the potential for sensitive biological species or habitat to occur on the Project site and area of construction impact with a special focus on species known to occur locally and regionally.

INTRODUCTION

The project site is located south of Interstate 10, immediately west of Alabama Street, east of California street, and north of Barton Road in the city of Redlands, San Bernardino County, California. The site is identified on the *Redlands* U.S. Geological Survey's (USGS) 7.5-minute topographic map in Section 29, Township 1 South, Range 3 West (Figures 1-2). The site consists of vacant property, commercial businesses, and some existing residences. It is surrounded by a mix of residential and open space that is being used for agricultural purposes.

Local Setting

The City of Redlands is subject to both seasonal and annual variations in temperature and precipitation. The local climatic conditions in the project area are characterized by warm summers, mild winters, infrequent rainfall, and dry humidity. The average annual temperature is 65°, ranging between 38 and 98°. The rainy season begins in November and continues through March, with the quantity and frequency of rain varying from year to year. The average annual rainfall is approximately 12 inches.

According to the U.S. Environmental Protection Agency (EPA) Regional map, the project site is located in the Inland Valleys 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 consists of alluvial fans and basin floors immediately south of the San Gabriel and San Bernardino Mountains of Southern California and includes the San Jacinto and Perris Valleys toward the south. This ecoregion includes some floodplains along the Santa Ana River. The soil moisture regime is xeric which is characterized by long

periods of drought in the summer. Historically, vegetation in this Ecoregion included Riversidean coastal sage scrub, valley grasslands, and riparian woodlands. Currently, much of this Ecoregion, including the project site and surrounding vicinity is heavily urbanized.

Hydrologically, the project sites are located within the Mission Zanja Hydrologic Sub-Area (HSA 801.52) which comprises a 124,791-acre drainage area within the larger Upper Santa Ana Watershed (HUC 180702030506). Soils in this area consist of Hanford Coarse Sandy Loam and Ramona Sandy Loam, which are found in alluvial fans and are well drained. These soils are considered to be prime farmland if irrigated (USDA, 2018).

METHODS

Literature detailing biological resources previously observed in the local proximity of the project site and historical land uses were reviewed to understand the extent of disturbances to the habitats within the proposed project site. Previously recorded occurrences of special status plant and wildlife species and their proximity to the project site were determined through a query of the City of Redlands General Plan, United States Fish and Wildlife (USFWS) threatened and endangered species occurrence data overlay, California Department of Fish and Wildlife's (CDFWs) California Natural Diversity Database (CNDDB) Rarefind BIOS and Quickview Tool, the California Native Plant Society's (CNPS) Electronic Inventory of Rare, Endangered, and Threatened Plants of California, Calflora, and compendia of special-status species published by CDFW. According to these databases, 46 sensitive species (31 vertebrates, 2 invertebrates, and 13 plant species) and 3 sensitive habitats have been documented in the *Redlands* USGS 7.5-minute quadrangle. An analysis of the occurrence potential of all sensitive species documented in this quad is provided in Appendix A. This analysis takes into account 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.

The USFWS National Wetland Inventory and Environmental Protection Agency (EPA) Water Program "My Waters" data layer were also reviewed to determine whether any hydrologic features and wetland areas had been documented within the vicinity of the site. Similarly, the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) soil maps for San Bernardino County were used to identify the soil series in the area and to check these soils to determine whether they are regionally identified as hydric soils.

On November 30, 2017, Jericho Ecologist Shay Lawrey conducted a biological resources assessment of the project site and adjacent areas (when appropriate and feasible). On March 23, 2018, Jericho Biologist Eugene Jennings conducted an additional survey for the two parcels (APN 0292-168-21 and -22) that were subsequently added to the original project site surveyed in November 2017. The site was assessed for habitat type and structure and, for jurisdictional drainage features potentially subject to Sections 404 and 401 of the Clean Water Act (CWA) and /or Section 1600 of the California Fish and Game Code (FGC). Evaluation of State jurisdiction followed the guidance in the FGC and A Review of Stream Processes and Forms in Dryland Watersheds (CDFW, 2010). Specifically, CDFW jurisdiction would occur where a stream has a definite course showing evidence of where waters rise to their highest level and to the extent of associated riparian vegetation. Areas potentially subject to the CWA jurisdiction were evaluated at the Ordinary High-Water Mark (OHWM), which is indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris.

Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other sign. In addition to species actually observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area.

RESULTS

The proposed project site contains residential and commercial structures, vacant parcels and a closed commercial nursery. The soils on site consist of gravelly, loamy sands including Hanford course sandy loam and Ramona sandy loam which are not identified as a hydric soil type according to the National List of Hydric Soils. The vegetation on site consists primarily of ornamental and ruderal vegetation dominated by non-native grasses. Dominate plant species include tumbleweed (*Salsola tragus*), slender oat (*Avena barbata*), tree of heaven (*Ailanthus* altissima), and tree tobacco (*Nicotiana glauca*). The vegetation within the nursery site is a mix of non-native vegetation including multiple trees and shrubs. The northern boundary of the site abuts Morey Arroyo Canal which contains arundo, tree tobacco, castor bean, mule fat and willow species.

Non-wetland waters of the U.S.

Waters of the U.S. (WUS) are defined as: "All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters". CWA jurisdiction exists over the following:

1. all traditional navigable waters (TNWs);
2. all wetlands adjacent to TNWs;
3. non-navigable tributaries of TNWs that are relatively permanent (RPW) (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally); and
4. every water body determined to have a significant nexus with TNWs.

Morey Arroyo Canal is an ephemeral stream that likely flows for less than 3 months per year, and would, therefore, be classified as a non-relatively permanent water (RPW) by the Corps. It flows into an RPW, the Santa Ana River which flows into a Traditionally Navigable Water (TNW), the Pacific Ocean. Morey Arroyo Canal would be considered a jurisdictional WUS due to a "significant nexus" with a TNW.

Wetlands

Although hydric vegetation is present in Morey Arroyo Canal, the two other required parameters, hydric soils and/or wetland hydrology, are absent. Therefore, no wetlands were identified in the study area during this investigation based on the absence of hydric soil indicators and/or wetland hydrology.

California Streambed and Riverine Riparian

Morey Arroyo Canal meets the criteria of streambed subject to CDFW jurisdiction because defined channel bed and banks are present with associated riparian vegetation. Figures 5a and 5b identify the limits of jurisdictional areas. Table 1 includes a list of jurisdictional areas identified on the property including average OHWM, riparian canopy dripline width and channel depth.

Table 1: Summary of Acreage of Jurisdictional Waters on site

Feature	OHWM (feet)	Dripline width (feet)	Channel Depth (feet)	WUS Corps jurisdiction (acres)	FGC 1600 CDFW jurisdiction (acres)
Morey Arroyo Canal	12	35	3	0.00	0.37

The channel bottom is shallow containing gravel, sand, and fine silts. The width of the canal taken at the CDFW jurisdiction of the outer edges of the riparian vegetation dripline averages 35 feet across. The in-stream channel widths at the OHWM averages 12 feet.

Wildlife observed included coyote (*Canis latrans*), side-blotched lizard (*Uta stansburiana*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), California towhee (*Melozone crissalis*), and turkey vulture (*Cathartes aura*), as well as a large flock of rock pigeon (*Columba livia*), which stayed close to the adjacent residential area, indicating that these may be a domestic flock associated with one of the residents.

CONCLUSIONS

Because the site does contain jurisdictional features, it will be necessary to avoid impacts to those areas. The project engineer is continuing to finalize the development plans. However, they have assured us that all jurisdictional features will be avoided.

Conversely, if the proposed project requires temporary and/or permanent impacts to the jurisdictional areas identified on site, authorizations from the Corps, Regional Water Quality Control Board (RWQCB), and CDFW, may be required (see Attachment D - regulatory framework). Morey Arroyo Canal is a jurisdictional feature subject to the CWA and FGC under the jurisdictions of USACE, RWQCB, and CDFW respectively. Any proposed permanent or temporary impacts to Morey Arroyo Canal will likely require a Streambed Alteration Agreement from the CDFW, and CWA Sections 401/404 permits from the RWQCB and Corps.

RECOMMENDATIONS

Jurisdictional Waters

A top priority for any project that has jurisdictional waters on site is to avoid all impacts to those areas. In discussions with the engineer for the project, he indicated that all jurisdictional features would be avoided. Figures 5A and 5B show the jurisdictional features in relation to the property boundary. CDFW maintains jurisdiction not only within the channel but to the outer edge of dripline of riparian vegetation. As such, any encroachment into this jurisdictional zone would require a permit from CDFW. The Army Corps of Engineers and the RWQCB maintain jurisdiction within the channel. As such, any encroachment into this jurisdictional zone would require a permit from both the Army Corps of Engineers and the RWQCB. Below is a basic permitting background for information purposes only, if complete avoidance of jurisdictional features is not possible.

Streambed Alteration Agreement

A 1602 Streambed Alteration Agreement is required for all activities that alter streams and lakes and their associated riparian habitat. In addition to the formal application materials and fee (based on the cost of the project), a copy of the appropriate CEQA documentation must be included with the application.

401 Certification

The project area is within the jurisdiction of the Santa Ana RWQCB. Under Section 401 of the CWA, the RWQCB must certify that the discharge of dredged or fill material into WUS does not violate state water quality standards. The RWQCB also regulates impacts to WSC under the Porter Cologne Water Quality Control Act through the issuance of a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending upon the level of impact and the waterway. In addition to the formal application materials and fee (based on the area of impact), a copy of the appropriate California Environmental Quality Act (CEQA) documentation must be included with the application.

404 Permit

The two most common types of permits issued by USACE under Section 404 of the CWA to authorize the discharge of dredged or fill material into WUS are a nation-wide permit (NWP) or an individual permit (IP). NWPs are general permits for specific categories of activities that result in minimal impacts to aquatic resources. The discharge must not cause the loss of greater than ½ acre to WUS, including the loss of no more than 300 linear feet of streambed. For project impacts that do not meet the provisions of an existing NWP, the USACE would require an IP. An IP requires detailed analysis and compliance with the USACE formal review process. This process includes preparation of an alternatives analysis as required by EPA Section 404(b)(1) Guidelines and the National Environmental Policy Act (NEPA) and requires compliance with NEPA's environmental review process. This process provides opportunities for public notice and comment. The USACE must comply with the federal Endangered Species Act and Section 106 of the National Historic Preservation Act when issuing an NWP or IP.

Nesting Birds

On-site and surrounding land uses have just about eliminated the naturally occurring native habitats locally. Morey Arroyo Canal is dominated by non-native weedy species, but some native riparian species do persist here. Land uses surrounding the proposed project site primarily consists of residential and commercial land uses. The ground cover within, and adjacent to, the impact area consists mostly of weedy vegetation, tilled dirt, pavement, concrete, ornamental trees, and existing buildings. The site does not provide suitable habitat for any of the identified sensitive plant and wildlife species known to occur in the general vicinity of the proposed project site. The vegetation on site (native or not) does, however, provide potential nesting habitat for birds. All vegetation on site will likely be removed for construction of the project. The following recommendations are made to avoid and minimize potential impacts to nesting birds and raptors.

Any grubbing, brushing or tree removal should be conducted outside of the State identified nesting season for migratory birds, which is typically March 15 through September 1. If work cannot be conducted outside of nesting season, a migratory nesting bird survey within and adjacent to the project site shall be conducted by a qualified biologist within three (3) days 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 size and location of all buffer zones, if required, shall

be based on the nesting species, nesting sage, nest location, its sensitivity to disturbance, and intensity and duration of the disturbance activity.

Should you have any questions or require further information, please contact me at (909) 915-5900 or shay@jericho-systems.com should you have any questions or require further information.

Sincerely,

Shay Lawrey, President

Attachments:

A. Photos
B. Project Exhibits
C. Species Occurrence Potential
D. Regulatory framework


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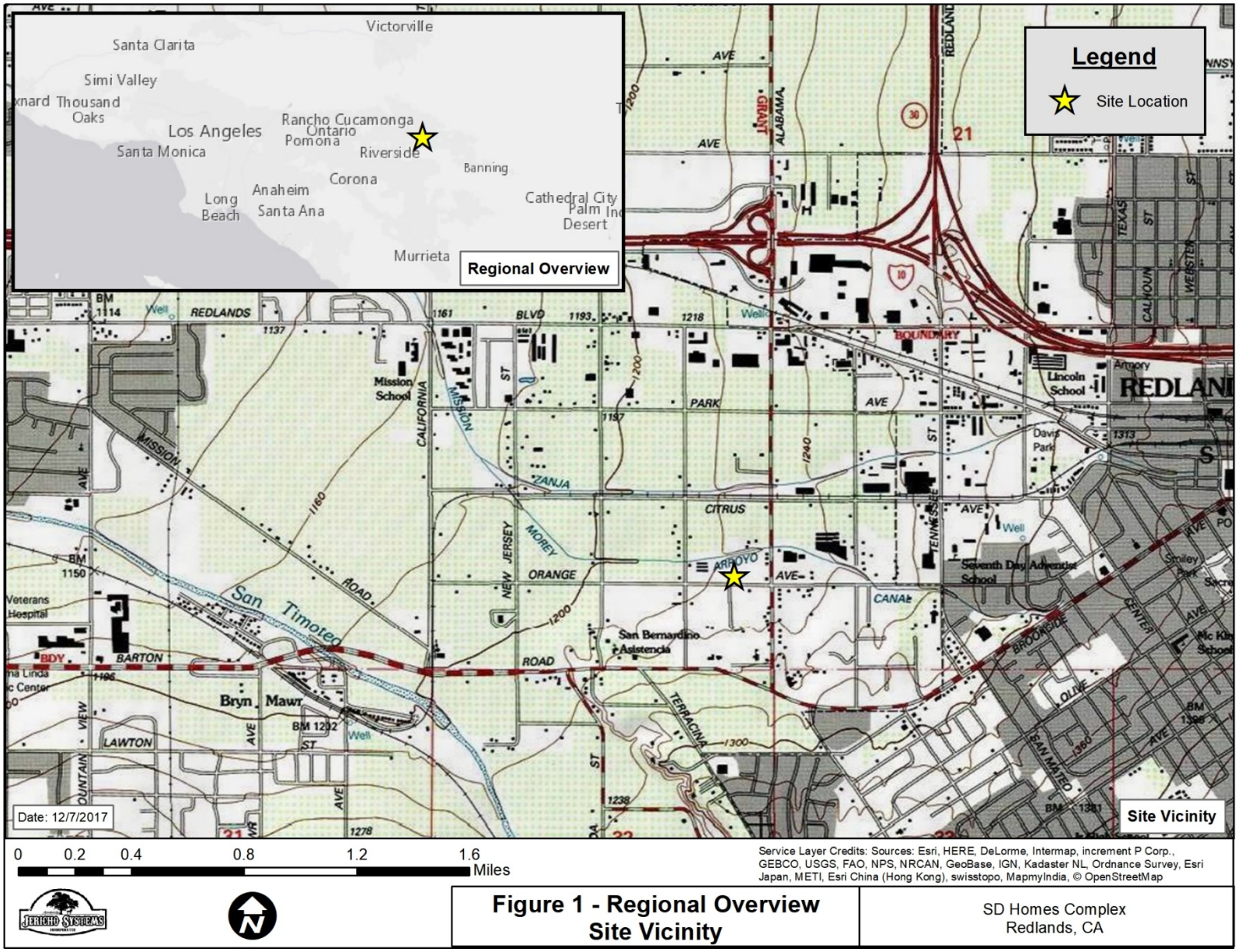
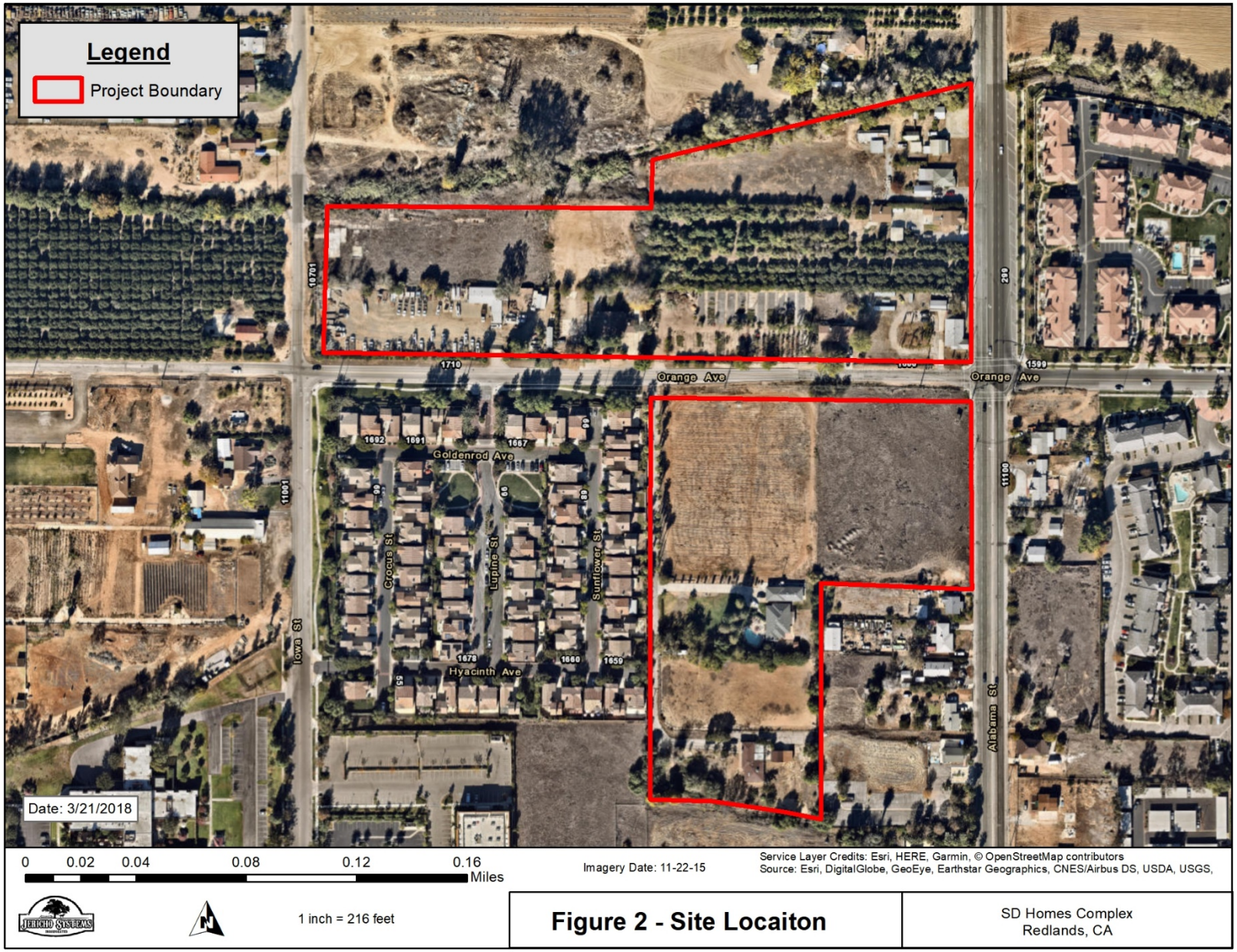
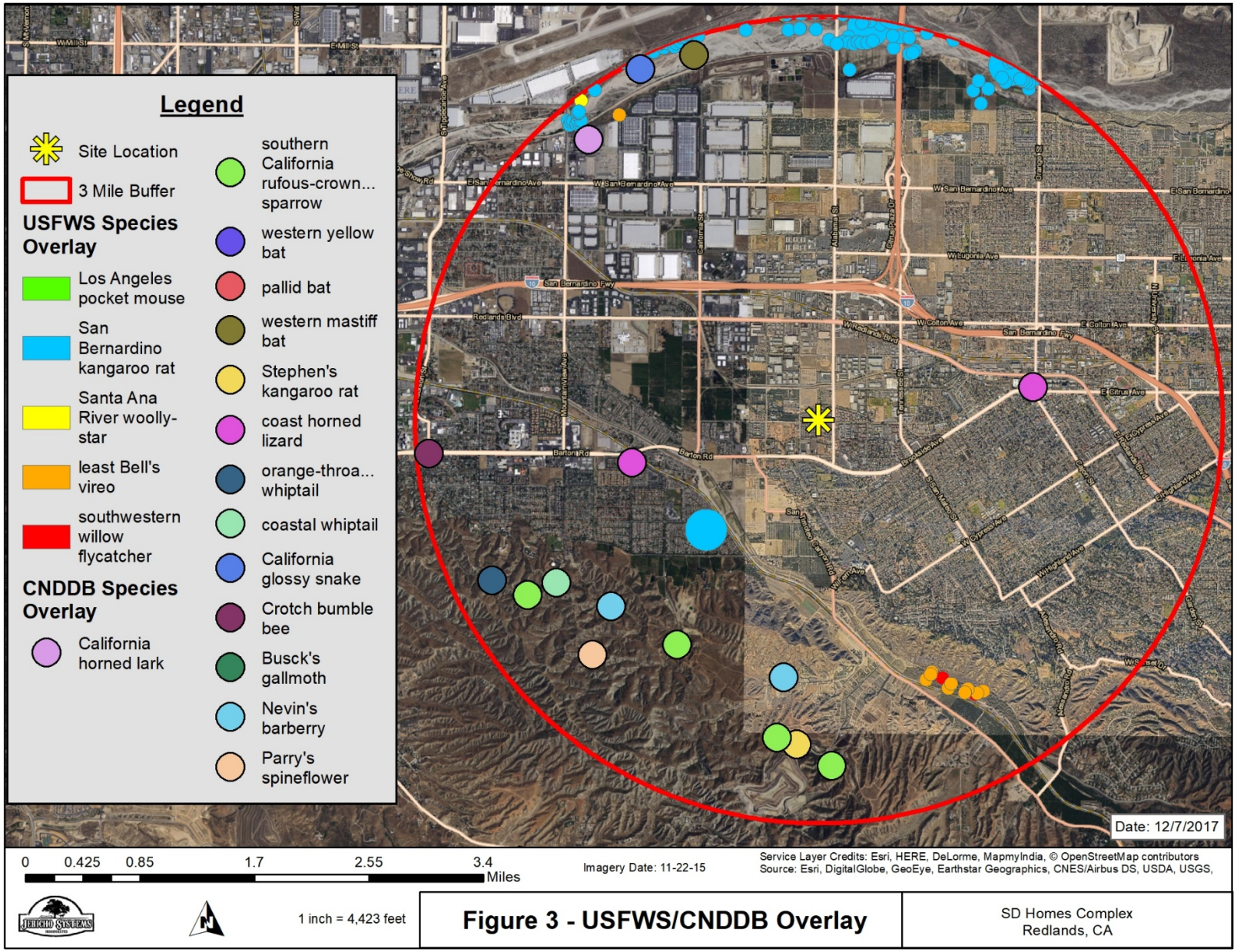
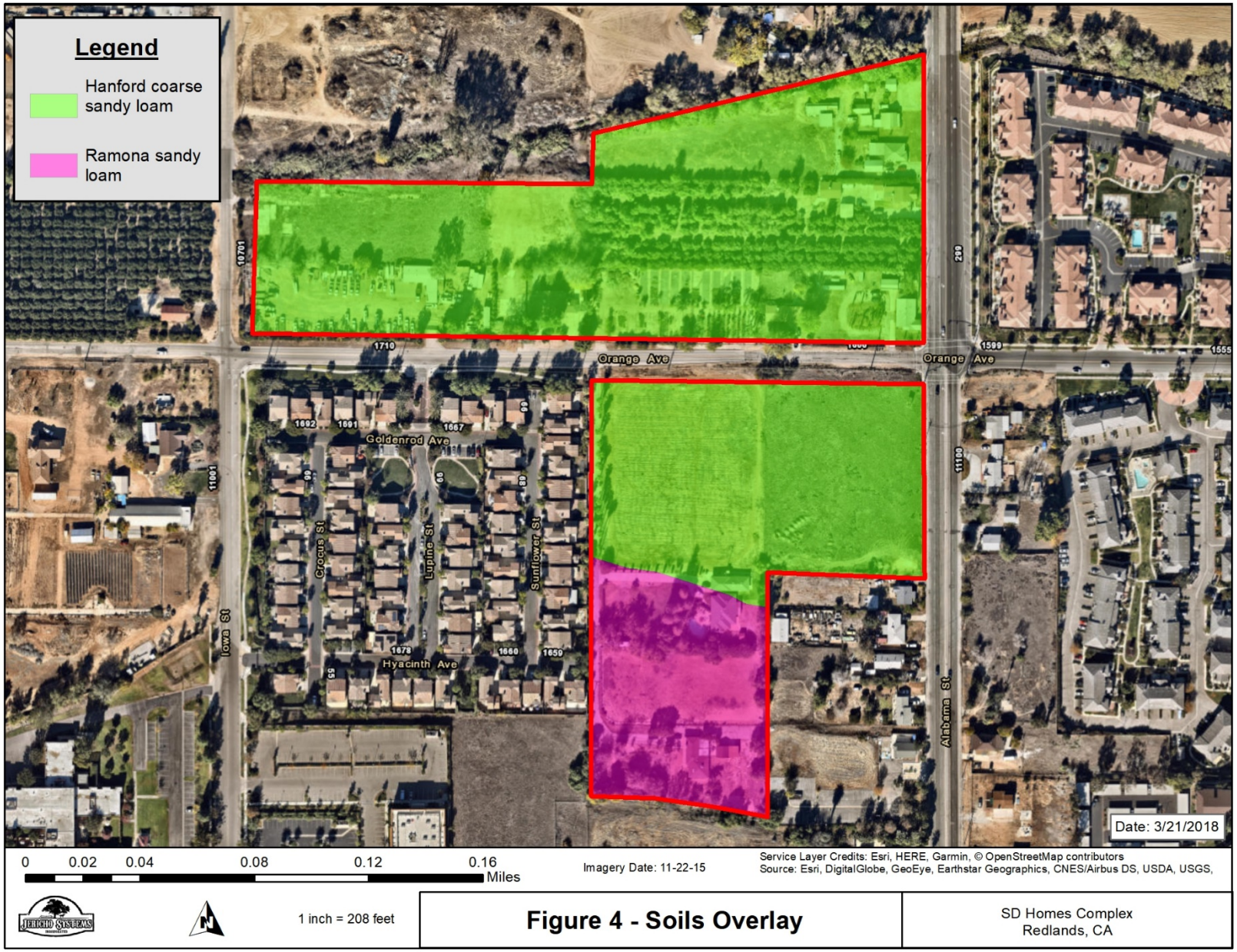


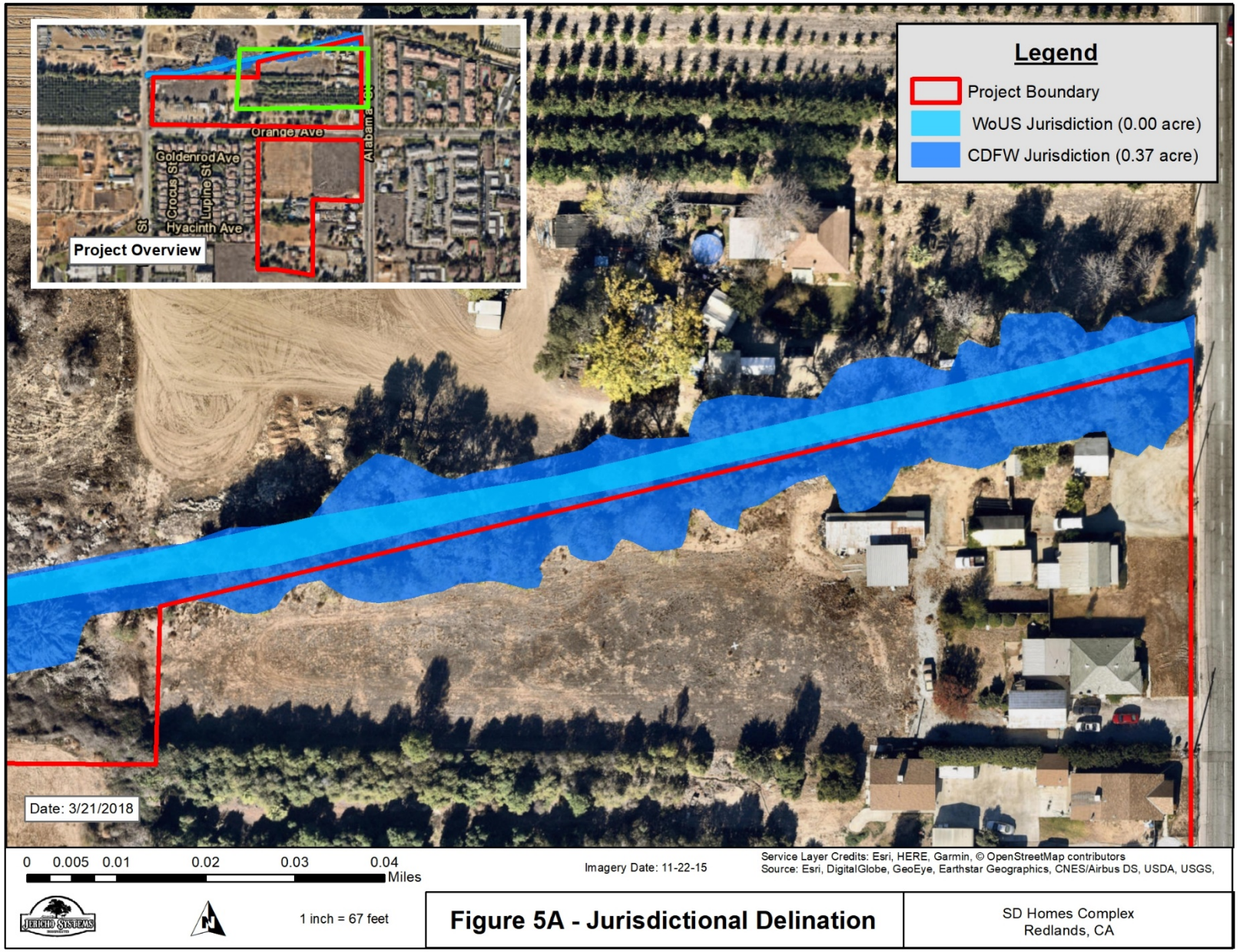
Figure 1 - Regional Overview
Site Vicinity

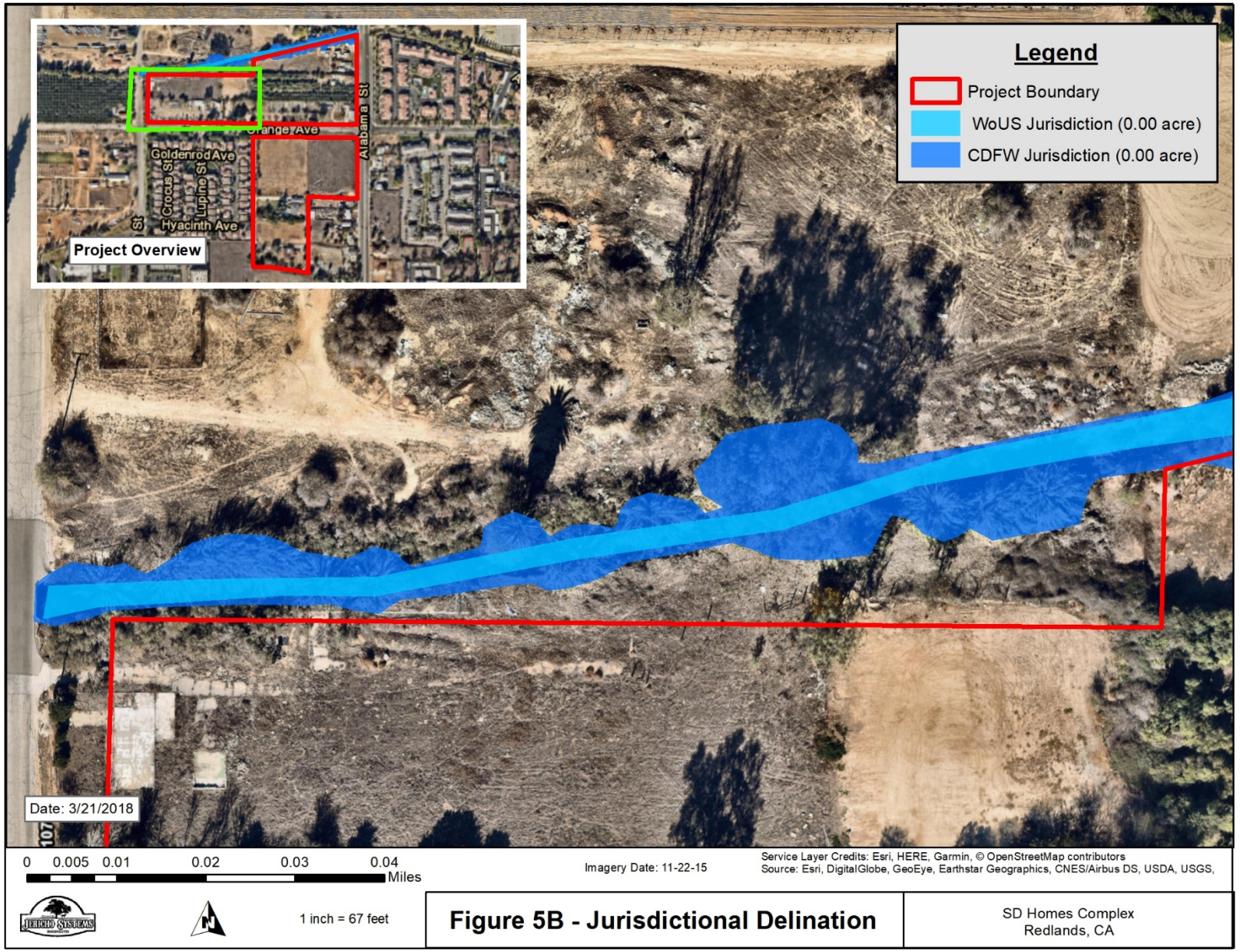
SD Homes Complex
Redlands, CA


Legend
Project Boundary
Orange Ave
Goldenrod Ave
Hyacinth Ave
Crocus St
Lupine St
Sunflower St
Iowa St
Alabama St
1710
1701
1692
1691
1687
1678
1660
1659
1590
1100
1100
Date: 3/21/2018
0 0.02 0.04 0.08 0.12 0.16
Miles
Imagery Date: 11-22-15
Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
1 inch = 216 feet
Figure 2 - Site Locaiton
SD Homes Complex
Redlands, CA


Legend
Site Location
3 Mile Buffer
USFWS Species Overlay
Los Angeles pocket mouse
San Bernardino kangaroo rat
Santa Ana River woolly-star
least Bell's vireo
southwestern willow flycatcher
CNDDB Species Overlay
California horned lark
southern California rufous-crown... sparrow
western yellow bat
pallid bat
western mastiff bat
Stephen's kangaroo rat
coast horned lizard
orange-throa... whiptail
coastal whiptail
California glossy snake
Crotch bumble bee
Busck's gallmoth
Nevin's barberry
Parry's spineflower
Date: 12/7/2017
0 0.425 0.85 1.7 2.55 3.4
Miles
Imagery Date: 11-22-15
Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
1 inch = 4,423 feet
Figure 3 - USFWS/CNDDB Overlay
SD Homes Complex
Redlands, CA


Legend
Hanford coarse sandy loam
Ramona sandy loam
Orange Ave
Orange Ave
Goldenrod Ave
Hyacinth Ave
Crocus St
Lupine St
Sunflower St
Iowa St
Alabama St
1710
1692
1691
1667
1678
1660
1659
1599
1555
11100
11001
10701
200
Date: 3/21/2018
0 0.02 0.04 0.08 0.12 0.16
Miles
Imagery Date: 11-22-15
Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
1 inch = 208 feet
Figure 4 - Soils Overlay
SD Homes Complex
Redlands, CA


Legend
Project Boundary
WoUS Jurisdiction (0.00 acre)
CDFW Jurisdiction (0.37 acre)
Project Overview
Orange Ave
Goldenrod Ave
Crocus St
Lupine St
Hyacinth Ave
Date: 3/21/2018
0 0.005 0.01 0.02 0.03 0.04
Miles
Imagery Date: 11-22-15
Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
1 inch = 67 feet
Figure 5A - Jurisdictional Delination
SD Homes Complex
Redlands, CA


Legend
Project Boundary
WoUS Jurisdiction (0.00 acre)
CDFW Jurisdiction (0.00 acre)
Project Overview
Orange Ave
Goldenrod Ave
Crocus St
Lupine St
Hyacinth Ave
Alabama St
Date: 3/21/2018
0 0.005 0.01 0.02 0.03 0.04
Miles
Imagery Date: 11-22-15
Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
1 inch = 67 feet
Figure 5B - Jurisdictional Delination
SD Homes Complex
Redlands, CA

Scientific Name	Common Name	Federal/State Ranking	Other Rankings	Habitat	Potential to Occur
Accipiter cooperii	Cooper's hawk	None/None	G5, S4	Woodland, chiefly of open, interrupted or marginal type. Nest sites are placed mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	The riparian habitat in Morey Arroyo Canal is marginally suitable for this species. Potential to occur is low to moderrate
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None/None	G5T3, S2S3	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky, hillsides with grass & forb patches.	Marginally suitable habitat for this species occurs on site. Potential to occur is low.
Anniella pulchra pulchra	silvery legless lizard	None/None	G3G4T3T4Q, S3, SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Marginally suitable habitat for this species occurs on site. Potential to occur is low.
Antrozous pallidus	pallid bat	None/None	G5, S3, SSC	Found in deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Marginally suitable habitat for this species occurs on site. Potential to occur is low.
Arenaria paludicola	marsh sandwort	Endangered/ Endangered	G1, S1, CNPS 1B.1	Marshes and swamps. Growing up through dense mats of *Typha, Juncus, Scirpus*, etc. in freshwater marsh. Sandy soil. 3-170 m.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Arizona elegans occidentalis	California glossy snake	None/None	G5T2, S2, SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges, south to	Marginally suitable habitat for this species occurs on site. Potential

				Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	to occur is low.
Aspidoscelis hyperythra	orange-throated whiptail	None/None	G5, S2S3	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes & other sandy areas with patches of brush & rocks. Perennial plants necessary for its major food-termites.	Marginally suitable habitat for this species occurs on site. Potential to occur is low.
Aspidoscelis tigris stejnegeri	coastal whiptail	None/None	G5T5, S3, SSC	Found in deserts & semiarid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	Marginally suitable habitat for this species occurs on site. Potential to occur is low.
Athene cunicularia	burrowing owl	None/None	G4, S3, SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Marginally suitable habitat for this species occurs on site. Potential to occur is low.
Berberis nevinii	Nevin's barberry	Endangered/ Endangered	G1, S1, CNPS 1B.1	Occurs in chaparral, cismontane woodland, coastal scrub, and riparian scrub. Located on steep, north-facing slopes or in low grade sandy washes. 290-1575 m.	No suitable habitat for this species occurs on site. Potential to occur is low.
Bombus crotchii	Crotch bumble bee	None/None	G3G4, S1S2	Found from coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.	No suitable habitat for this species occurs on site. Potential to occur is low.
Calochortus plummerae	Plummer's mariposa-lily	None/None	G4, S4, CNPS 4.2	Occurs in coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and 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.	No suitable habitat for this species occurs on site. Potential to occur is low.
Carolella busckana	Busck's gallmoth	None/None	G1G3, SH	Found from southern California to southern Arizona and Mexico. Associated with brittlebrush (*Encelia farinosa)*.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Centromadia pungens ssp. laevis	smooth tarplant	None/None	G3G4T2, S2, CNPS 1B.1	Occurs in valley and foothill grassland, chenopod scrub, meadows and seeps, playas, and riparian woodland. Prefers alkali meadow, alkali scrub; also	No suitable habitat for this species occurs on site. Potential to occur is

				disturbed places. 5-1170 m.	low.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/None	G5T3T4, S3S4, SSC	Found in coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Prefers sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Marginally suitable habitat for this species occurs on site. Potential to occur is moderate.
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Endangered/ Endangered	G4?T1, S1, CNPS 1B.2	Occurs in marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	No suitable habitat for this species occurs on site. Potential to occur is low.
Chorizanthe parryi var. parryi	Parry's spineflower	None/None	G3T3, S3, CNPS 1B.1	Occurs in coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of two vegetation types, such as chaparral and oak woodland; dry, sandy soils. 225-1220 m.	Marginally suitable habitat for this species occurs on site. Potential to occur is moderate.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened/ Endangered	G5T2T3, S1	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.	No suitable habitat for this species occurs on site. Potential to occur is low.
Crotalus ruber	red-diamond rattlesnake	None/None	G4, S3, SSC	Found in chaparrral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas & dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Marginally suitable habitat for this species occurs on site. Potential to occur is moderate.
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	None/None	G5T4T5, SH, CNPS 2B.2	Occurs in marshes and swamps (freshwater). 15-280 m.	No suitable habitat for this species occurs on site. Potential to occur is low.
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered/ None	G5T1, S1, SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	No suitable habitat for this species occurs on site. Potential to occur is low.
Dipodomys stephensi	Stephens' kangaroo rat	Endangered/ Threatened	G2, S2	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass & filaree. Will burrow into firm soil.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.

Dodecahema leptoceras	slender-horned spineflower	Endangered/ Endangered	G1, S1, CNPS 1B.1	Occurs in chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include *Encelia, Dalea, Lepidospartum*, etc. Sandy soils. 200-765 m.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Empidonax traillii extimus	southwestern willow flycatcher	Endangered/ Endangered	G5T2, S1	Riparian woodlands in Southern California.	No suitable habitat for this species occurs on site. Potential to occur is low.
Eremophila alpestris actia	California horned lark	None/None	G5T3Q, S3	Found in coastal regions, chiefly from Sonoma Co. to San Diego County, and the main part of San Joaquin Valley & east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	No suitable habitat for this species occurs on site. Potential to occur is low.
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered/ Endangered	G4T1, S1, CNPS 1B.1	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-700 m.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Eumops perotis californicus	western mastiff bat	None/None	G5T4, S3S4, SSC	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 & tunnels.	No suitable habitat for this species occurs on site. Potential to occur is low.
Icteria virens	yellow-breasted chat	None/None	G5, S3, SSC	Summer resident; inhabits riparian thickets of willow & other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	No suitable habitat for this species occurs on site. Potential to occur is low.
Imperata brevifolia	California satintail	None/None	G4, S3, CNPS 2B.1	Coastal scrub, chaparral, riparian scrub, Mojavean desert scrub, meadows and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-1495 m.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is

					considered absent from the project site.
Lanius ludovicianus	loggerhead shrike	None/None	G4, S4, SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, & riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	No suitable habitat for this species occurs on site. Potential to occur is low.
Lasiurus xanthinus	western yellow bat	None/None	G5, S3, SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	No suitable habitat for this species occurs on site. Potential to occur is low.
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None/None	G5T3, S3, CNPS 4.3	Occurs in chaparral and coastal scrub. Prefers dry soils, shrubland. 4-1435 m.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Malacothamnus parishii	Parish's bush-mallow	None/None	GXQ, SX, CNPS 1A	Occurs in chaparral, coastal sage scrub. Prefers washes. 305-455 m.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Neotoma lepida intermedia	San Diego desert woodrat	None/None	G5T3T4, S3S4, SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops & rocky cliffs & slopes.	No suitable habitat for this species occurs on site. Potential to occur is low.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/None	G4, S3, SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	No suitable habitat for this species occurs on site. Potential to occur is low.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/None	G5T1T2, S1S2, SSC	Lower elevation grasslands & coastal sage communities in and around the Los Angeles Basin. Open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds & dead leaves instead.	No suitable habitat for this species occurs on site. Potential to occur is low.

Phrynosoma blainvillii	coast horned lizard	None/None	G3G4, S3S4, SSC	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, & abundant supply of ants & other insects.	No suitable habitat for this species occurs on site. Potential to occur is low.
Polioptila californica californica	coastal California gnatcatcher	Threatened/ None	G4G5T2Q, S2, SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas & slopes. Not all areas classified as coastal sage scrub are occupied.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Rana muscosa	southern mountain yellow-legged frog	Endangered/ Endangered	G1, S1	Federal listing refers to populations in the San Gabriel, San Jacinto & San Bernardino Mountains (southern DPS). Northern DPS was determined to warrant listing as endangered, Apr 2014, effective Jun 30, 2014. Always encountered within a few feet of water. Tadpoles may require 2 - 4 years to complete their aquatic development.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	None/None	G5T1, S1, SSC	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	No suitable habitat for this species occurs on site. Potential to occur is low.
Ribes divaricatum var. parishii	Parish's gooseberry	None/None	G4TH, SH, CNPS 1A	Riparian woodland. Salix swales in riparian habitats. 65-300 m.	No suitable habitat for this species occurs on site. Potential to occur is low.
Riversidian Alluvial Fan Sage Scrub		None/None	G1, S1.1	Habitat type does not occur on project site	
Setophaga petechia	yellow warbler	None/None	G5, S3S4, SSC	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 riparian vegetation in Morey Arroyo Canal is marginally suitable at best. Occurrence potential is low.
Southern Coast Live Oak Riparian Forest		None/None	G4, S4	Habitat type does not occur on project site	

Southern Sycamore Alder Riparian Woodland		None/None	G4, S4	Habitat type does not occur on project site	
Spea hammondii	western spadefoot	None/None	G3, S3, SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Taxidea taxus	American badger	None/None	G5, S3, SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils & open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Thamnophis hammondii	two-striped gartersnake	None/None	G4, S3S4, SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	The macro and microhabitats this species is associated with are not present within the project area. Therefore, this species is considered absent from the project site.
Vireo bellii pusillus	least Bell's vireo	Endangered/ Endangered	G5T2, S2	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 riparian vegetation in Morey Arroyo Canal is marginally suitable at best. Occurrence potential is low.

Regulatory Framework and Relevant Regulatory Agencies

Clean Water Act (CWA)

The CWA is the principal federal law that governs pollution in the nation's lakes, rivers, and coastal waters. Originally enacted in 1972 as a series of amendments to the Federal Water Pollution Control Act of 1948 the Act was last amended in 1987. The overriding purpose of the CWA is to "restore and maintain the chemical, physical and biological integrity of the nation's waters." The statute employs a variety of regulatory and non-regulatory tools to eliminate the discharge of pollutants into the nation's waters and achieve water quality that is both "swimmable and fishable". Section 303 of CWA requires that states establish ambient water quality standards for water bodies, consisting of the beneficial use or uses of a water body (e.g. recreation, public water supply, etc.), and the water quality criteria necessary to protect the use or uses. Section 303(d) requires states to identify waters that are impaired by pollution, even after application of pollution controls.

Discharges of dredged or fill material in waters of the United States (WUS) are regulated pursuant to Section 404 of the CWA. WUS are defined as follows:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
- All impoundments of waters otherwise defined as WUS under the definition;
- Tributaries of WUS;
- The territorial seas;
- Wetlands adjacent to WUS (other than waters that are themselves wetlands).

In the Arid West Region non-wetland waters are identified by the ordinary high water mark (OHWM) in ephemeral and intermittent channels (USACE, 2008a). The OHWM is as: "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." Identification of OHWM involves assessments of stream geomorphology and vegetation response to the dominant stream discharge. Determining whether any non-wetland water is a jurisdictional WUS involves further assessment in accordance with the regulations, case law, and clarifying guidance as discussed below. Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Sections 404 and 401 of the Federal CWA are founded on a connection, or nexus, between the water body in question and traditionally navigable waters, such as the Pacific Ocean or interstate commerce.

California Fish and Game Code

Sections 1600 to 1616 of the California Fish and Game Code require any person, state, or local government agency or public utility to notify the California Department of Fish and Game (CDFG) before beginning any

activity that will substantially modify a river, stream, or lake. Drainages A and B contain habitat that meet the definition of streambed in Section 1600 of the FGC and any impacts to either Drainage A or B would require Lake and Streambed Alteration Agreement.

U.S. Army Corps of Engineers

The Corps regulates discharges of dredged or fill material into waters of the United States. Waters of the United States include wetlands and non-wetland bodies of water that meet specific criteria. The Corps' regulatory jurisdiction pursuant to Sections 404 and 401 of the Federal CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps regulations. One of the mechanisms adopted by Congress to achieve restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters is a prohibition on the discharge of any pollutants, including dredged or fill material, into "navigable waters" except in compliance with other specified sections of the Act.

Regional Water Quality Control Board

The RWQCB's regulatory jurisdiction is pursuant to Section 401 of the Federal CWA. The RWQCB typically regulates discharges of dredged or fill material into Waters of the United States, however they also have regulatory authority over waste discharges into Waters of the State, which may be isolated, under the Porter-Cologne Water Quality Control Act issued by the State Water Resources Board. In the absence of a nexus with the Corps, the Regional Board requires the submittal of a Waste Discharge Requirement (WDR) application, which must include a copy of the project Stormwater Pollution Prevention Plan (SWPPP) and a copy of the project Water Quality Management Plan (WQMP), otherwise called a Standard Urban Stormwater Management Plan (SUSMP). The Regional Board's role is to ensure that disturbances in the stream channel do not cause water quality degradation.

California Department of Fish and Wildlife

Unlike the Corps, CDFW regulates not only the discharge of dredged or fill material, but all activities that alter streams and lakes and their associated habitats. The CDFW, through provisions of the California Fish and Game Code (Sections 1601-1603), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of water. The CDFW typically extends the limits of their jurisdiction laterally beyond the channel banks for streams that support riparian vegetation. In these situations the outer edge of the riparian vegetation is generally used as the lateral extent of the stream and CDFW jurisdiction. CDFW regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFW.

Migratory Bird Treaty Act (MBTA)

Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711). The MBTA provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA prohibits take of nearly all native birds. 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 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.

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