



Appendix C

General Biological Resources Assessment

ALDER LOGISTICAL CENTER PROJECT

May 2019

General Biological Resources Assessment

Fontana United States Geological Survey 7.5-Minute Topographic Quadrangles Map
San Bernardino Base and Meridian
Township 1 South, Range 5 West, Sections 20 and 21.

Assessor Parcel Numbers

025213103, 025213104, 025213136, 025213141 and 025213143

Owner

SRPF B/10336 ALDER, L.L.C., a Texas limited liability company.

Prepared By

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1.0 EXECUTIVE SUMMARY

NOREAS Inc. (NOREAS) is pleased to provide this Biological Technical Report for the Alder Logistical Center Project (hereafter referred to as the “Project”). The Project is located at the north terminus of Alder Avenue, near the Union Pacific Rail Road tracks in Fontana, California (Figure 1). This report documents the findings of baseline biological resources surveys and habitat assessments for the Project. The intended use of this document is to disclose and evaluate Project conditions, to determine the potential for occurrence of common and special-status species, and their habitats, within study area limits. For the purposes of this report, the “study area” includes the Project’s proposed ground disturbance footprint (Project Site), and a buffer (Figure 2).

Only developed and disturbed land cover types were detected within the study area during pedestrian surveys in 2019. As such, greater than 99% of the study area is comprised of developed, disturbed and/or non-native plant and wildlife habitats. The Project is not collocated with any United States Fish and Wildlife Service designated critical habitat, nor were any special status species detected within the study area during the 2019 field survey events. No nesting birds, remnant raptor nests, or bat guano were detected within the Project Site either.

The extent of anthropogenic disturbance within the Project Site and in the region, have substantially decreased the Project Site’s value as suitable breeding, nesting, refuge and foraging habitat for native and special status species as well. The Project Site also has limited – if any, value as a low quality migration corridor - or overland dispersal habitat for wildlife, because the Project is severely movement constrained by surrounding residential and commercial developments, and public infrastructure (i.e., interstate highway, paved roads, rail roads, residential houses, vacant lots, parking and industrial complexes, etc.). Nonetheless, the study area is within the Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis* [DSF]) Jurupa Recovery Unit.

To that end, portions of the Project Site have been mapped by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey as being comprised of Delhi Sand soils. Delhi Sand soils are wind deposited (aeolian), the boundaries established by USDA-NRCS are not exact and change over time. Based on the results of the survey, surface soils present on the Project Site were determined not to contain clean Delhi Sand soils. As a result, the Project Site was determined not to have the potential to provide suitable habitat for DSF and it is assumed that DSF is absent from it. Further – and as detailed to some extent above, the Project Site is surrounded by existing development on all of its sides, and no longer has connectivity to areas containing clean Delhi Sands soils, or locales subject to Aeolian processes. Therefore, development of this Project would not be expected to impact DSF or impede the species recovery as defined by the United States Fish and Wildlife Service (USFWS) DSF Recovery Plan (1997).

In summary, given the extent of disturbance present, the Project Site lacks the substantive habitat needed to support special status species; and any common species currently using these lands are assumed to be acclimated to the human influenced environment that exists there. Therefore, the permanent habitat loss associated with the Project would be considered an insignificant effect, as a result of the amount of higher value native vegetation communities and land cover types within the region that are already held in conservation (or designated as open space) in San Bernardino County.

2.0 PROJECT AND PROPERTY DESCRIPTION

The Project will consist of an approximate 174,780 square foot high cube warehouse which is to include office space and parking in Fontana, California (Figure 1). For the purposes of this report, the “study area” includes the Project’s proposed ground disturbance footprint (Project Site) and a buffer (Figure 2). The Project can be found on the Fontana United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map within San Bernardino Base and Meridian – Township 1 South, Range 5 west, Sections 20 and 21 (USGS 1989). The vast majority of the study area is limited to disturbed and developed land cover types.

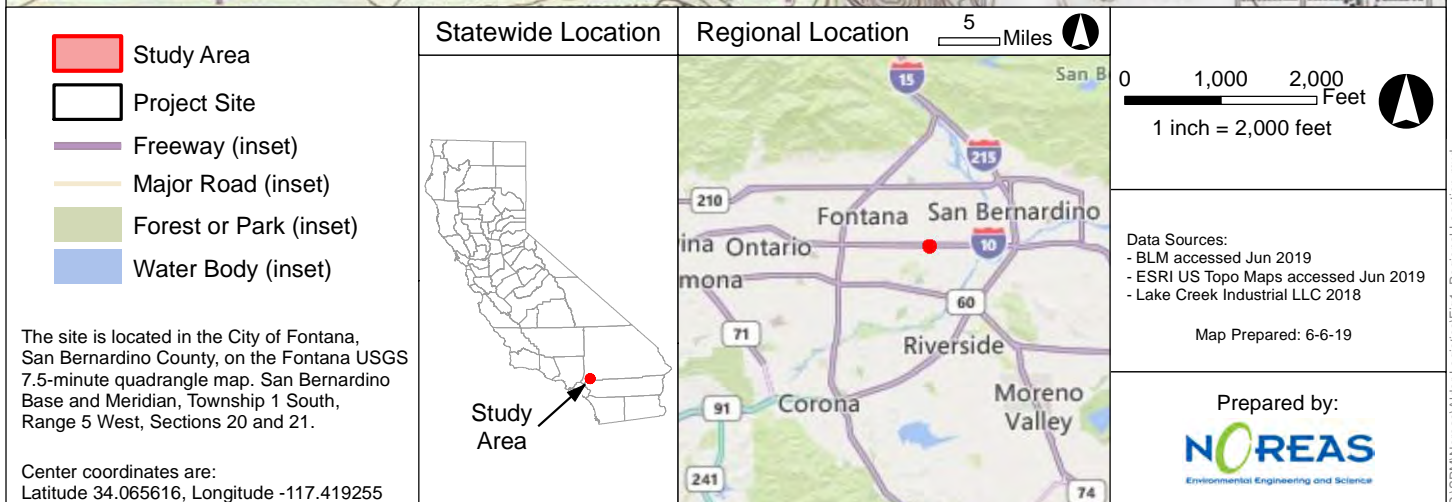
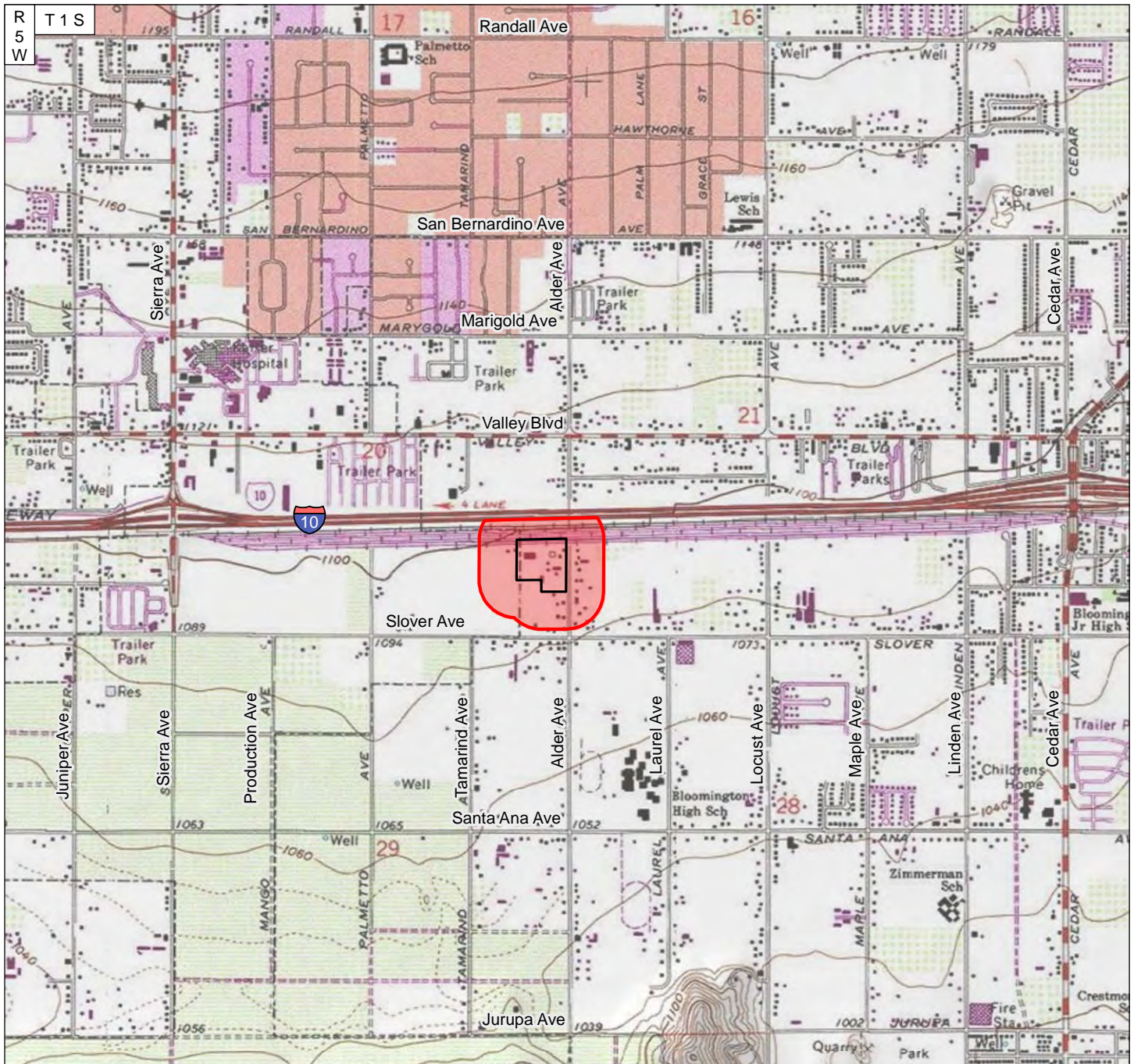
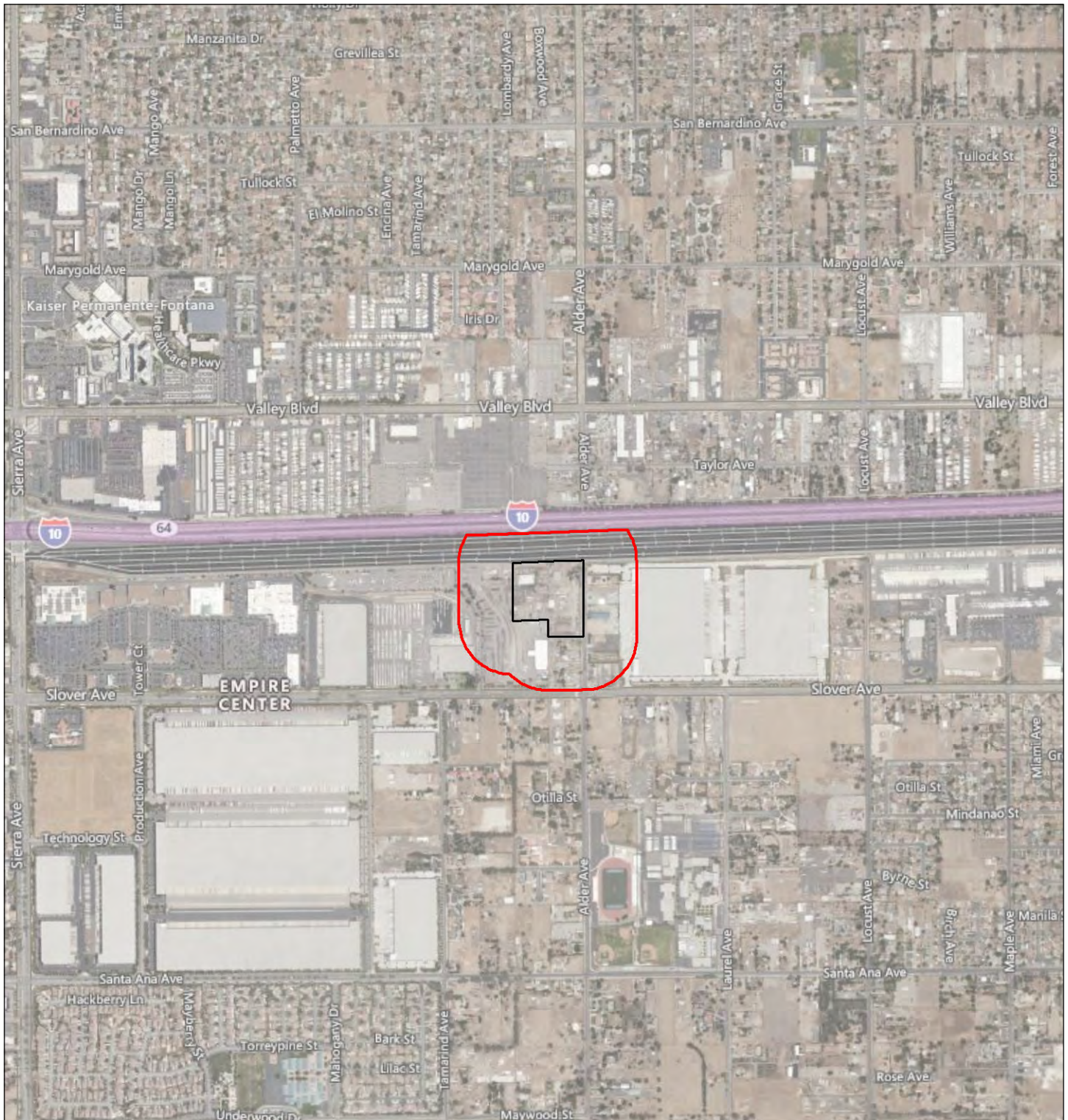
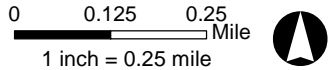


Figure 1. Regional Location



- Study Area (51 acres)
- Project Site (9.5 acres)
- Freeway



Data Sources:
 - Bing accessed May 2019
 - Lake Creek Industrial LLC 2019
 Map Prepared: 5-20-19

Prepared by:
NOREAS
 Environmental Engineering and Science

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Figure 2. Site Vicinity

3.0 FOCUSED STUDY/SPECIES OF CONCERN

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans and relevant documents were reviewed to determine the locations and types of biological resources¹ that have the potential to exist within - and adjacent to the study area. Resources were evaluated within several miles of the Project (Figures 4, 5 and 6). The materials reviewed included, but were not limited to, the following:

- ✓ U.S. Fish and Wildlife Service (USFWS) Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) Recovery Plan (USFWS 1997);
- ✓ USFWS Critical Habitat Mapper and File Data (USFWS 2019a);
- ✓ USFWS Carlsbad Field Office Species List for San Bernardino County (2019b);
- ✓ California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW 2019);
- ✓ California Native Plant Society (CNPS) Electronic Inventory (CNPS 2019); and
- ✓ Aerial Photographs (Microsoft Corporation 2019).

¹ For the purposes of this analysis, “biological resources” refers to the plants, wildlife, and habitats that occur, or have the potential to occur, within the study area.

4.0 METHODS

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

Plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded according to Baldwin et al. (2012).

The presence of a wildlife species was based on direct observation and wildlife sign (e.g., tracks, burrows, nests, scat, or vocalization). Field data compiled for wildlife species included scientific name, common name. Wildlife of uncertain identity was documented and subsequently identified from specialized field guides and related literature (Burt and Grossenheider 1980; Halfpenny 2000; Sibley 2000; Elbroch 2003, and Stebbins 2003).

The Project Site was also assessed for its potential to support special-status species² based on habitat³ suitability comparisons with reported occupied habitats (Appendix B). The following potential for occurrence definitions were utilized within Appendix B:

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

² For the purposes of this analysis, “special-status species” refers to any species that has been afforded special protection by federal, state, or local resource agencies (e.g., U.S. Fish and Wildlife Service, California Department of Fish and Wildlife) or resource conservation organizations (e.g., California Native Plant Society). The term “special-status species” excludes those avian species solely identified under Section 10 of the Migratory Bird Treaty Act (MBTA) for federal protection. Nonetheless, MBTA Section 10 protected species are afforded avoidance and minimization measures per state and federal requirements.

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

5.0 GENERAL BIOLOGICAL SURVEY RESULTS

Weather conditions during the May 2019 surveys included clear skies, temperatures ranging from 52–60 °F, and winds ranging from 0 to 5 miles per hour (mph). Representative photos of the study area are provided in Appendix A.

5.1 Vegetation Communities and Land Cover Types

The only land cover type observed within the study area was *Developed and Disturbed* (Figure 3). This land cover type is described below. Plant species observed during the surveys are listed in Appendix C. Representative photographs of the study area are provided in Appendix A.

Developed and Disturbed Land Cover Type

Developed and disturbed lands within the study area include locales that have been paved, cleared, graded or otherwise altered by anthropogenic activities (i.e., access roads, residential housing, ornamental landscaping, commercial enterprises and so forth). This cover type includes ruderal locales subject to recent grading, clearing, or other physical human modification of soils and/or vegetation. These lands consist of exposed soils with minimal vegetation, and moderate cover by various non-native annual grasses, and weeds adapted for growth on substrates subject to disturbance. Common non-native plants species within this type included ripgut brome (*Bromus diandrus*), slender wild oat (*Avena barbata*), Peruvian Pepper (*Schinus molle*), redstem filaree (*Erodium cicutarium*) and Russian thistle (*Salsola tragus*).

5.2 Wildlife

Wildlife species observed within the study area consisted of commonly-occurring species - including, but not limited to, European starling (*Sturnus vulgaris*), Common Raven (*Corvus corax*), Say's Phoebe (*Sayornis saya*), and Side-blotched Lizard (*Uta stansburiana*). Wildlife detected during the surveys are identified in Appendix D.

5.3 Special-Status Plants

No Federal or State listed plant species were observed within the study area during the 2019 field survey events. Nonetheless, several have been documented within 10 miles (Figure 4). The study area includes no USFWS-designated critical habitat for plants (Figure 5), and the Project Site does not include the substantive habitat requirements necessary to support special-status flora. Special-status species known to occur within 10 miles of the Project, and their potential for occurrence within the Project Site are detailed within Appendix B. Plant species observed during the surveys are listed in Appendix C.

5.4 Special-Status Wildlife

No Federal or State listed wildlife species were observed within the study area during the 2019 field survey events. Nonetheless, several have been documented within 10 miles of the Project (Figure 4). The study area includes no USFWS-designated critical habitat for wildlife (Figure 5), and the Project Site does not include the substantive habitat requirements necessary to support special-status wildlife. Special-status species known to occur within 10 miles of the Project, and their potential for occurrence within the Project Site are detailed within Appendix B. Wildlife species detected during the surveys are listed in Appendix D. The Project Site occurs in an area that has undergone a conversion from natural habitats into residential, industrial, and commercial land uses. The Project Site is bordered by residential and commercial endeavors. On-site and surrounding land uses in the immediate vicinity of the Project have been heavily disturbed - if not completely eliminated, most of the naturally occurring


habitats on and around the Project Site, reducing the suitability of the habitat to support special status plant and wildlife species, in particular Delhi Sands Flower-loving Fly (*Rhaphiomidas terminatus abdominalis* [DSF]).


The study area is within the DSF Jurupa Recovery Unit (Figure 5). To that end, portions of the Project Site have been mapped by the USDA Natural Resources Conservation Service (NRCS) Soil Survey as being comprised of Delhi Sand soils (Figure 6). Since Delhi Sand soils are wind deposited (aeolian), the boundaries established by USDA-NRCS are not exact and change over time. Based on the results of the survey, surface soils present on the Project Site were determined not to contain clean Delhi Sand soils. The soils within the boundaries of the Project Site have been mechanically disturbed by maintenance activities and surrounding development. These activities have mixed existing surface soils present on the Project Site with Delhi Sand soils that could have historically provided suitable habitat. As a result, open, undisturbed Delhi sand soils required by DSF do not occur within the Project Site. The undeveloped areas within the Project Site were unsuitable to support DSF. Furthermore, it has been common to attribute the presence of four common plant species California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), deer weed (*Acmispon glaber*), and telegraph weed (*Heterotheca grandiflora*) as indicators of DSF habitat suitability. It is worth noting that none of the aforementioned indicator species were observed within the Project Site. As a result, the Project Site was determined not to have the potential to provide suitable habitat for DSF and it is assumed that DSF is absent from it. Further – and as detailed to some extent above, the Project Site is surrounded by existing development on all of its sides, and no longer has connectivity to areas containing clean Delhi Sands soils, or locales subject to Aeolian processes.

5.5 Wetland and Waterways

The literature review and field survey data also implies it is appropriate to characterize the Project Site as an upland; as no riparian habitats or obvious indicators of well-defined water conveyance bed, bank or channel were observed. The topography of the Project Site and regional groundwater basin information reviewed suggests that the Project Site lacks waters which are typically subject to Clean Water Act, or Fish and Game Code Section 1600 jurisdiction. Furthermore, the National Wetland Inventory has no records of special aquatic resources within the study area (Figure 7).



 Study Area (51 acres)

 Project Site (9.5 acres)

Vegetation Communities / Land Cover Types

 Developed/Disturbed (51 acres)

0 100 200 300 Feet
1 inch = 300 feet



Data Sources:
- Google Earth accessed Jun 2019,
imagery date: Aug 2018
- Lake Creek Industrial LLC 2018

Map Prepared: 6-6-19

Prepared by:



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Figure 3. Vegetation Communities / Land Cover Types

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

Special-Status Species Occurrences

(Note: Only occurrences within 5 miles of the Study Area are labeled.)

Label	Common Name (Scientific Name)
Plants	
1	Marsh sandwort (<i>Arenaria paludicola</i>)
2	Plummer's mariposa-lily (<i>Calochortus plummerae</i>)
3	Salt marsh bird's-beak (<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>)
4	Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)
5	Santa Ana River woollystar (<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>)
6	Mesa horkelia (<i>Horkelia cuneata</i> var. <i>puberula</i>)
7	Robinson's pepper-grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)
8	Parish's desert-thorn (<i>Lycium parishii</i>)
9	Parish's bush-mallow (<i>Malacothamnus parishii</i>)
10	Pringle's monardella (<i>Monardella pringlei</i>)
11	Chaparral ragwort (<i>Senecio aphanactis</i>)
12	Prairie wedge grass (<i>Sphenopholis obtusata</i>)
13	San Bernardino aster (<i>Symphytotrichum defoliatum</i>)
Invertebrates	
14	Crotch bumble bee (<i>Bombus crotchii</i>)
15	Delhi Sands flower-loving fly (<i>Rhaphiomidas terminatus abdominalis</i>)
16	Greenest tiger beetle (<i>Cicindela tranquebarica viridissima</i>)
Reptiles	
17	California glossy snake (<i>Arizona elegans occidentalis</i>)
18	Coast horned lizard (<i>Phrynosoma blainvillii</i>)
19	Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)
20	Orange-throated whiptail (<i>Aspidoscelis hyperythra</i>)
21	San Diego banded gecko (<i>Coleonyx variegatus abbotti</i>)
22	Southern California legless lizard (<i>Anniella stebbinsi</i>)
23	Southern rubber boa (<i>Charina umbratica</i>)
Birds	
24	Bell's sage sparrow (<i>Artemisiospiza belli belli</i>)
25	Burrowing owl (<i>Athene cunicularia</i>)
26	Coastal California gnatcatcher (<i>Polioptila californica californica</i>)
27	Least Bell's vireo (<i>Vireo bellii pusillus</i>)
28	Tricolored blackbird (<i>Agelaius tricolor</i>)
29	Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)
Mammals	
30	Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)
31	Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)
32	Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)
33	San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)
34	San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)
35	Western mastiff bat (<i>Eumops perotis californicus</i>)
36	Western yellow bat (<i>Lasiurus xanthinus</i>)
Fish	
37	Arroyo chub (<i>Gila orcuttii</i>)
38	Santa Ana sucker (<i>Catostomus santaanae</i>)
39	Steelhead - southern California DPS (<i>Oncorhynchus mykiss irideus</i> pop. 10)

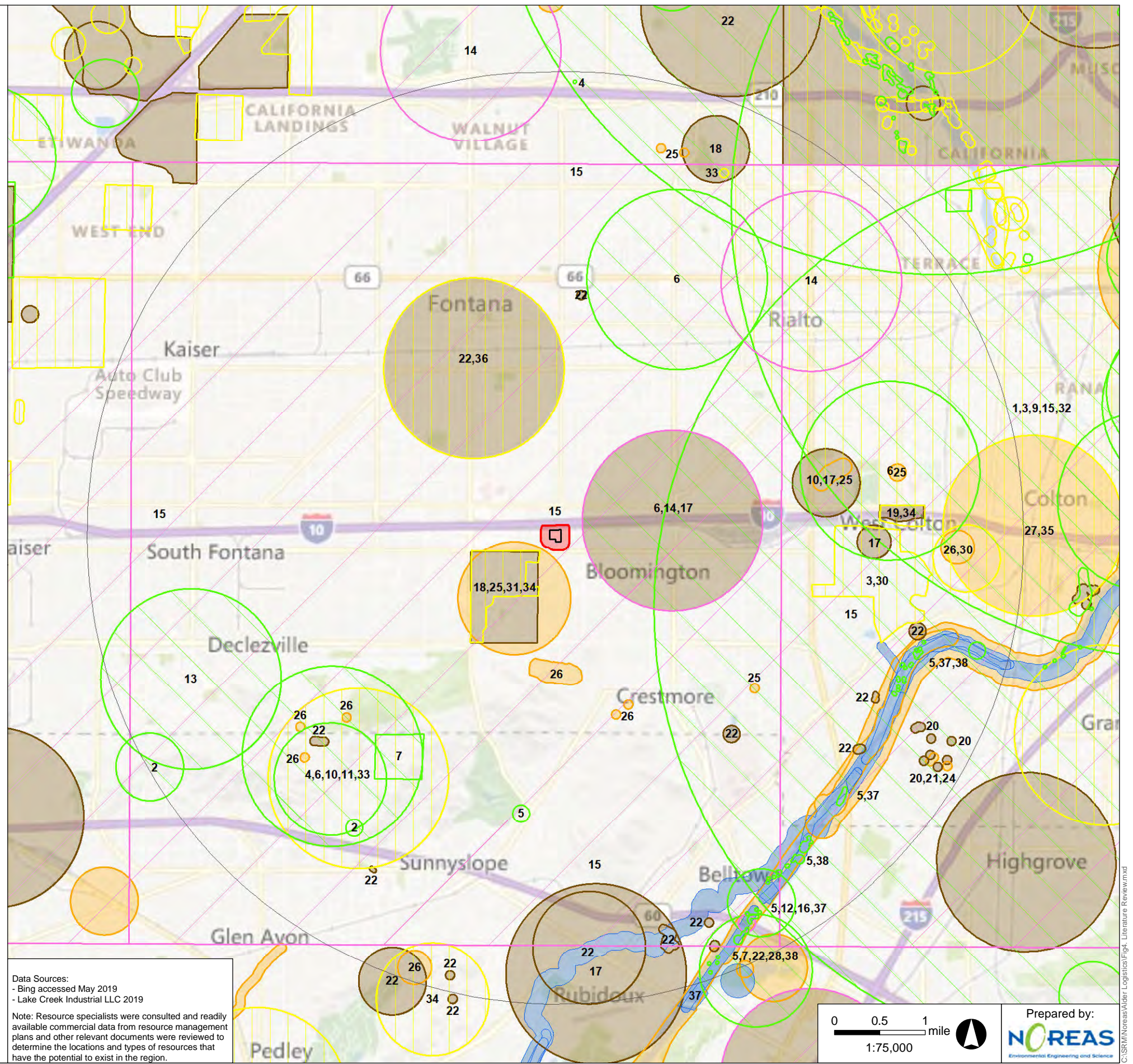
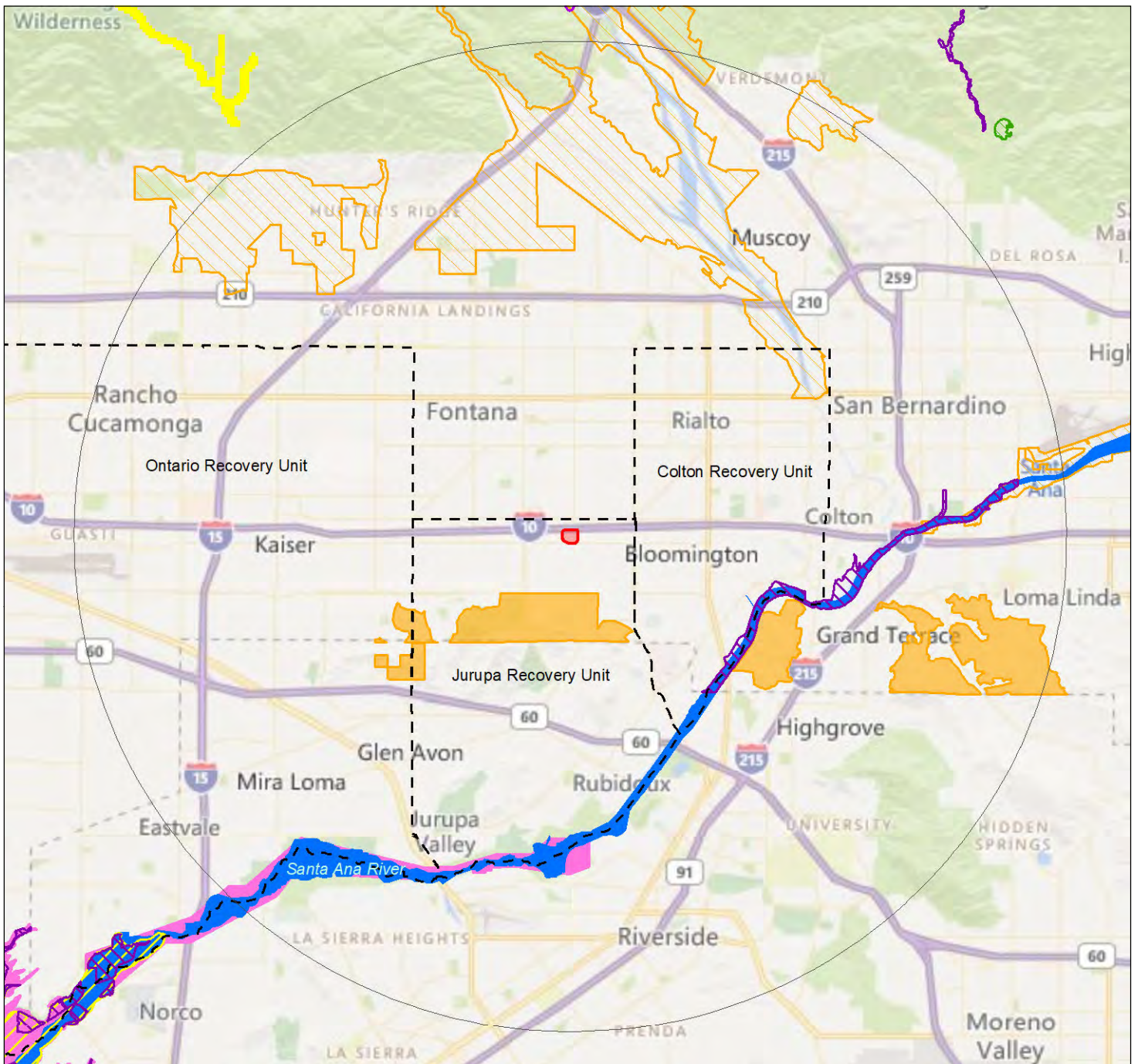
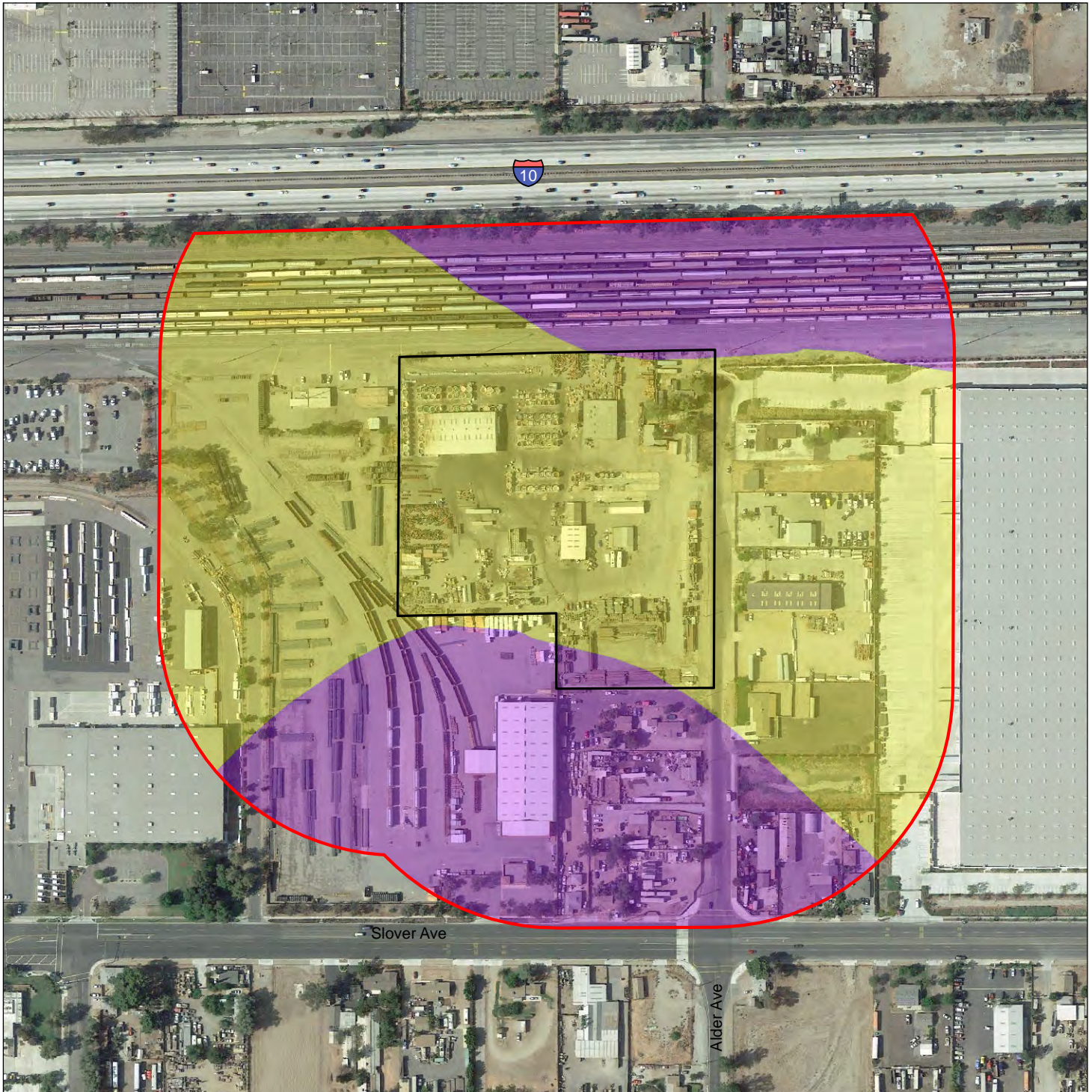



Figure 4. Literature Review



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Figure 5. Critical Habitat




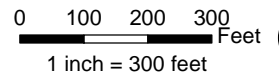
 Study Area

 Project Site

Soil Types

 Delhi fine sand

 Tujunga loamy sand, 0-5% slopes

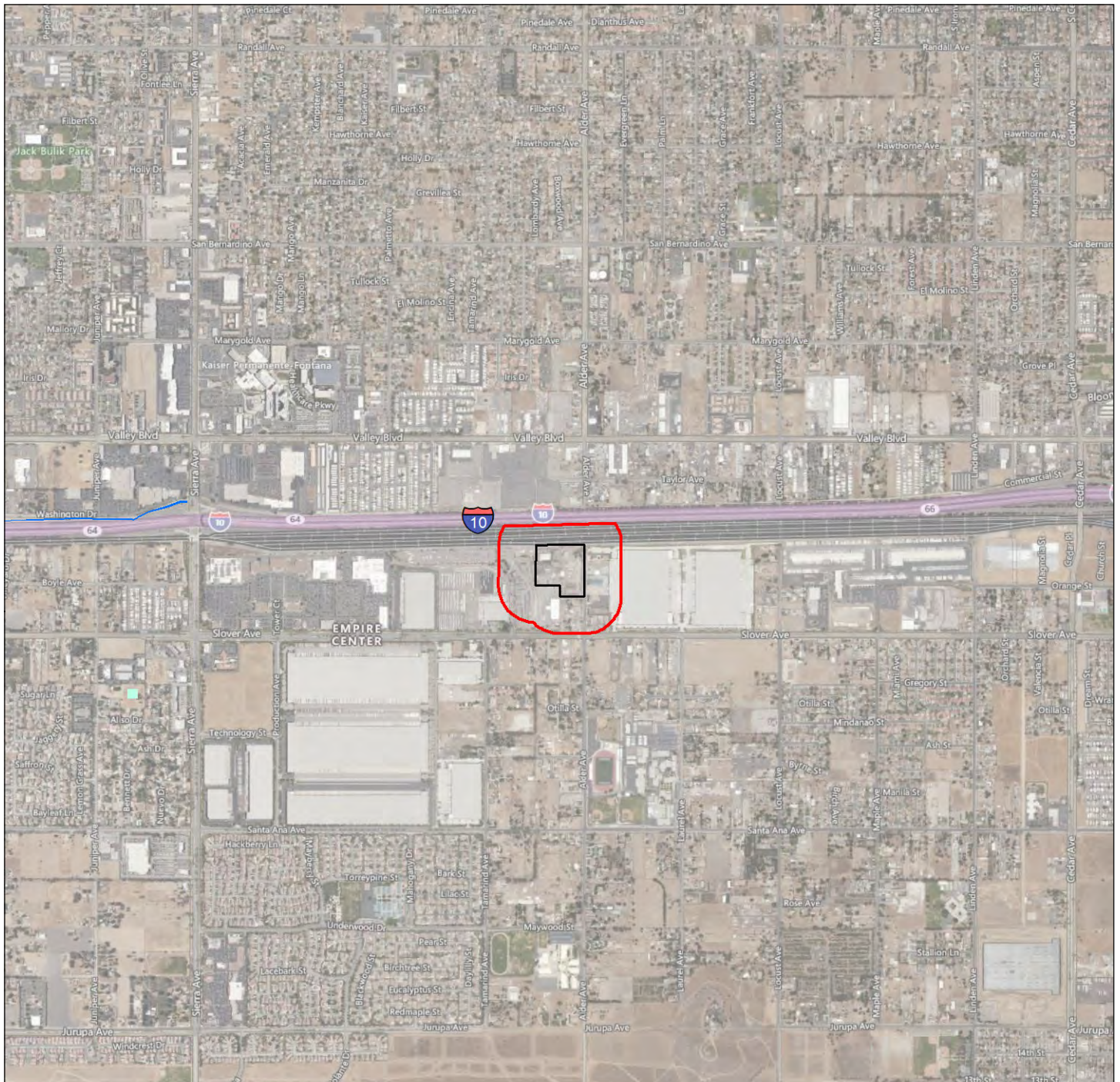



Data Sources:
 - Google Earth accessed May 2019, imagery date: Aug 2018
 - Lake Creek Industrial LLC 2018
 - USDA-NRCS Web Soil Survey accessed May 2019
 Map Prepared: 5-22-19

Prepared by:



Figure 6. Soils

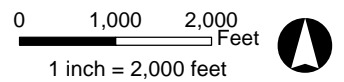


 Study Area

 Project Site

National Wetland Inventory

 Riverine



Data Sources:
 Bing accessed May 2019
 - Lake Creek Industrial LLC 2019
 - US Fish and Wildlife Service National Wetland Inventory geodatabase accessed May 2019, data date: Oct 2018

Map Prepared: 5-21-19

Prepared by:



Figure 7. National Wetland Inventory

6.0 IMPACTS

The entire study area consists of a developed and disturbed land cover types. Given the extent of human influence within the study area, any species currently using these lands are presumed to be acclimated to the disturbance regime present. No special-status species were observed within the study area during the field survey events, nor does it include any USFWS-designated critical habitat.

The following thresholds of impact significance are based on California Environmental Quality Act (CEQA) Guidelines. As such, the Project would have a significant impact on biological resources if it would result in any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Our analysis suggests that the following potential effects to biological resources are less than significant, or did not have an effect, and therefore do not need to be further evaluated:

- The Project would not be expected to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.
- The Project would not be expected to have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- The Project would not be expected to have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh,

vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- The Project would not be expected to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- The Project would not be expected to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- The Project would not be anticipated to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.
- The Project shall comply with all applicable codes, laws, ordinances, and regulations to minimize or avoid adverse effects to state and federally-listed animals, or species proposed for listing to the greatest extent practical.
- Furthermore, any other projects – even if not planned at the present time, would also be required to comply with the same local, state, and federal codes, ordinances, laws, and other required regulations. Therefore, this Project’s incremental contribution to cumulative effects on common, special status species or their habitats is not expected to be considerable either.

7.0 PROPOSED MITIGATION MEASURES


The following measures are recommended as a means of avoiding and minimizing adverse impacts within the Project Site and on adjacent lands:

- In order to comply with Section 10 of the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code, any vegetation clearing should take place outside of the typical avian nesting season (e.g., March 15th until September 1st).
 - If work needs to take place between March 15th and September 1st, a pre – activity clearance survey for nesting birds should be completed prior to the onset of ground disturbance.
 - An activity exclusion buffer zone around occupied nests should be maintained during physical ground disturbing undertakings. Once nesting has ended, the buffer may be removed.

8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached figures present the data and information required for this resource assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this investigation was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with SRPF B/10336 ALDER, L.L.C., a Texas limited liability company or SRPF B/10336 ALDER, L.L.C., a Texas limited liability company's representative, and that I have no financial interest in the Project. The services performed and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations are either expressed or implied and no warranty or guarantee is included or intended in this report.

DATE: June 07, 2019

SIGNED: 
Lincoln Hulse

The following NOREAS employees performed the field work and/or participated in preparation of this report: Lenny Malo MS, Lincoln Hulse BS, Dale Powell PhD and Erin Serra BS.

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APPENDIX A
PHOTOGRAPH LOG

APPENDIX A

PHOTOGRAPH LOG



Photograph 1. Facing West



Photograph 2. Facing West

APPENDIX A

PHOTOGRAPH LOG



Photograph 3. Facing West



Photograph 4. Facing South

APPENDIX B

**SPECIAL-STATUS SPECIES POTENTIAL FOR
OCCURRENCE WITHIN THE PROJECT SITE**

APPENDIX B

SPECIAL-STATUS SPECIES POTENTIAL FOR OCCURRENCE WITHIN THE PROJECT SITE

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	Global rank ^a	State rank ^b	CNPS list ^c	Number of records within 10 miles	Year(s) sighted
A	Delhi Sands flower-loving fly (<i>Rhaphiomidas terminatus abdominalis</i>)	Endangered	None	G1T1	S1	-	36	1941-2013
A	Burrowing owl (<i>Athene cunicularia</i>)	None	None	G4	S3	-	23	2000-2016
A	Mesa horkelia (<i>Horkelia cuneata</i> var. <i>puberula</i>)	None	None	G4T1	S1	1B.1	7	1885-1995
A	Crotch bumble bee (<i>Bombus crotchii</i>)	None	None	G3G4	S1S2	-	6	1933-1976
A	California glossy snake (<i>Arizona elegans occidentalis</i>)	None	None	G5T2	S2	-	15	1935-2016
A	Coast horned lizard (<i>Phrynosoma blainvillii</i>)	None	None	G3G4	S3S4	-	16	Unknown-1926
A	Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	None	None	G5T3T4	S3S4	-	12	1994-2016
A	San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	None	None	G5T3T4	S3S4	-	6	1995-2005
A	Southern California legless lizard (<i>Anniella stebbinsi</i>)	None	None	G3	S3	-	35	Unknown-1897
A	Western yellow bat (<i>Lasiurus xanthinus</i>)	None	None	G5	S3	-	6	1984-1996
A	Marsh sandwort (<i>Arenaria paludicola</i>)	Endangered	Endangered	G1	S1	1B.1	1	1899
A	Salt marsh bird's-beak (<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>)	Endangered	Endangered	G4T1	S1	1B.2	1	1888
A	Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	Threatened	None	G4G5T2Q	S2	-	22	1924-2013
A	Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	None	None	G3T2	S2	1B.1	18	1882-2012
A	Chaparral ragwort (<i>Senecio aphanactis</i>)	None	None	G3	S2	2B.2	3	1909-2004
A	San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)	Endangered	None	G5T1	S1	-	41	1909-2017
A	Robinson's pepper-grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	None	None	G5T3	S3	4.3	8	1889-2004
A	Parish's bush-mallow (<i>Malacothamnus parishii</i>)	None	None	GXQ	SX	1A	1	1895
A	Pringle's monardella (<i>Monardella pringlei</i>)	None	None	GX	SX	1A	2	1904-1941
A	Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	None	None	G4	S3	-	2	1985-1988
A	Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)	None	None	G5T1T2	S1S2	-	13	1912-2003
A	Santa Ana River woollystar (<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>)	Endangered	Endangered	G4T1	S1	1B.1	20	1910-2018
A	San Bernardino aster (<i>Symphyotrichum defoliatum</i>)	None	None	G2	S2	1B.2	2	1917-1995
A	Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	None	None	G5T5	S3	-	4	1995-2016
A	Santa Ana sucker (<i>Catostomus santaanae</i>)	Threatened	None	G1	S1	-	7	2001-2011
A	Plummer's mariposa-lily (<i>Calochortus plummerae</i>)	None	None	G4	S4	4.2	22	1971-2011
A	Parish's desert-thorn (<i>Lycium parishii</i>)	None	None	G3?	S1	2B.3	1	1885
A	Least Bell's vireo (<i>Vireo bellii pusillus</i>)	Endangered	Endangered	G5T2	S2	-	12	1917-2015
A	Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Threatened	Endangered	G5T2T3	S1	-	3	1894-1977
A	Arroyo chub (<i>Gila orcuttii</i>)	None	None	G2	S2	-	5	1995-2001

APPENDIX B

SPECIAL-STATUS SPECIES POTENTIAL FOR OCCURRENCE WITHIN THE PROJECT SITE

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	Global rank ^a	State rank ^b	CNPS list ^c	Number of records within 10 miles	Year(s) sighted
A	Steelhead - southern California DPS (<i>Oncorhynchus mykiss irideus</i> pop. 10)	Endangered	None	G5T1Q	S1	-	1	1950
A	Prairie wedge grass (<i>Sphenopholis obtusata</i>)	None	None	G5	S2	2B.2	2	1907-1917
A	Western mastiff bat (<i>Eumops perotis californicus</i>)	None	None	G5T4	S3S4	-	3	1933-1992
A	Orange-throated whiptail (<i>Aspidoscelis hyperythra</i>)	None	None	G5	S2S3	-	9	Unknown-1955
A	Greenest tiger beetle (<i>Cicindela tranquebarica viridissima</i>)	None	None	G5T1	S1	-	1	1987
A	San Diego banded gecko (<i>Coleonyx variegatus abbotti</i>)	None	None	G5T3T4	S1S2	-	1	2015
A	Southern rubber boa (<i>Charina umbratica</i>)	None	Threatened	G2G3	S2S3	-	1	1981
A	Bell's sage sparrow (<i>Artemisiospiza belli belli</i>)	None	None	G5T2T3	S3	-	2	1997-2015
A	Tricolored blackbird (<i>Agelaius tricolor</i>)	None	Threatened	G2G3	S1S2	-	4	1950-1999
A	Bristly sedge (<i>Carex comosa</i>)	None	None	G5	S2	2B.1	1	1882
A	Slender-horned spineflower (<i>Dodecahema leptoceras</i>)	Endangered	Endangered	G1	S1	1B.1	2	1884-1994
A	Los Angeles sunflower (<i>Helianthus nuttallii</i> ssp. <i>parishii</i>)	None	None	G5TH	SH	1A	1	1937
A	Desert cuckoo wasp (<i>Ceratochrysis longimala</i>)	None	None	G1	S1	-	1	1915
A	Red-diamond rattlesnake (<i>Crotalus ruber</i>)	None	None	G4	S3	-	4	1931-1988
A	California black rail (<i>Laterallus jamaicensis coturniculus</i>)	None	Threatened	G3G4T1	S1	-	2	1892-1919
A	Southern California Arroyo Chub/Santa Ana Sucker Stream	None	None	GNR	SNR	-	1	1991
A	Brand's star phacelia (<i>Phacelia stellaris</i>)	None	None	G1	S1	1B.1	2	2000-2003
A	Singlewhorl burrobrush (<i>Ambrosia monogyra</i>)	None	None	G5	S2	2B.2	1	1961
A	Smooth tarplant (<i>Centromadia pungens</i> ssp. <i>laevis</i>)	None	None	G3G4T2	S2	1B.1	6	1948-2016
A	Gambel's water cress (<i>Nasturtium gambelii</i>)	Endangered	Threatened	G1	S1	1B.1	1	1935
A	San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	None	None	G5T3T4	S3S4	-	4	1994-2002
A	Peruvian dodder (<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>)	None	None	G5T4	SH	2B.2	1	1890
A	Yellow-breasted chat (<i>Icteria virens</i>)	None	None	G5	S3	-	1	2015
A	Yellow warbler (<i>Setophaga petechia</i>)	None	None	G5	S3S4	-	1	2015
A	Horn's milk-vetch (<i>Astragalus hornii</i> var. <i>hornii</i>)	None	None	G4G5T1T2	S1	1B.1	1	1898
A	White rabbit-tobacco (<i>Pseudognaphalium leucocephalum</i>)	None	None	G4	S2	2B.2	1	1891
A	Salt Spring checkerbloom (<i>Sidalcea neomexicana</i>)	None	None	G4	S2	2B.2	1	1906
A	Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	Endangered	None	G5T1T2	S1S2	-	1	1914
A	Cooper's hawk (<i>Accipiter cooperii</i>)	None	None	G5	S4	-	1	2016

APPENDIX B

SPECIAL-STATUS SPECIES POTENTIAL FOR OCCURRENCE WITHIN THE PROJECT SITE

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	Global rank ^a	State rank ^b	CNPS list ^c	Number of records within 10 miles	Year(s) sighted
A	Swainson's hawk (<i>Buteo swainsoni</i>)	None	Threatened	G5	S3	-	2	Unknown-1889
A	American badger (<i>Taxidea taxus</i>)	None	None	G5	S3	-	2	Unknown-1908
A	Alvin Meadow bedstraw (<i>Galium californicum</i> ssp. <i>primum</i>)	None	None	G5T2	S2	1B.2	1	1891
A	Busck's gallmoth (<i>Carolella busckana</i>)	None	None	G1G3	SH	-	2	Unknown-1906
A	Lawrence's goldfinch (<i>Spinus lawrencei</i>)	None	None	G3G4	S3S4	-	1	2015
A	Southern grasshopper mouse (<i>Onychomys torridus ramona</i>)	None	None	G5T3	S3	-	1	1923
A	Merlin (<i>Falco columbarius</i>)	None	None	G5	S3S4	-	2	2013-2014
A	Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	None	None	G5T3	S3	-	3	2016-2016
A	Santa Ana speckled dace (<i>Rhinichthys osculus</i> ssp. 3)	None	None	G5T1	S1	-	1	1996
A	San Diego ambrosia (<i>Ambrosia pumila</i>)	Endangered	None	G1	S1	1B.1	1	1940
A	Nevin's barberry (<i>Berberis nevinii</i>)	Endangered	Endangered	G1	S1	1B.1	1	1999
A	Stephens' kangaroo rat (<i>Dipodomys stephensi</i>)	Endangered	Threatened	G2	S2	-	8	Unknown-1980
A	Palmer's mariposa-lily (<i>Calochortus palmeri</i> var. <i>palmeri</i>)	None	None	G3T2	S2	1B.2	1	1962
A	Parish's gooseberry (<i>Ribes divaricatum</i> var. <i>parishii</i>)	None	None	G5TX	SX	1A	1	1917
A	California horned lark (<i>Eremophila alpestris actia</i>)	None	None	G5T4Q	S4	-	2	2001-2004
A	Pallid San Diego pocket mouse (<i>Chaetodipus fallax pallidus</i>)	None	None	G5T34	S3S4	-	1	1976
A	Western spadefoot (<i>Spea hammondi</i>)	None	None	G3	S3	-	1	2014
A	Many-stemmed dudleya (<i>Dudleya multicaulis</i>)	None	None	G2	S2	1B.2	1	2017
A	Lemon lily (<i>Lilium parryi</i>)	None	None	G3	S3	1B.2	1	1993
A	Southern mountain yellow-legged frog (<i>Rana muscosa</i>)	Endangered	Endangered	G1	S1	-	1	1959

^a GLOBAL RANKING

The global rank (G-rank) is a reflection of the overall condition of an element throughout its global range.

SPECIES OR NATURAL COMMUNITY LEVEL

G1 = Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres.

G2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres.

G3 = 21-100 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres.

G4 = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.

G5 = Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

S1 = Less than 6 EOs OR less than 1,000 individuals OR less than 2,000 acres

APPENDIX B

SPECIAL-STATUS SPECIES POTENTIAL FOR OCCURRENCE WITHIN THE PROJECT SITE

Potential for occurrence	Common name (Scientific name)	Federal listing status	State listing status	Global rank ^a	State rank ^b	CNPS list ^c	Number of records within 10 miles	Year(s) sighted
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S1.1 = very threatened

S1.2 = threatened

S1.3 = no current threats known

S2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

S2.1 = very threatened

S2.2 = threatened

S2.3 = no current threats known

List 1A: Plants presumed extinct in California

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

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

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

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

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

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

Low [L] – Species distribution is restricted by substantive habitat requirements, which are negligible within the Project Site, and no further survey or study is obligatory to determine likely presence or absence of this species.

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

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

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

APPENDIX C
PLANT SPECIES OBSERVED WITHIN THE STUDY AREA

APPENDIX C

PLANT SPECIES OBSERVED WITHIN THE STUDY AREA

<i>Scientific Name</i>	<i>Common Name</i>
EUDICOTS	
Asteraceae (Aster family)	
<i>Ambrosia acanthicarpa</i> *	Annual bur-sage
<i>Centaurea benedicta</i> *	Blessed thistle
<i>Cotula coronopifolia</i> *	Brass Buttons
<i>Lactuca serriola</i> *	Prickly lettuce
<i>Sonchus asper</i> *	Prickly Sow Thistle
<i>Taraxacum officinale</i> *	Dandelion
Anacardiaceae (Sumac family)	
<i>Schinus molle</i> *	Peruvian Pepper
<i>Schinus terebinthifolius</i> *	Brazilian Pepper Tree
Apocynaceae (Dogbane family)	
<i>Nerium oleander</i> *	Oleander
Bignoniaceae (bignonias family)	
<i>Jacaranda mimosifolia</i> *	Jacaranda
Brassicaceae (Mustard family)	
<i>Hirschfeldia incana</i> *	Shortpod mustard
<i>Sisymbrium irio</i> *	London rocket
Chenopodiaceae (Goosefoot family)	
<i>Chenopodium sp.</i> *	Goosefoot
<i>Salsola tragus</i> *	Prickly Russian thistle
Fabaceae (Pea family)	
<i>Medicago polymorpha</i> *	Bur Clover
Geraniaceae (Geranium family)	
<i>Erodium botrys</i> *	Filaree
<i>Erodium cicutarium</i> *	Redstem stork's bill
Myrtaceae (Myrtle family)	
<i>Eucalyptus spp.</i> *	Eucalyptus
Simaroubaceae (Simarouba family)	
<i>Ailanthus altissima</i> *	Tree-of-heaven
Solanaceae (Potato family)	
<i>Datura wrightii</i> *	Sacred thorn-apple
Zygophyllaceae (Creosote-bush family)	
<i>Tribulus terrestris</i> *	Puncturevine
MONOCOTS	

APPENDIX C

PLANT SPECIES OBSERVED WITHIN THE STUDY AREA

<i>Scientific Name</i>	<i>Common Name</i>
<i>Poaceae (Grass family)</i>	
<i>Avena barbata</i> *	Lopsided oat
<i>Bromus diandrus</i> *	Ripgut brome
<i>Bromus madritensis subsp. Rubens</i> *	Red brome
<i>Cynodon dactylon</i> *	Bermuda grass,
<i>Hordeum marinum subsp. Gussoneanum</i> *	Mediterranean barley
<i>Schismus barbatus</i> *	Schismus
<i>Sisymbrium altissimum</i> *	Tumble Mustard

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

* = naturalized, non- native plant species.

APPENDIX D
WILDLIFE SPECIES OBSERVED WITHIN THE STUDY AREA

APPENDIX D

WILDLIFE SPECIES OBSERVED WITHIN THE STUDY AREA

Scientific name	Common name
Reptiles	
<i>Uta stansburiana</i>	Common Side-blotched Lizard
Birds	
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Sturnus vulgaris</i>	European starling
<i>Corvus corax</i>	Common Raven
<i>Streptopelia decaocto</i>	Eurasian Collared-Dove
<i>Carpodacus mexicanus</i>	House Finch
<i>Passer domesticus</i>	House Sparrow
<i>Buteo jamaicensis</i>	Red-Tailed Hawk
<i>Sayornis saya</i>	Say's Phoebe
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel