# **BIOLOGICAL TECHNICAL REPORT**

# FOR

# THE CHINO PARCEL DELIVERY SERVICE PROJECT

# LOCATED IN THE CITY OF CHINO, SAN BERNARDINO, CALIFORNIA

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# **TABLE OF CONTENTS**

1.0	INTRODUCTION1
1.1 1.2 1.3 1.4	Background and Scope of Work
2.0	METHODOLOGY
2.1 2.2 2.3 2.4	Summary of Surveys3Botanical Resources4Wildlife Resources5Jurisdictional Delineation7
3.0	REGULATORY SETTING
3.1 3.2 3.3	State and/or Federally Listed Plants and Animals
4.0	<b>RESULTS</b>
4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.1 4.1	Existing Conditions.17Vegetation18Special-Status Vegetation Communities.19Special-Status Plants19Special-Status Animals24Raptor Use31Nesting Birds32Tree Windrows.32Soil Mapping.320Jurisdictional Delineation321Wildlife Migration/Nurseries33
5.0	IMPACT ANALYSIS
5.1 5.2 5.3 5.4 5.5	California Environmental Quality Act

# Page #

5	.6	Wildlife Migration/Nurseries	37
5	.7	Indirect Impacts to Biological Resources	37
5	.8	Cumulative Impacts to Biological Resources	37
6.0	M	ITIGATION/AVOIDANCE MEASURES	38
6	.1	Burrowing Owl	38
6	.2	Nesting Birds	39
6	.3	Tree Windrows	39
6	.4	Level of Significance After Mitigation	41
7.0	RI	EFERENCES	41
8.0	CI	ERTIFICATION	43

# TABLES

Table 2-1. Summary of Biological Surveys for the Project Site	3
Table 2-2. Summary of Burrowing Owl Surveys	7
Table 3-1. CNPS Ranks 1, 2, 3, and 4 and Threat Code Extensions	11
Table 4-1. Summary of Vegetation/Land Use Types for the Project Site	
Table 4-2. Special-Status Plants Evaluated for the Project Site	19
Table 4-3. Special-Status Wildlife Evaluated for the Project Site	

# **EXHIBITS**

Exhibit 1	Regional Map
Exhibit 2	Vicinity Map
Exhibit 3	Aerial Map
Exhibit 4	Vegetation Map
Exhibit 5	Site Photographs
Exhibit 6	Burrow Location Map
Exhibit 7	Soils Map

# APPENDICES

Appendix A Results of a Habitat Suitability Evaluation for the Delhi Sands Flower-Loving Fly

# **1.0 INTRODUCTION**

# 1.1 Background and Scope of Work

This document provides the results of general and focused biological surveys for the approximately 74-acre Chino Parcel Delivery Service Project (the Project) located in the City of Chino, San Bernardino County, California. This report identifies and evaluates impacts to biological resources associated with the proposed Project in the context of the California Environmental Quality Act (CEQA), and State and Federal regulations such as the Endangered Species Act (ESA), Clean Water Act (CWA), and the California Fish and Game Code.

The Project site is located within The Preserve Specific Plan, for which a Resource Management Plan (RMP) was prepared and adopted by the City of Chino. The RMP provides a detailed program to implement, report, and monitor biological mitigation within The Preserve Specific Plan area in accordance with the Specific Plan's EIR. As such, this report evaluates the Project's consistency with the biological requirements of the approved RMP.

The scope of this report includes a discussion of existing conditions for the Project site, all methods employed regarding the general and focused biological surveys, the documentation of botanical and wildlife resources identified (including special-status species), and an analysis of impacts to biological resources. Methods of the study include a review of relevant literature, field surveys, and a Geographical Information System (GIS)-based analysis of vegetation communities. As appropriate, this report is consistent with accepted scientific and technical standards and survey guideline requirements issued by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), the California Native Plant Society (CNPS), and other applicable agencies/organizations.

The field study focused on a number of primary objectives that would comply with CEQA requirements, including (1) general and focused biological surveys; (2) vegetation mapping; (3) habitat assessments for special-status plant species; (4) habitat assessments for special-status wildlife species; and (5) a delineation of waters subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and CDFW. Observations of all plant and wildlife species were recorded during the general biological surveys.

# 1.2 <u>Project Location</u>

The Project site comprises approximately 74 acres in the City of Chino, San Bernardino County, California [Exhibit 1 – Regional Map] and is located within an unsectioned portion of Township 2 South, Range 7 West, of the U.S. Geological Survey (USGS) 7.5" quadrangle maps Prado Dam and Corona North, California [Exhibit 2 – Vicinity Map]. The Project site is bordered by Merrill Avenue to the north, Flight Avenue to the east, and Chino Airport property to the west and south.

# 1.3 <u>Project Description</u>

The entire subject property will be developed with light industrial land uses, and will also

include road improvements to Merrill Avenue, Flight Avenue, and Remington Avenue where they front the property, and potentially to the centerline of the Comet Avenue right-of-way (ROW) on the west. The Project will include at least 11 acres of landscaping and will include tree plantings (including along Merrill Avenue and Flight Avenue for screening purposes).

# 1.4 Existing Conditions

The Project site is flat and is generally disturbed/developed with non-native vegetation. The site consists of an active dairy property, including a pasture area, and additional agricultural lands. A windrow of Tamarisk (*Tamarix ramosissima*) is located immediately offsite to the west. Vegetation within the Project site consists of non-native, ruderal species, including London rocket (*Sisymbrium irio*), lamb's quarters (*Chenopodium album*), Russian thistle (*Salsola tragus*), cheeseweed (*Malva parviflora*), tree tobacco (*Nicotiana glauca*), tocalote (*Centaurea melitensis*), five-hook bassia (*Bassia hyssopifolia*), prostrate pigweed (*Amaranthus blitoides*), Palmer's pigweed (*Amaranthus palmeri*), Bermuda grass (*Cynodon dactylon*), and other non-native grasses. Exhibit 3 provides an aerial map of the site. A vegetation map is provided as Exhibit 4. Representative site photographs are provided as Exhibit 5.

As noted above, the proposed Project includes improvements to Merrill Avenue on the north, Flight Avenue on the east, and Remington Avenue on the south. Merrill Avenue consists of a paved road with disturbed shoulders, but contains a short windrow of gum trees (*Eucalyptus* sp.) within the southern portion of the ROW. Both Flight Avenue and Remington Avenue consist of disturbed dirt access areas, neither of which support native/sensitive habitats or species. A small windrow of tamarisk trees is located on the southern side of the Remington Avenue ROW.

# 2.0 METHODOLOGY

In order to adequately identify biological resources in accordance with the requirements of CEQA, Glenn Lukos Associates (GLA) assembled biological data consisting of the following main components:

- Delineation of aquatic resources (including wetlands and riparian habitat) subject to the jurisdiction of the Corps, Regional Water Quality Control Board, and CDFW;
- Performance of vegetation mapping for the Project site; and
- Performance of habitat assessments, and site-specific biological surveys, to evaluate the presence/absence of special-status species in accordance with the requirements of CEQA.

The focus of the biological surveys was determined through initial site reconnaissance, a review of the CNDDB [CDFW 2016], CNPS 8<sup>th</sup> edition online inventory (CNPS 2016), Natural Resource Conservation Service (NRCS) soil data, other pertinent literature, and knowledge of the region. Site-specific general surveys within the Project site were conducted on foot in the proposed development areas for each target plant or animal species identified below.

Vegetation was mapped directly onto a 200-scale (1"=200') aerial photograph following Holland (1986). Vegetation communities not listed under the above-mentioned vegetation classification systems were named based on the dominant plant species present.

# 2.1 <u>Summary of Surveys</u>

GLA conducted biological studies in order to identify and analyze actual or potential impacts to biological resources associated with development of the Project site. The studies conducted include the following:

- Performance of vegetation mapping;
- Performance of site-specific habitat assessments and biological surveys to evaluate the potential presence/absence of special-status species (or potentially suitable habitat) to the satisfaction of CEQA and federal and state regulations; and
- Delineation/evaluation of aquatic resources (including wetlands and riparian habitat) potentially subject to the jurisdiction of the Corps, Regional Board, and CDFW.

Table 2-1 provides a summary list of survey dates, survey types and personnel.

Survey Type	Survey Dates	Biologists
Delhi Sands Flower-Loving Fly Habitat Suitability Evaluation	11/5/15	SC
General Biological Survey and Habitat Assessments	4/12/16	JA/JF
Rare Plant Surveys	4/12/16 6/7/16 7/15/16	JA/JF JA JF
Focused Burrowing Owl Surveys	4/12/16 6/7/16 6/28/16 7/15/16	JA/JF JA JA JA JA/JF
Jurisdictional Delineation	4/12/16	JA/JF

# Table 2-1. Summary of Biological Surveys for the Project Site.

SC = Scott Cameron; JA = Jeff Ahrens; JF = Jason Fitzgibbon

Individual plants and wildlife species are evaluated in this report based on their "special-status." For this report, plants were considered "special-status" based on one or more of the following criteria:

• Listing through the Federal and/or State Endangered Species Act (ESA);

- Occurrence in the CNPS Rare Plant Inventory (Rank 1A/1B, 2A/2B, 3, or 4); and/or
- Occurrence in the CNDDB inventory.

Wildlife species were considered "special-status" based on one or more of the following criteria:

- Listing through the Federal and/or State ESA; and
- Designation by the State as a Species of Special Concern (SSC) or California Fully Protected (CFP) species.

# 2.2 <u>Botanical Resources</u>

A site-specific survey program was designed to accurately document the botanical resources within the Project site, and consisted of five components: (1) a literature search; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur within the Project site; (3) general field reconnaissance surveys; (4) vegetation mapping; and (5) habitat assessments and focused surveys for special-status plants.

# 2.2.1 Literature Search

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included the following:

- CNPS *Inventory of Rare and Endangered Plants* (online edition, v8-02) (CNPS 2016); and
- CNDDB for the USGS 7.5' quadrangles: Prado Dam, Corona North, Guasti, and Ontario (CNDDB 2016).

# 2.2.2 Vegetation Mapping

Vegetation communities within the Project site were mapped per Holland. Where necessary, deviations were made when areas did not fit into exact habitat descriptions. These vegetation communities were named based on the dominant plant species present. Plant communities were mapped in the field directly onto a 200-scale (1"=200') aerial photograph. A vegetation map is included as Exhibit 4. Representative site photographs are included as Exhibit 5.

# 2.2.3 Special-Status Plant Species and Habitats Evaluated for the Project Site

A literature search was conducted to obtain a list of special status plants with the potential to occur within the Project site. The CNDDB was initially consulted to determine well-known occurrences of plants and habitats of special concern in the region. Other sources used to develop a list of target species for the survey program included the CNPS online inventory (2016).

Based on this information, vegetation profiles and a list of target sensitive plant species and habitats that could occur within the Project site were developed and incorporated into a mapping and survey program to achieve the following goals: (1) characterize the vegetation associations and land use; (2) prepare a detailed floristic compendium; (3) identify the potential for any special status plants that may occur within the Project site; and (4) prepare a map showing the distribution of any sensitive botanical resources associated with the Project site, if applicable.

# 2.2.5 Botanical Surveys

GLA biologists Jeff Ahrens and Jason Fitzgibbon conducted an initial focused plant survey on April 12, 2016. Additional surveys were conducted on June 7 and July 15, 2016. Surveys were conducted in accordance with accepted botanical survey guidelines (CDFG 2009, CNPS 2001, USFWS 2000). As applicable, surveys were conducted at appropriate times based on precipitation and flowering periods. An aerial photograph, a soil map, and/or a topographic map were used to determine the community types and other physical features that may support sensitive and uncommon taxa or communities within the Project site. Surveys were conducted by following meandering transects within target areas of suitable habitat. All plant species encountered during the field surveys were identified and recorded. Scientific nomenclature and common names used in this report follow Baldwin et al (2012), and Munz (1974).

### 2.3 <u>Wildlife Resources</u>

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the entire Project site by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during the visit. Scientific nomenclature and common names for vertebrate species referred to in this report follow the Complete List of Amphibian, Reptile, Bird, and Mammal Species in California (CDFG 2008), Standard Common and Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians 6<sup>th</sup> Edition, Collins and Taggert (2009) for amphibians and reptiles, and the American Ornithologists' Union Checklist 7<sup>th</sup> Edition (2009) for birds. The methodology (including any applicable survey protocols) utilized to conduct general surveys, habitat assessments, and/or focused surveys for special-status animals are included below.

#### 2.3.1 General Surveys

#### Birds

During the general biological and reconnaissance survey within the Project site, birds were detected incidentally by direct observation and/or by vocalizations, with identifications recorded in field notes.

### Mammals

During general biological and reconnaissance survey within the Project site, mammals were identified and detected incidentally by direct observations and/or by the presence of diagnostic sign (i.e., tracks, burrows, scat, etc.).

#### **Reptiles and Amphibians**

During general biological and reconnaissance surveys within the Project site, reptiles and amphibians were identified incidentally during surveys. Habitats were examined for diagnostic reptile sign, which include shed skins, scat, tracks, snake prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

#### 2.3.2 Special-Status Animal Species Reviewed

A literature search was conducted in order to obtain a list of special-status wildlife species with the potential to occur within the Project site. Species were evaluated based on two factors: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project site, and 2) any other special-status animals that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs on the Project site.

### 2.3.3 Habitat Assessment for Special Status Animal Species

GLA biologists Jason Fitzgibbon and Jeff Ahrens conducted habitat assessments for specialstatus animal species on April 12, 2016. An aerial photograph, soil map and/or topographic map were used to determine the community types and other physical features that may support special-status and uncommon taxa within the Project site.

#### 2.3.4 Focused Surveys for Special-Status Animals Species

#### **Burrowing Owl**

GLA biologists Jason Fitzgibbon and Jeff Ahrens conducted focused surveys for the burrowing owl (*Athene cunicularia*) for all suitable habitat areas within the Project site. Surveys were conducted in accordance with survey guidelines described in the 2012 CDFG Staff Report on Burrowing Owl Mitigation, which were also consistent with the Chino RMP. The guidelines stipulate that four focused survey visits should be conducted between February 15 and July 15, with the first visit occurring between February 15 and April 15. The remaining three visits should be conducted three weeks apart from each other, with at least one visit occurring between June 15 and July 15. Focused surveys were conducted on April 12, June 7 and 28, and July 15, 2016. As recommended by the survey guidelines, the survey visits were conducted between morning civil twilight and 10:00 AM. Weather conditions during the surveys were conducive to a high level of bird activity.

Surveys were conducted by walking meandering transects throughout areas of suitable habitat. Transects were spaced between 7 m and 20 m apart, adjusting for vegetation height and density,

in order to provide adequate visual coverage of the survey areas. At the start of each transect, and at least every 100 m along transects, the survey area was scanned for burrowing owls using binoculars. All suitable burrows were inspected for diagnostic owl sign (e.g., pellets, prey remains, whitewash, feathers, bones, and/or decoration) in order to identify potentially occupied burrows. Table 2-2 summarizes the burrowing owl survey visits. The results of the burrowing owl surveys are documented in Section 4.0 of this report.

Survey Date	Biologist	Start/End Time	Start/End	Wind Speed	Cloud
			Temperature	(mph)	Cover
4/12/16	JF/JA	0555/0930	52/65	0-3	Clear
6/7/16	JA	0530/0940	61/68	0-2	Cloudy
6/28/16	JA	0545/0940	68/77	0-2	Cloudy
7/15/16	JF/JA	0530/0855	65/72	0-3	Clear

Table 2-2. Summary of Burrowing Owl Surveys

JF = Jason Fitzgibbon; JA = Jeff Ahrens

#### **Delhi Sands Flower-Loving Fly**

A small portion of the northeastern portion of the Project site is mapped as containing Delhi Fine Sand, which is associated with the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) [DSFF]. In order to evaluate the potential for the DSFF to occur at the Project site, GLA retained a permitted biologist (Scott Cameron of Ecological Sciences, Inc.) to perform a habitat assessment for the DSFF. Mr. Cameron performed the assessment on November 5, 2015 and prepared a report dated December 14, 2015 documenting the results of the habitat assessment. The results of the assessment are summarized in Section 4.0 of this report. Mr. Cameron's report is attached as Appendix A.

#### 2.4 Jurisdictional Delineation

Prior to beginning the field delineation, a 200-scale color aerial photograph and the previously cited USGS topographic maps were examined to determine the locations of potential areas of Corps/CDFW jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Potential wetland habitats at the subject site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual<sup>1</sup> (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement)<sup>2</sup>. The presence of an Ordinary High Water Mark (OHWM) was determined using the 2008 Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States<sup>3</sup> in conjunction with the

<sup>&</sup>lt;sup>1</sup> Environmental Laboratory. 1987. <u>Corps of Engineers Wetlands Delineation Manual</u>, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

 <sup>&</sup>lt;sup>2</sup> U.S. Army Corps of Engineers. 2008. <u>Regional Supplement to the Corps of Engineers Wetland Delineation</u> <u>Manual: Arid West Supplement (Version 2.0)</u>. Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

<sup>&</sup>lt;sup>3</sup> Lichvar, R. W., and S. M. McColley. 2008. <u>A Field Guide to the Identification of the Ordinary High Water Mark</u> (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TR-08-12. Hanover, NH: U.S.

Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.<sup>4</sup>

# 3.0 REGULATORY SETTING

The proposed Project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state- and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

# 3.1 <u>State and/or Federally Listed Plants or Animals</u>

# 3.1.1 State of California Endangered Species Act

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Under the CESA, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require permits or memoranda of

 Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. (http://www.crrel.usace.army.mil/library/technicalreports/ERDC-CRREL-TR-08-12.pdf).
 <sup>4</sup> Curtis, Katherine E. and Robert Lichevar. 2010. <u>Updated Datasheet for the Identification of the Ordinary High</u> <u>Water Mark (OHWM) in the Arid West Region of the Western United States</u>. ERDC/CRREL TN-10-1. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

# 3.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification that result in injury to, or death of species as forms of "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

# 3.1.3 State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.
- Sections 2090-2097 of the CESA require that the state lead agency consult with CDFW on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

# 3.2 California Environmental Quality Act

#### 3.2.1 CEQA Guidelines Section 15380

CEQA requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW recognizes that plants on Lists 1A, 1B, or 2 of the CNPS *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFW also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 or 4.

# 3.2.2 Non-Listed Special-Status Plants, Wildlife and Vegetation Communities Evaluated Under CEQA

#### Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. This term is employed in this document, but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For this report the following acronyms are used for federal special-status species:

- FE Federally listed as Endangered
- FT Federally listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FC Federal Candidate Species (former C1 species)
- FSC Federal Species of Concern (former C2 species)

#### State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (SFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California SSC are designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's CNDDB project. Informally listed taxa are not protected, but warrant

consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State Candidate for listing as Endangered
- SCT State Candidate for listing as Threatened
- SFP State Fully Protected
- SP State Protected
- SSC State Species of Special Concern

#### California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The CNPS's Eighth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five ranks. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California. The list serves as the candidate list for listing as threatened and endangered by CDFW. CNPS has developed five categories of rarity that are summarized in Table 3-1.

CNPS Bank	Commonts
	Comments
Rank 1A – Plants Presumed	Thought to be extinct in California based on a lack of observation or
Extirpated in California and	detection for many years.
Either Rare or Extinct	
Elsewhere	
Rank 1B – Plants Rare,	Species, which are generally rare throughout their range that are also
Threatened, or Endangered in	judged to be vulnerable to other threats such as declining habitat.
California and Elsewhere	
Rank 2A – Plants presumed	Species that are presumed extinct in California but more common
Extirpated in California, But	outside of California
Common Elsewhere	
Rank 2B – Plants Rare,	Species that are rare in California but more common outside of
Threatened or Endangered in	California
California, But More	
Common Elsewhere	
Rank 3 – Plants About Which	Species that are thought to be rare or in decline but CNPS lacks the
More Information Is Needed	information needed to assign to the appropriate list. In most instances,
(A Review List)	the extent of surveys for these species is not sufficient to allow CNPS
· · · ·	to accurately assess whether these species should be assigned to a
	specific rank. In addition, many of the Rank 3 species have associated
	taxonomic problems such that the validity of their current taxonomy is
	unclear.
Rank 4 – Plants of Limited	Species that are currently thought to be limited in distribution or range

 Table 3-1. CNPS Ranks 1, 2, 3, & 4, and Threat Code Extensions

Distribution (A Watch List)	whose vulnerability or susceptibility to threat is currently low. In
	some cases, as noted above for Rank 3 species, CNPS lacks survey
	data to accurately determine status in California. Many species have
	been placed on Rank 4 in previous editions of the "Inventory" and
	have been removed as survey data has indicated that the species are
	more common than previously thought. CNPS recommends that
	species currently included on this list should be monitored to ensure
	that future substantial declines are minimized.
Extension	Comments
.1 – Seriously endangered in	Species with over 80% of occurrences threatened and/or have a high
California	degree and immediacy of threat.
.2 – Fairly endangered in	Species with 20-80% of occurrences threatened.
California	
.3 – Not very endangered in	Species with <20% of occurrences threatened or with no current
California	dimensional management of the second s

#### 3.3 Jurisdictional Waters

#### 3.3.1 Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a)<sup>5</sup> as:

- (1) 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;
- (2) All interstate waters including interstate wetlands;
- (3) 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 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 shell fish 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...
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;

<sup>&</sup>lt;sup>5</sup> On October 9, 2015, the U.S. 6<sup>th</sup> District Circuit Court of Appeals ordered a nationwide stay on the Corps and EPA's definition of waters of the United States under the Clean Water Rule ("Clean Water Rule: Definition of 'Waters of the United States"; Final Rule," 80 Federal Register 124 (29 June, 2015), pp. 37054-37127). As a result, the Corps' regulations that were in effect prior to the August 28, 2015 Clean Water Rule is again in effect until such a time as the Court order is satisfied, if this occurs.

- (6) *The territorial seas;*
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.
- (8) Waters of the United States do not include prior converted cropland.<sup>6</sup> Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.
- Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed 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.

# 1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that <u>abutted</u> a navigable water and that the court did not express any opinion on the

<sup>&</sup>lt;sup>6</sup> The term "prior converted cropland" is defined in the Corps' Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is <u>inundated for no more than 14 consecutive days</u> during the growing season...." [Emphasis added.]

question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

# 2. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the U.S. Environmental Protection Agency (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPMs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

### 3. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands<sup>7</sup>);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with "problematic hydrophytic vegetation", which require a minimum of 14 days of ponding to be considered a wetland.

<sup>&</sup>lt;sup>7</sup>Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. <u>The National Wetland Plant List: 2016 wetland</u> ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

#### 3.3.2 Regional Water Quality Control Board

Section 401 of the Clean Water Act requires any applicant for a Section 404 permit to obtain certification from the State that the discharge (and the operation of the facility being constructed) will comply with the applicable effluent limitation and water quality standards. In California, this 401 certification is obtained from the Regional Water Quality Control Board. The Corps, by law, cannot issue a Section 404 permit until a 401 certification is issued or waived.

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.<sup>8</sup> The memorandum states:

California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...

The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....

Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification....

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act.<sup>9</sup>

<sup>&</sup>lt;sup>8</sup> Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

## 3.3.3 California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFW defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW's definition of "lake" includes "natural lakes or manmade reservoirs." CDFW also defines a stream as "a body of water that flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators."

It is important to note that the Fish and game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

#### 4.0 **RESULTS**

This section provides the results of general biological surveys, vegetation mapping, habitat assessments and focused surveys for special-status plants and animals, and a jurisdictional delineation for Waters of the United States (including wetlands) subject to the jurisdiction of the Corps and Regional Board, and streams (including riparian vegetation) and lakes subject to the jurisdiction of CDFW.

#### 4.1 Existing Conditions

The Project site is flat and is disturbed/developed with non-native vegetation. The site consists of a dairy property, including a pasture area. A windrow of Tamarisk (*Tamarix ramosissima*) is located just offsite of the property to the west. Vegetation within the Project site consists of non-native, ruderal species, including London rocket (*Sisymbrium irio*), lamb's quarters (*Chenopodium album*), Russian thistle (*Salsola tragus*), cheeseweed (*Malva parviflora*), tree tobacco (*Nicotiana glauca*), tocalote (*Centaurea melitensis*), five-hook bassia (*Bassia hyssopifolia*), prostrate pigweed (*Amaranthus blitoides*), Palmer's pigweed (*Amaranthus palmeri*), Bermuda grass (*Cynodon dactylon*), and other non-native grasses.

<sup>&</sup>lt;sup>9</sup> On June 17, 2016, the SWRCB issued a draft "Procedures for Discharges of Dredged or Fill Materials to Waters of the State" which provides definitions for wetlands, procedures for jurisdictional delineations, and procedures for obtaining permits for impacts to waters of the State.

As noted above, the proposed Project includes improvements to Merrill Avenue on the north, Flight Avenue on the east, and Remington Avenue on the south. Merrill Avenue consists of a paved road with disturbed shoulders, but contains a short windrow of gum trees within the southern portion of the ROW. Both Flight Avenue and Remington Avenue consist of disturbed dirt access areas, neither of which support native/sensitive habitats or species. A small windrow of tamarisk trees is located on the southern side of the Remington Avenue ROW.

# 4.2 <u>Vegetation</u>

During vegetation mapping of the Project site, four different vegetation types/land uses were identified. Table 4-1 provides a summary of the vegetation types/land uses and the corresponding acreage. Detailed descriptions of each vegetation type follow the table. A Vegetation Map is attached as Exhibit 4. Photographs depicting the various vegetation types and land uses are attached as Exhibit 5.

Vegetation/Land Use Type	Acreage
Agriculture	49.43
Disturbed/Developed	20.72
Ornamental	0.96
Ruderal	3.31
Total	74.42

Table 4-1.	Summary of	f Vegetation/]	Land Use [	Types for the	Project Site
I UDIC I II	Summary of		Luna Coc.	Lypes for the	

# 4.1.1 Agriculture

Approximately 49.43 acres of the Project site was mapped as agricultural, consisting of crop fields and pastureland associated with the dairy.

#### 4.1.2 Disturbed/Developed

Approximately 20.72 acres of the Project site was mapped as disturbed/developed lands associated with the dairy property.

# 4.1.3 Ornamental

Approximately 0.96 acre of the Project site was mapped as containing ornamental vegetation. Ornamental vegetation also includes several gum trees, tamarisk, and other ornamental trees.

#### 4.1.4 Ruderal

Approximately 3.31 acres of the Project site was mapped as containing ruderal vegetation. These areas have been subject to repeated disturbance over many years, but are less frequently disturbed compared with other areas of the Project site. Dominant species include Russian thistle, lamb's quarters, London rocket, cheeseweed, five-hook bassia, and other non-native species.

### 4.3 Special-Status Vegetation Communities

The CNDDB identifies the following special-status vegetation communities as occurring within the vicinity of the Project site: California Walnut Woodland, Riversidean Alluvial Fan Sage Scrub, Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Cottonwood Willow Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub. The Project site does not contain any special-status vegetation types, including those identified by the CNDDB.

#### 4.4 Special-Status Plants

No special-status plants were detected at the Project site and none are expected to occur due to a lack of suitable habitat. Table 4-2 provides a list of special-status plants evaluated for the Project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors: 1) species identified by the CNDDB and CNPS as occurring (either currently or historically) on or in the vicinity of the Project site, and 2) any other special-status plants that are known to occur within the vicinity of the Project site, or for which potentially suitable habitat occurs within the site.

Species Name	Status	Species Information	Occurrence
Brand's star phacelia	Federal: None	Habitat Requirements: Coastal	Does not occur due
Phacelia stellaris	State: None	dunes and coastal sage scrub.	to a lack of suitable
	CNPS: Rank 1B.1		habitat.
		Lifeform: Annual herb	
		Blooming Period: March-June	
Braunton's milk-vetch	Federal: FE	Habitat Requirements: Closed-	Does not occur due
Astragalus brauntonii	State: None	cone coniferous forest, chaparral,	to a lack of suitable
	CNPS: Rank 1B.1	coastal sage scrub, valley and	habitat.
		foothill grassland. Usually	
		carbonate soils. Recent burn or	
		disturbed areas.	
		Lifeform: Perennial herb	
		Blooming Period: January-	
		August	

#### Table 4-2. Special-Status Plants Evaluated for the Project Site

Species Nome	Status	Spacing Information	Occurrence
California muchla		Species information	Description
California muniy	Federal: None	habitata including score and	boes not occur due
Muniendergia californica	CNPS: Rank 4.3	streambanks in chaparral coastal	habitat
	CIVES. Ralik 4.3	scrub lower montane coniferous	naonai.
		forest and meadows	
		iorest, and meadows.	
		Lifeform: Perennial rhizomatous herb	
		Blooming Period: June- September	
California saw-grass	Federal: None	Habitat Requirements:	Does not occur due
Cladium californicum	State: None	Meadows and seeps, and alkaline	to a lack of suitable
	CNPS: Rank 2B.2	or freshwater marshes and swamps.	habitat.
		T : C. C	
		herb	
		Blooming Period: June-	
		September	
Chaparral sand-verbena	Federal: None	Habitat Requirements: Sandy	Does not occur due
Abronia villosa var. aurita	State: None	soils in chaparral, coastal sage	to a lack of suitable
	CNPS: Rank 1B.1	scrub.	habitat.
		Lifeform: Annual herb	
		Blooming Period: January- September	
Coulter's saltbush	Federal: None	Habitat Requirements: Coastal	Does not occur due
Atriplex coulteri	State: None	bluff scrub, coastal dunes, coastal	to a lack of suitable
-	CNPS: Rank 1B.2	sage scrub, valley and foothill	habitat.
		grassland. Occurring on alkaline	
		or clay soils.	
		Lifeform: Perennial herb	
		Blooming Period: March- October	
Intermediate mariposa-lily	Federal: None	Habitat Requirements: Rocky	Does not occur due
Calochortus weedii var. intermedius	State: None	soils in chaparral, coastal sage	to a lack of suitable
	CNPS: Rank 1B.2	scrub, valley and foothill	habitat.
		grassland.	
		Lifeform: Perennial bulbiferous herb	
		Blooming Period: May-Julv	

Species Name	Status	Species Information	Occurrence
Iokerst's monardella	Federal: None	Habitat Requirements: Steen	Does not occur due
Monardella australis ssp. jokerstii	State: None CNPS: Rank 1B.1	scree or talus slopes between breccia, secondary alluvial benches along drainages and washes. Chaparral, lower montane coniferous forest.	to a lack of suitable habitat.
		Lifeform: Perennial rhizomatous herb	
		September	
Lucky morning-glory	Federal: None	Habitat Requirements:	Does not occur due
Calystegia felix	State: None CNPS: Rank 3.1	Historically associated with wetland and marshy places, but possibly in drier situations as well. Possibly silty loam and alkaline soils. Meadows and seeps (sometimes alkaline), riparian scrub (alluvial).	to a lack of suitable habitat.
		Lifeform: Annual rhizomatous herb Blooming Period: March-	
		September	
Many-stemmed dudleya Dudleya multicaulis	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils. Lifeform: Perennial herb	Does not occur due to a lack of suitable habitat.
		Blooming Period: April-July	
Mesa horkelia Horkelia cuneata var. puberula	Federal: None State: None CNPS: Rank 1B.1	Habitat Requirements: Sandy or gravelly soils in chaparral (maritime), cismontane woodland, and coastal scrub.	Does not occur due to a lack of suitable habitat.
		Blooming Period: February- September	
Parry's spineflower	Federal: None	Habitat Requirements: Sandy or	Does not occur due
Chorizanthe parryi var. parryi	State: None CNPS: Rank 1B.1	rocky soils in open habitats of chaparral and coastal sage scrub.	to a lack of suitable habitat.
		Lifeform: Annual herb	
		Blooming Period: April-June	

Species Name	Status	Species Information	Occurrence
Plummer's mariposa lily Calochortus plummerae	Federal: None State: None CNPS: Rank 4.2	Habitat Requirements: Granitic, rock soils within chaparral, cismontane woodland, coastal sage scrub, lower montane coniferous forest, valley and foothill grassland. Lifeform: Perennial bulbiferous	Does not occur due to a lack of suitable habitat.
		herb Blooming Period: May-July	
Prostrate vernal pool navarretia Navarretia prostrata	Federal: None State: None CNPS: Rank 1B.1	Habitat Requirements: Coastal sage scrub, valley and foothill grassland (alkaline), vernal pools. Occurring in mesic soils. Lifeform: Annual herb Blooming Period: April-July	Does not occur due to a lack of suitable habitat.
Rigid fringepod Thysanocarpus rigidus	Federal: None State: None CNPS: Rank 1B.2	Habitat Requirements: Dry rocky slopes in pinyon and juniper woodland. Lifeform: Annual herb Blooming Period: February May	Does not occur due to a lack of suitable habitat.
Robinson's pepper grass Lepidium virginicum var. robinsonii	Federal: None State: None CNPS: Rank 4.3	Habitat Requirements: Chaparral, coastal sage scrub Lifeform: Annual herb Blooming Period: January-July	Does not occur due to a lack of suitable habitat.
Salt Spring checkerbloom Sidalcea neomexicana	Federal: None State: None CNPS: Rank 2B.2	Habitat Requirements: Mesic, alkaline soils in chaparral, coastal sage scrub, lower montane coniferous forest, Mojavean desert scrub, and playas. Lifeform: Perennial herb Blooming Period: March-June	Does not occur due to a lack of suitable habitat.

Spacing Name	States	Succion Information	0.000
Species Name	Status Endersly Mana	Species information	Descent exercise
San Bernardino aster Symphyotrichum defoliatum	State: None CNPS: Rank 1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic).	to a lack of suitable habitat.
		<b>Lifeform</b> : Perennial rhizomatous herb	
		Blooming Period: July- November	
Santa Ana River woolly star Eriastrum densifolium ssp. sanctorum	Federal: FE State: SE CNPS: Rank 1B.1	Habitat Requirements: Alluvial fan sage scrub, chaparral. Occurring on sandy or rocky soils.	Does not occur due to a lack of suitable habitat.
		Lifeform: Perennial herb	
		Blooming Period: April- September	
Slender-horned spineflower Dodecahema leptoceras	Federal: FE State: SE CNPS: Rank 1B.1	Habitat Requirements: Sandy soils in alluvial scrub, chaparral, cismontane woodland.	Does not occur due to a lack of suitable habitat.
		Lifeform: Annual herb	
		Blooming Period: April-June	
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CNPS: Rank 1B.1	Habitat Requirements: Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grasslands, disturbed habitats.	Does not occur due to a lack of suitable habitat.
		Lifeform: Annual herb	
		Blooming Period: April- September	
White rabbit-tobacco Pseudognaphalium leucocephalum	Federal: None State: None CNPS: Rank 2B.2	Habitat Requirements: Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian woodland. Lifeform: Perennial herb	Does not occur due to a lack of suitable habitat.
		Blooming Period: July- December	

#### **Status**

Federal	State
FE – Federally Endangered	SE – State Endangered
FT – Federally Threatened	ST – State Threatened
FC – Federal Candidate	

#### CNPS

Rank 1A - Plants presumed extirpated in California and either rare or extinct elsewhere.

Rank 1B - Plants rare, threatened, or endangered in California and elsewhere.

Rank 2A – Plants presumed extirpated in California, but common elsewhere.

Rank 2B - Plants rare, threatened, or endangered in California, but more common elsewhere.

Rank 3 – Plants about which more information is needed (a review list).

Rank 4 – Plants of limited distribution (a watch list).

#### **CNPS** Threat Code extension

.1 - Seriously endangered in California (over 80% occurrences threatened)

.2 – Fairly endangered in California (20-80% occurrences threatened)

.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

#### 4.5 Special-Status Animals

No special-status animals were detected at the Project site. A few special-status animals have a potential to occur at the Project site. Table 4-3 provides a list of special-status animals evaluated for the Project site through general biological surveys, habitat assessments, and focused surveys. Species were evaluated based on the following factors, including: 1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the Project site, and 2) any other special-status animals that are known to occur within the vicinity of the Project site, for which potentially suitable habitat occurs on the site.

Species Name	Status	Habitat Requirements	Occurrence
Invertebrates			
Delhi-sands flower-loving fly Rhaphiomidas terminatus abdominalis	Federal: FE State: None	Fine, sandy soils, often associated with wholly or partially consolidated dunes referred to as the "Delhi" series. Vegetation consists of a sparse cover, including Californica buckwheat, California croton, deerweed, and evening primrose.	Does not occur due to a lack of suitable habitat.
Fish			
Arroyo chub Gila orcutti	Federal: None State: SSC	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Does not occur due to a lack of suitable habitat.

Table 4-3.	<b>Special Status</b>	<b>Animals Evaluated</b>	for the Project Site
			J

Species Name	Status	Habitat Requirements	Occurrence
Santa Ana sucker Catostomus santaanae	Federal: FT State: SSC	Small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates.	Does not occur due to a lack of suitable habitat.
Amphibians	1	r	1
Western spadefoot Spea hammondii	Federal: None State: SSC	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Does not occur due to a lack of suitable habitat.
Reptiles			
California glossy snake Arizona elegans occidentalis	Federal: None State: SSC	Inhabits arid scrub, rocky washes, grasslands, chaparral.	Does not occur due to a lack of suitable habitat.
Coast horned lizard Phrynosoma blainvillii	Federal: None State: SSC	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Does not occur due to a lack of suitable habitat.
Red-diamond rattlesnake Crotalus ruber	Federal: None State: SSC	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Does not occur due to a lack of suitable habitat.
San Diego banded gecko Coleonyx variegatus abbotti	Federal: None State: SSC	Primarily a desert species, but also occurs in cismontane chaparral, desert scrub, and open sand dunes.	Does not occur due to a lack of suitable habitat.
Silvery legless lizard Anniella pulchra pulchra	Federal: None State: SSC	Occurs primarily in areas with sandy or loose organic soil, or where there is plenty of leaf litter. Associated with coastal sage scrub, chaparral, coastal dunes, valley/foothill grasslands, oak woodlands, and pine forests.	Does not occur due to a lack of suitable habitat.
Two-striped garter snake Thamnophis hammondii	Federal: None State: SSC	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Western pond turtle <i>Emys marmorata</i>	Federal: None State: SSC	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Does not occur due to a lack of suitable habitat.
Birds			NT - 1 1 1 -
Burrowing owl Athene cunicularia	Federal: BCC State: SSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Not detected during focused surveys. Moderate to high potential for occurrence due to the presence of suitable habitat, including burrows.
Coastal cactus wren (San	Federal: BCC	Occurs almost exclusively in	Does not occur due
Diego & Orange County only) Campylorhynchus brunneicapillus sandiegensis	State: SSC	cactus (cholla and prickly pear) dominated coastal sage scrub.	to a lack of suitable habitat.
Coastal California gnatcatcher Polioptila californica californica	Federal: FT State: SSC	Low elevation coastal sage scrub and coastal bluff scrub.	Does not occur due to a lack of suitable habitat.
Golden eagle (nesting & wintering) Aquila chrysaetos	Federal: BCC State: WL, FP	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Does not nest at the site due to a lack of suitable, but has the potential to forage onsite.
Grasshopper sparrow (nesting) Ammodramus savannarum	Federal: None State: SSC	Open grassland and prairies with patches of bare ground.	Does not occur due to a lack of suitable habitat.
Least Bell's vireo (nesting) Vireo bellii pusillus	Federal: FE State: SE	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Loggerhead shrike (nesting) Lanius ludovicianus	Federal: BCC State: SSC	Forages over open ground within areas of short vegetation, pastures with fence rows, old orchards, mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, agricultural fields, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs.	Moderate potential for occurrence.
Long-eared owl (nesting) Asio otus	Federal: None State: SSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Does not occur due to a lack of suitable habitat.
Northern harrier (nesting) Circus cyaneus	Federal: None State: SSC	A variety of habitats, including open wetlands, grasslands, wet pasture, old fields, dry uplands, and croplands.	Does not nest at the site due to a lack of suitable, but has the potential to forage onsite.
Short-eared owl (nesting) Asio flammeus	Federal: None State: SSC	Open country, including prairie, meadows, tundra, moorlands, marshes, savanna, and open woodland. Nests on the ground.	Does not occur due to a lack of suitable habitat.
Southwestern willow flycatcher (nesting) Empidonax traillii extimus	Federal: FE State: SE	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Does not occur due to a lack of suitable habitat.
Tricolored blackbird (nesting colony) Agelaius tricolor	Federal: BCC State: Candidate Endangered	Breeding colonies require nearby water, a suitable nesting substrate, and open- range foraging habitat of natural grassland, woodland, or agricultural cropland.	Does not occur due to a lack of suitable habitat.
Western yellow-billed cuckoo (nesting) Coccyzus americanus occidentalis	Federal: FT, BCC State: SE	Dense, wide riparian woodlands with well- developed understories.	Does not occur due to a lack of suitable habitat.
White-tailed kite (nesting) Elanus leucurus	Federal: None State: FP	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Dense canopies used for nesting and cover.	Does not nest at the site due to a lack of suitable, but has the potential to forage onsite.
Yellow-breasted chat (nesting) Icteria virens	Federal: None State: SSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Does not occur due to a lack of suitable habitat.

Species Name	Status	Habitat Requirements	Occurrence
Yellow warbler (nesting)	Federal: BCC	Breed in lowland and foothill	Does not occur due
Setophaga petechia	State: SSC	riparian woodlands	to a lack of suitable
		dominated by cottonwoods,	habitat.
		alders, or willows and other	
		small trees and shrubs typical	
		of low, open-canopy riparian	
		woodland. During migration,	
		forages in woodland, forest,	
Mommola		and shrub habitats.	
Dia frastailad hat	Endaral Nora	Deast mainly in anaviase and	Deas not acour due
Nystinomons magnetis	State: SSC	rocks in cliff situations: also	to a lack of suitable
Nyclinomops macrolis	WRWC: MU	utilize buildings caves and	hobitat
		tree cavities	naonai.
Los Angeles pocket mouse	Federal: None	Fine sandy soils in coastal	Does not occur due
Perognathus longimembris	State: SSC	sage scrub and grasslands	to a lack of suitable
brevinasus	Suite. SSC	suge serue und grussiunds.	habitat.
Northwestern San Diego	Federal: None	Coastal sage scrub, sage	Does not occur due
pocket mouse	State: SSC	scrub/grassland ecotones, and	to a lack of suitable
Chaetodipus fallax fallax		chaparral.	habitat.
Pallid bat	Federal: None	Deserts, grasslands,	Does not occur due
Antrozous pallidus	State: SSC	shrublands, woodlands, and	to a lack of suitable
_	WBWG: H	forests. Most common in	habitat.
		open, dry habitats with rocky	
		areas for roosting.	
Pocketed free-tailed bat	Federal: None	Rocky areas with high cliffs	Does not occur due
Nyctinomops femorosaccus	State: SSC	in pine-juniper woodlands,	to a lack of suitable
	WBWG: M	desert scrub, palm oasis,	habitat.
		desert wash, and desert	
		riparian.	
San Bernardino kangaroo rat	Federal: FE	Typically found in	Does not occur due
Dipodomys merriami parvus	State: SSC	Riversidean alluvial fan sage	to a lack of suitable
		scrub and sandy loam soils,	nabitat.
		and along washes with	
		nearby sage scrub	
San Diego black-tailed	Federal: None	Occupies a variety of	Does not occur due
iackrabbit	State: SSC	habitats but is most common	to a lack of suitable
Lepus californicus bennettii	Suite. SSC	among shortgrass habitats.	habitat.
		Also occurs in sage scrub.	
		but needs open habitats.	
San Diego desert woodrat	Federal: None	Occurs in a variety of shrub	Does not occur due
Neotoma lepida intermedia	State: SSC	and desert habitats, primarily	to a lack of suitable
		associated with rock	habitat.
		outcrops, boulders, cacti, or	
		areas of dense undergrowth.	
Stephens' kangaroo rat	Federal: FE	Open grasslands or sparse	Does not occur due
Dipodomys stephensi	State: ST	shrublands with less than	to a lack of suitable
		50% vegetation cover during	habitat.
		the summer.	1

Species Name	Status	Habitat Requirements	Occurrence
Western mastiff bat	Federal: None	Occurs in many open, semi-	Low potential for
Eumops perotis californicus	State: SSC	arid to arid habitats,	foraging and
	WBWG: H	including conifer and	roosting at the site.
		deciduous woodlands, coastal	
		scrub, grasslands, and	
		chaparral. Roosts in crevices	
		in cliff faces, high buildings,	
		trees, and tunnels.	
Western yellow bat	Federal: None	Found in valley foothill	Low potential for
Lasiurus xanthinus	State: SSC	riparian, desert riparian,	foraging and
	WBWG: H	desert wash, and palm oasis	roosting at the site.
		habitats. Roosts in trees,	
		particularly palms. Forages	
		over water and among trees.	

#### <u>Status</u>

**Federal** FE – Federally Endangered FT – Federally Threatened FPT – Federally Proposed Threatened FC – Federal Candidate BGEPA– Bald and Golden Eagle Protection Act

Western Bat Working Group (WBWG) H – High Priority LM – Low-Medium Priority M – Medium Priority MH – Medium-High Priority State SE – State Endangered ST – State Threatened SC– State Candidate CFP – California Fully-Protected Species SSC – Species of Special Concern

# 4.5.1 Special-Status Wildlife Species not Observed but with a Potential to Occur at the Project Site

**Burrowing Owl**. The burrowing owl was not detected within the Project boundary during focused surveys; however, the Project site has a moderate to high potential for occurrence based on the presence of suitable habitat, including numerous burrows. Furthermore, the burrowing owl is known from other properties in the vicinity of the Project site. The locations of the suitable burrows within the Project site were mapped, and are depicted on Exhibit 6 (Burrow Location Map).

**Golden Eagle**. Low potential to occur. This bird of prey occurs widely in California, and forages in grassland and open savannah of many types. It tolerates considerable variation in topography and elevation. It prefers to hunt moderate-sized prey, especially California Ground Squirrels and rabbits, but will occasionally take larger prey, such as Mule Deer (*Odocoileus hemionus*) fawns. It is very sensitive to human disturbance. Species occurs in the region as a migrant and winter visitor. The project site appears to provide suitable foraging habitat, although the amount of small mammal prey is limited due to existing agricultural and land management activities. No potential for this species to nest on or adjacent to the Project site as it is sensitive to human disturbance and the site lacks ledges used for nest placement.

**Loggerhead Shrike**. Low potential to occur. This is a formerly common resident and occasional migrant in open natural areas throughout cismontane (coastal rather than desert) southern California. For breeding, requires areas with high productivity of large invertebrate and small vertebrate prey, along with low levels of predation for adults and young (e.g., from crows, ravens, hawks, and domestic pets). The resident populations have slowly declined for decades and appear to be on the verge of extirpation, though small numbers still breed in relatively pristine, undisturbed grasslands and savannahs. Populations occurring in the region from the north, as migrants and winter visitors, have also declined substantially but at this point are somewhat more numerous than the resident birds. Thus, the Project site may be visited on rare occasions by migrant or winter visitors, as it is relatively open. However, the site does not appear likely to provide high or medium quality foraging, and it appears reasonable to likely that predation pressures and human disturbance are at least moderately high relative to requirements of the species.

**Northern Harrier**. Moderate potential to occur. Preys mostly on small mammals and small to moderate-sized birds, but will also opportunistically forage on appropriately-sized amphibians, reptiles, and large invertebrates. Uses a wide variety of natural communities, from broken forest and lake margins to grasslands, as well as anthropogenic, open areas such as croplands. Now occurs primarily as a migrant and winter visitor in southern California, with nesting limited to small numbers in extensive natural areas, primarily marshes and open grasslands with minimal human disturbance, and mostly within a few miles of the coast. May occur on the Project site during migration and winter. Although the site may appear to provide suitable foraging habitat, the availability of small mammals is diminished as a result of the dairy and agricultural lands uses. No nesting potential present.

White-tailed Kite. Moderate potential to occur. This species hunts in open lands vegetated with grasses and low-growing shrubs. Although the Project site has mature trees, this species has no potential to nest as it requires low trees and/or large shrubs, which the site lacks. This species has a moderate potential to occur during the fall and spring months as a migrant and may forage on the site over winter; however active small mammal abatement greatly reduces the potential for the Project site to provide valuable foraging grounds to this or other birds of prey.

**Western Mastiff Bat**. Low potential to occur. Forages over a wide variety of natural communities and occasionally over manmade areas. The Project site is potentially suitable for foraging, given the broad array of conditions utilized by the species, but does not show potential to be especially valuable or productive for the species. The species nests and roosts in crevices in tall, generally vertical surfaces and requires very low levels of disturbance (e.g. noise, night lighting, human or other activity) in the site vicinity. Evidence indicates low but reasonable potential for occasional foraging, but no reasonable potential for roosting or nesting, by the species at the Project site.

**Western Yellow Bat**. Low potential to occur. This is primarily a desert species, historically foraging, roosting and nesting in desert wetlands, especially native fan palm oases. It has substantially declined in this role due to disturbance and degradation of desert wetlands. However, it has also apparently expanded its range into other areas in recent decades, apparently

as an adaptation to increasing ornamental plantings in the southwest and southern California of nonnative fan palms. The species was unrecorded in cismontane (coastal rather than desert) California prior to about 1969, with noteworthy increases since then (Constantine 1998). The Project site holds a few nonnative fan palms and only marginal potential foraging habitat. Thus, potential for occurrence of a few individuals is low but reasonable.

# 4.5.3 Special-Status Animals Evaluated for the Project Site but not Observed

**Delhi Sands Flower-Loving Fly (DSFF)**. Based on the habitat assessment performed by Ecological Sciences, Inc., the Project is considered unsuitable for DSFF. In view of the site's highly disturbed and isolated condition, exposure to extensive and recurring surface disturbances, and analyses of correlative habitat information from a wide range (e.g., relatively disturbed to more natural habitats) of occupied DSFF habitats in the region, the site does not contain habitat suitable to support or sustain a viable DSFF population. Therefore, no impacts to DSFF are expected. The Ecological Sciences report is attached as Appendix A.

# 4.5.4 Critical Habitat

Federal designated or proposed Critical Habitat is absent from the Project site and adjacent lands.

# 4.6 <u>Raptor Use</u>

No more than small numbers of the two most regionally abundant raptor species, red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), were documented for the Project site during biological surveys. There is potential for several special-status raptor species (i.e. Northern Harrier, White-tailed Kite, and Golden Eagle) to occur in a foraging role during migration or winter.

The Project site provides potential breeding habitat for common raptor species, such as red-tailed hawk, American kestrel, Cooper's hawk (*Accipiter cooperi*), great horned owl (*Bubo virginianus*), and barn owl (*Tyto alba*), although breeding raptors were not detected during biological surveys.

In concept, the site would be expected to provide native or nonnative prey species such as California vole (*Microtus californicus*), squirrels (family Sciuridae), and larger invertebrate animals, that support raptor foraging. However, the extensive, long-standing alteration of the site from natural conditions, squirrel abatement activities, and the lack of small mammal sign all indicate it may be of little to no value for raptor foraging compared with that typical for the region as a whole. Although the windrows provide potential nesting and roosting (resting) habitat, the active squirrel abatement activities may be harmful to raptors nesting on site and looking for food.

# 4.7 <u>Nesting Birds</u>

The Project site contains trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.<sup>10</sup>

# 4.8 <u>Tree Windrows</u>

A large windrow comprised predominantly of tamarisk (*Tamarix aphylla*) trees is located just offsite of the property to the west, which screens the adjacent Chino Airport from the Project site. The windrow provides general habitat for raptors, although no active raptor nests were detected in the trees during the biological surveys. In addition, a smaller tamarisk windrow is located on the southern edge of the Project site, within southern portion of the Merrill Avenue ROW, and a short windrow of gum trees is located at the northern edge of the Project site as part of the Merrill Avenue ROW. Pursuant to the City of Chino RMP, existing windrows that provide viable raptor habitat shall be retained and incorporated into the design of individual development projects where practical. If retention is demonstrated to be impractical to the satisfaction of the City, the developer shall provide for the replacement of the windrow trees in a manner supportive of raptor habitat.

# 4.9 Soil Mapping

The Natural Resource Conservation Service (NRCS) identifies the following soil types (series) as occurring (currently or historically) within the Project site [Exhibit 7]:

- Chino Silt Loam (Cb)
- Delhi Fine Sand (Db)
- Hilmar Loamy Fine Sand (Hr)

# 4.10 Jurisdictional Delineation

The Project site does not contain jurisdictional waters, including waters of the U.S. subject to the jurisdiction of the Corps and Regional Board, or waters of the State subject to the jurisdiction of CDFW.

<sup>&</sup>lt;sup>10</sup> The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

#### 4.11 <u>Wildlife Migration/Nurseries</u>

Wildlife corridors provide specific opportunities for individual animals to disperse or migrate between areas, generally extensive but otherwise partially or wholly separated regions. Adequate cover and tolerably low levels of disturbance are common requirements for corridors. Habitat in corridors may be quite different than that in the connected areas, but if used by the wildlife species of interest, the corridor will still function as desired.

The Project site lacks any features, such as drainages that would support wildlife migration. The site also lacks rookery or nursery grounds. The mature windrow trees lacked all sign of a heron rookery. No other nursery habitat would be expected.

### 5.0 IMPACT ANALYSIS

The following discussion examines the potential impacts to plant and wildlife resources that would occur as a result of the proposed project. Impacts (or effects) can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or animals, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Indirect impacts pertain to those impacts that result in a change to the physical environment, but which is not immediately related to a project. Indirect (or secondary) impacts are those that are reasonably foreseeable and caused by a project, but occur at a different time or place. Indirect impacts can occur at the urban/wildland interface of projects, to biological resources located downstream from projects, and other off-site areas where the effects of the project may be experienced by plants and wildlife. Examples of indirect impacts include the effects of increases in ambient levels of noise or light; predation by domestic pets; competition with exotic plants and animals; introduction of toxics, including pesticides; and other human disturbances such as hiking, off-road vehicle use, unauthorized dumping, etc. Indirect impacts are often attributed to the subsequent day-to-day activities associated with project build-out, such as increased noise, the use of artificial light sources, and invasive ornamental plantings that may encroach into native areas. Indirect effects may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by non-native invasives, as well as changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

Cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. A cumulative impact can occur from multiple individual effects from the same project, or from several projects. The cumulative impact from several projects is the change in the environment resulting from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

#### 5.1 California Environmental Quality Act (CEQA)

#### 5.1.1 Thresholds of Significance

Environmental impacts to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California:

"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..."

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

#### 5.1.2 Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 1998 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

a) 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 U.S. Fish and Wildlife Service. b) 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.

c) 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.

d) 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.

*e)* Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

*f)* Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

# 5.2 <u>Native Vegetation</u>

The proposed Project will not impact any native vegetation types, including riparian habitats. As such, the Project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS.

# 5.3 Special-Status Plants

The proposed Project will not impact any special-status plants. As such, the Project will not have a substantial adverse effect, either directly or through habitat modifications, on any plant species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

#### 5.4 Special-Status Animals

The proposed Project will not impact any Federal or State listed species. Several special-status species have a potential to occur on the Project site, including burrowing owl, northern harrier, white-tailed kite, golden eagle, loggerhead shrike, western mastiff bat, and western yellow bat. Discussion is provided below for the potential impacts to these species that may occur from implementation of the proposed Project. Burrowing owls were not detected during focused surveys, and so are treated as absent. However, since the Project site has the potential to support burrowing owls in the future, measures are provided below to avoid direct impacts to burrowing owls.

**Raptors/Windrows**. Raptors (Birds of Prey) include owls, hawks, eagles, and falcons. Common species of raptors (e.g. Red-tailed Hawk, American Kestrel, Great Horned Owl) as well as less common special-status species (i.e. Northern Harrier, White-tailed Kite, Golden Eagle) have in concept the potential to forage on the Project site. The proposed Project would remove potential foraging and nesting habitat (fallow fields, ornamental windrow, etc.). The loss of potential foraging habitat for raptors (a group of species that hunts and feeds on small mammals) that is actively managed to eliminate small mammals would not pose a significant impact to raptors under CEQA. The viability of lands to support raptor foraging is directly connected to its ability to support raptor prey – small mammals. If the site is actively managed to reduce the population of rodents, this greatly reduces the value of raptor foraging habitat. The removal of valuable raptor nesting habitat, however, requires mitigation per the City of Chino's RMP and would be a significant impact under CEQA. Refer to Section 6.3 for measures to address this impact.

Special-status Bats. Two species of bats, western mastiff bat and western yellow bat have potential to occur on the Project site. Both species are state species of special concern and both species have a low potential to occur in a foraging role (above the site), with western yellow bat also potentially roosting in the nonnative fan palms present on the site. Both species forage on insects while in flight. Development of the Project site may reduce available foraging habitat for these bat species, although the quality of the potential habitat does not appear to be of much value given the limited number of flying insects detected during site visits. The number of individuals potentially affected is judged to be few given the degraded nature of the potential habitat on the Project site. There may be several western vellow bats roosting in the ornamental Mexican fan palms on the Project site. This species is classified as a solitary bat, in that it does not form large roosts, but instead roosts singly or with a few other individuals. The number of western yellow bats potentially roosting in the fan palms is expected to be less than 10. Although this species has been given special status, its population has increased in Southern California due to the increase in plantings of ornamental fan palms. Potential impacts to these two species of bats would be less than significant under CEQA given the limited number of individuals potentially impacted.

#### 5.5 <u>Nesting Birds</u>

The project has the potential to impact active native bird nests if vegetation is removed during the nesting season (January 1 to August 31). Impacts to nesting native birds are prohibited by the MBTA and California Fish and Game Code. A project-specific mitigation measure is identified in Section 6.2 of this report to avoid impacts to native nesting birds. Although impacts to native birds are prohibited by MBTA and similar provisions of California Fish and Game Code, impacts to native birds by the proposed Project would not be a significant impact under CEQA. The native birds with potential to nest on the Project site would be those that are extremely common to the region and highly adapted to human landscapes (Anna's Hummingbird, House Finch). The number of individuals potentially affected by the Project would not significantly affect regional, let alone local populations of such species.

# 5.6 <u>Wildlife Migration/Nurseries</u>

The proposed Project would not interfere or impact the movement of native resident or migratory fish or wildlife species or established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The Project site lacks migratory wildlife corridors and wildlife nursery sites.

### 5.7 Indirect Impacts to Biological Resources

In the context of biological resources, indirect effects are those effects associated with developing areas adjacent to adjacent native open space. Potential indirect effects associated with development include water quality impacts from associated with drainage into adjacent open space/downstream aquatic resources; lighting effects; noise effects; invasive plant species from landscaping; and effects from human access into adjacent open space, such as recreational activities (including off-road vehicles and hiking), pets, dumping, etc. Temporary, indirect effects may also occur as a result of construction-related activities. The proposed Project is not expected to have any indirect effects on sensitive biological resources.

### 5.8 <u>Cumulative Impacts to Biological Resources</u>

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, may or may not be deemed a substantial impact, but when considered in addition to (considerable contribution to) the impacts of related projects in the area, would be considered potentially significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed project.

The Preserve Specific Plan and EIR, identified the following significant cumulative impacts to biological resources: (1) loss of occupied burrowing owl nesting and foraging habitat and (2) loss of raptor nesting and foraging habitat. As such, the Project could make a cumulatively considerable contribution to regional impacts to raptor nesting and foraging habitat and burrowing owl (if present), but the impacts are not expected to be cumulatively considerable on an individual project level.

For other biological resources potentially present and impacted by the project (special-status songbirds and bats), the degree of contribution to the regional decline of these resources is judged to not be considerable at the project and regional levels.

### 6.0 MITIGATION/AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for actual or potential impacts to special-status resources.

### 6.1 <u>Burrowing Owl</u>

As previously noted, the Project site is located within The Preserve Specific Plan, and is subject to the City of Chino RMP. The RMP addresses mitigation requirements for impacts to burrowing owls, stating that the 1995 CDFG Staff Report on Burrowing Owl Mitigation (as supplemented by the RMP) shall be followed when burrowing owls are detected on properties. However, the 1995 CDFG Staff Report was superseded by the current 2012 CDFW Staff Report. As such, where avoidance of occupied habitat is infeasible, provisions shall be made to passively relocate owls from sites in accordance with the current 2012 Staff Report, but while also considering the 1995 CDFG Staff Report (and RMP) for consistency.

A qualified biologist will conduct a pre-construction presence/absence survey for burrowing owls within 14 days prior to site disturbance. If burrowing owls are detected on site, and avoidance of the occupied habitat is infeasible, provisions shall be made to passively relocate owls from sites in accordance with the current 2012 CDFG Staff Report and the RMP.

According to the Preserve EIR and RMP, Burrowing Owls to be relocated from properties within the City's Subarea 2 are intended to be accommodated within a "300-acre conservation area" and/or additional Candidate Relocation Areas as described on Page 4-16 and 4-21 of the RMP. One such contingency conservation area is identified in the RMP as "Drainage Area B".

Drainage Area B consists of a series of Natural Treatment System (NTS) facilities that were constructed south of Kimball Avenue and west of Mill Creek Road. When the NTS facilities were constructed, artificial owl burrows were installed within the basins to accommodate relocated owls and additional owls dispersing to the site. This location was given top priority as an owl relocation site by the RMP due to its proximity to areas that have been and will be converted to urban development. If burrowing owls are present at the Project site at time of site disturbance, the Burrowing Owls would be more likely to initially relocate to the immediately surrounding properties. Although, the NTS basins represent the nearest conservation area providing regional mitigation for the loss of burrowing owl habitat, the Chino Airport contains burrowing owl habitat (including currently occupied areas) that is expected to remain viable into the future and would be the most immediately available candidate for passive relocation, supplemented by the NTS basins.

Consistent with the RMP, the following measures shall apply to the Project site regarding burrowing owl mitigation:

• Prior to disturbance of the occupied burrows, suitable and unoccupied replacement burrows shall be provided at a ratio of 2:1 within the City-designated relocation area (e.g. the NTS basins) or other acceptable habitat area (e.g. Chino Airport lands). A qualified biologist through coordination with the City shall confirm that adequate burrows (artificial or natural) are currently unoccupied and suitable for use by owls within the designated relocation areas.

- Until suitable replacement burrows have been provided/confirmed within the Citydesignated relocation area (e.g. the NTS basins), no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the nonbreeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31).
- Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- If burrowing owls are present at the time that the occupied burrows are to be disturbed, then the owls shall be excluded from the site following the 2012 CDFG Staff Report and Table 4-6 of the RMP.
- Pursuant to mitigation measure B-3(8) of The Preserve EIR, and as noted on Page 4-39 of the RMP, the Project shall pay the required mitigation fee. One priority for funding supported by the mitigation fees is the establishment and long-term management of burrowing owl habitat within the Drainage Area B conservation area.

With the implementation of these mitigation measures, impacts to burrowing owls will be reduced to below a level of significance.

# 6.2 <u>Nesting Birds</u>

Vegetation clearing should be conducted outside of the nesting season (February 1 through September 15). If avoidance of the nesting season is not feasible, then a qualified biologist shall conduct a nesting bird survey within three days prior any disturbance of the site, including disking, demolition activities, and grading. If active nests are identified, the biologist shall establish suitable buffers around the nests, and the buffer areas shall be avoided until the nests are no longer occupied and the juvenile birds can survive independently from the nests.

#### 6.3 <u>Raptor Nesting/Windrows</u>

As indicated previously, a large tree windrow is located immediately offsite to the west within Comet Avenue ROW. In addition, smaller windrows are located within the ROW of both Merrill Avenue and Remington Avenue. The windrows serve as potential roosting and nesting habitat for raptors. It is assumed for purposes of this report that the Project will result in impacts to portions of the ROW, and therefore will impact windrow habitat. The City of Chino RMP addresses mitigation requirements for the removal of valuable raptor nesting (windrows). In case of potential impacts to windrows from the Project, the RMP requirements are listed below:

- Existing windrows that provide viable raptor habitat shall be retained and incorporated into the design of individual development projects where practical.
- If retention is demonstrated to be impractical to the satisfaction of the City, the developer shall provide for the replacement of the windrow trees in a manner supportive of raptor habitat.
- An arborist report will be provided that includes an inventory of trees, description of the trees slated for removal, specification of replacement trees (tree species, number of trees for each species, and size of replacement trees), location of replacement area, planting requirements, irrigation requirements, post-planting monitoring requirements (including germination/survival rates and expected growth rates for a 5-year period), requirement to conduct a survey for nesting birds, including raptors, if trees will be removed during breeding season (February 1-August 31), requirements that trees be removed outside of the breeding season if birds are determined to be nesting, and submittal to the City of annual reports for a 5-year period documenting germination/survival rates and growth rates for all newly planted trees.
- An ornithologist specializing in raptor biology shall provide recommendations on the number of trees, tree specifications and location of replacement areas for windrows or stands of trees.
- Replacement trees may be located on the 300-acre Conservation Area or other suitable areas located inside or outside of the Project site if consistent with recommendations of the arborist and ornithologist.
- Recommendations in the arborist report (with input from an ornithologist) will be reviewed by the City in consultation with the wildlife agencies to ensure adequate compensation for the loss of a windrow on a Project site.
- In addition, payment of the RMP impact fee will mitigate impacts to below a level of insignificance. The impact fee is not specific to windrows, but is required for all new development.

If all or portions of the windrows trees will be impacted by the Project, tree replacement will occur on the Project site through integration into the landscape design, including screening trees along Merrill Avenue and Flight Avenue. The landscaping trees would be expected to replace the biological functions (including raptor habitat) of the windrow to be impacted. The tree replacement program would be required pursuant to the RMP to ensure establishment of the trees to replace the lost functions.

Full details would be provided in an arborist report that would be submitted for approval by the City and would include all the above requirements/stipulations stated in the RMP (pages 4-35 to 4-36). In addition, at a minimum, all removed windrow trees would be replaced at a 1:1 mitigation ratio, based upon the recommendations of the arborist report, and as approved by the City. Payment of the required RMP impact fee also would reduce the windrow impacts, as

collected RMP impact fees are to be used to fund implementation of the RMP mitigation measures.

Implementation of these measures would ensure the Project is in compliance with the City of Chino Preserve EIR and RMP, if tree windrow impacts would occur.

#### 6.4 Level of Significance after Mitigation

With the implementation of mitigation measures described above, including payment of the RMP mitigation fee, impacts to raptor nesting and burrowing owl (if present) would be reduced to less than significant under CEQA. Because the Project impacts would be mitigated to less than significant, the Project's cumulative impacts similarly would not be significant and hence not be cumulatively considerable.

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#### 8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Carriel 7. Mostor

Signed:\_\_\_\_\_

Date: 9/29/17

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Exhibit 1











1 inch = 300 feet

Coordinate System: State Plane 6 NAD 83 Projection: Lambert Conformal Conic Datum: NAD83 Map Prepared by: C. Lukos, GLA Date Prepared: August 29, 2017



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Project Boundary
Agriculture
Disturbed/Developed
Ornamental
Ruderal



X:\0363-THE REST\0849-15CH74\0849-15\_GIS\Vegetation\REV2\849-15VegetationREV2.mxd



Photograph 1: View from the eastern edge of the dairy property looking west towards the dairy operation and the tree windrow at the Comet Avenue ROW.



Photograph 2: View of the Project site looking northwest.



Photograph 3: View from the northern portion of the dairy property looking south.



Photograph 4: View from the southern portion of the dairy property looking west depicting ruderal vegetation areas and the southern tip of the tree windrow.



**GLENN LUKOS ASSOCIATES** Exhibit 5



# Legend

•	Burrow
	Burrow Complex
	Project Boundary



1 inch = 400 feet



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- Project Boundary
- Cb CHINO SILT LOAM
- Db DELHI FINE SAND
- Hr HILMAR LOAMY FINE SAND



1 inch = 300 feet



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December 14, 2015



David Moskovitz Glenn Lukos Associates, Inc. 29 Orchard Lake Forest, CA 92630

# SUBJECT: Results of a Habitat Suitability Evaluation, ±180-acre Site, City of Chino, San Bernardino County, California

Dear David:

This letter report presents findings of a reconnaissance-level survey conducted to generally evaluate the suitability of a  $\pm$ 180-acre site to support the federally-listed endangered Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*-herein DSFF).

#### Introduction

The site is regionally located in the City of Chino (City), San Bernardino County, California (*Plate 1*). Specifically, the project site is located south of Merrill Avenue, north of Kimball Avenue, east of the Euclid Avenue, and west of Flight Avenue. The site occurs on the "Corona North" and "Prado Dam" USGS 7.5minute topographic maps, Township 2 South, Range 7 West (*Plate 2*). *Plate 3* provides an aerial photograph of the site. Projects proposed in the area that contain potentially suitable habitat to support sensitive biological resources such as the DSFF must demonstrate to reviewing agencies that potential project-related impacts to sensitive biological resources are avoided or minimized. In order to meet the environmental documentation and review requirements, potentially occurring sensitive biological resources must be addressed to demonstrate the applicant's conformance to California Environmental Quality Act (CEQA) and the federal Endangered Species Act (Act) of 1973, as amended. As such, this report is intended to provide biological information to the applicant and reviewing agencies in support of the environmental review process.

As a federally listed endangered species, the DSFF is protected under the Act. As such, federal law prohibits "take" of listed species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. In some cases, habitat modification can constitute prohibitive "take". A section 10(a) permit is required for projects where a determination of "take" is likely to occur during a proposed non-federal activity. If the project were to require a federal permit (e.g., USACE 404 permit), the federal agency issuing the permit would consult with the Service to determine how the action may affect the DSFF under Section 7 of the Act.

The Service routinely reviews environmental documentation for proposed development projects in the area, and as such, would recommend that any impacts to sensitive biological resources be adequately addressed and mitigated pursuant to the Act and CEQA. Due to the inherent limitations of unseasonal or habitat-based data, definitive conclusions regarding the actual presence or absence of DSFF cannot be made in this evaluation, although these limitations do not affect our conclusion that the property does not contain suitable habitat for the DSFF. Accordingly, this report is intended to provide the applicant with general information relative to the potential occurrence of DSFF based solely on the nature of habitat present.



plate 1



December 2015

**Regional Site Location** 

180-acre Chino Site



ECOLOGICAL SCIENCES

USGS Topographic Vicinity Map

180-acre Chino Site

December 2015







plate 3

December 2015

180-acre Chino Site

Aerial of Site Vicinity

#### Selected Species Overview

The Service listed the DSFF as an endangered species on September 23, 1993. This species is only known to occur in association with Delhi sand deposits (USFWS 1997), primarily on twelve disjunct sites within a radius of about eight miles in the cities of Colton, Rialto, and Fontana in southwestern San Bernardino and northwestern Riverside counties. However, recent survey data (1997-03) indicates that DSFF occur in low numbers in Ontario, and also in sub-optimal habitat conditions. The DSFF is restricted to the Colton Dunes, which covers approximately 40 square miles. More than 95 percent of the formerly known habitat has been converted to human uses or severely affected by human activities, rendering it apparently unsuitable for occupation by the species (Smith 1993, USFWS 1997 <u>in</u> Kingsley 1996).

#### **General Habitat Characteristics**

Areas containing sandy substrates with a sparse cover of perennial shrubs and other vegetation constitute the primary habitat requirements for *Rhaphiomidas* flies (USFWS 1997). Potential habitat for the DSFF is typically defined as areas comprised of sandy soil (Delhi series) in open areas commonly dominated by three indicator plant species: California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californica*), and telegraph weed (*Heterotheca grandiflora*). Annual bur-sage (*Ambrosia acanthicarpa*), Rancher's fireweed (*Amsinckia menziesii*), autumn vinegar weed (*Lessingia glandulifera*), sapphire eriastrum (*Eriastrum sapphirinum*), primrose (*Oenothera* sp.), and Thurber's buckwheat (*Eriogonum thurberi*) are also commonly present at occupied DSFF sites. In addition, insect indicator species such as *Apiocera* and *Nemomydas* are also typically associated with occupied DSFF habitat. It is also important to note that the presence or absence of indicator species does not determine presence/absence of DSFF. Rather, these indicator species exhibit a strong correlation to habitats occupied by DSFF. A gradient of habitat suitability exists for DSFF, composed of varying degrees of both natural and artificial conditions.

#### Federal DSF Recovery Units / Core Reserves

Subregional areas encompassing smaller areas known to be inhabited by the DSFF or encompassing areas that contain restorable habitat for the DSFF have been grouped into three Recovery Units (RUs) by the Service based on geographic proximity, similarity of habitat, and potential genetic exchange (USFWS 1997). The subject site is located within an area designated as the Ontario RU. The Ontario RU historically contained the largest block of the Colton Dunes; however, most lands in this RU have been converted to agriculture, or developed for commercial and residential projects (USFWS 1997). The Ontario RU contains several areas that currently support DSFF, and additional areas have been proposed for restoration in the DSFF Recovery Plan. The occupied and/or potentially restorable habitat in the RUs includes only those areas that, at a minimum, contain Delhi Series soils. Further, RUs do not include residential and commercial development, or areas that have been otherwise permanently altered by human actions (USFWS 1997). DSFF will continue to exist in the Ontario RU only with land conservation, a cessation of current habitat-degrading land management practices and recreational uses, and/or a restoration or natural reversion of ecologically damaged lands back to an ecological community typical of Delhi sands formations.

Potentially suitable habitats remaining in the Ontario RU are highly fragmented, and as such, the establishment of a permanent long-term reserve in this RU is currently unresolved. While many degraded sites are currently unsuitable to support DSFF, DSFF have been recorded on certain properties that have been heavily disturbed in the past (e.g., previously graded and/or scraped sites where a cessation of disturbance-related land uses have occurred such that a degree of natural conditions now occur). Accordingly, DSFF may persist on, or disperse to, certain properties that have not been exposed to recurring and/or recent land disturbances. These previously disturbed properties may be important for future preservation of the species in the region. In addition, individual DSFF have been recorded in areas generally considered unsuitable to support this taxon, and with no apparent connectivity to occupied DSFF habitats.



Additional data will be needed on reproduction and mortality rates, dispersal, and habitat variables before further refinement of RU boundaries, development of alternative RU preserve designs, and analyses of population can be made (USFWS 1997). Until such data is obtained, the highest priority will be to protect existing populations of the DSFF (USFWS 1997). To achieve downlisting, areas containing occupied and/or restorable habitat and dispersal corridors need to be evaluated relative to the extent of distribution patterns necessary to support secure populations. Sites to be protected should be selected based on habitat needs of adults and larvae, and willingness of landowners to participate in recovery efforts (USFWS 1997). Several "Core Reserve Areas" have been initially identified by the Service, but to our knowledge, the actual extent of the proposed reserve areas has not been finalized.

#### Focused DSFF Survey Guidelines

The Service prepared Presence/Absence Survey Guidelines for the DSFF in December 1996 (USFWS 1996), with revisions in April 2004. In general, the guidelines maintain that in order to more fully determine the presence or absence of DSFF such that the results are acceptable to the Service, a survey following these guidelines must be conducted. The guidelines require that surveys be conducted in all areas containing Delhi sands twice weekly (two days per week) during the single annual flight period from July 1 to September 20. However, at the discretion of the Service, survey guidelines may be modified depending upon individual site circumstances (e.g., highly degraded sites that don't support constituent elements of potential DSFF habitat or early seasonal emergence periods). During the environmental review process, recommendations to perform focused DSFF surveys are evaluated by reviewing agencies on a site-by-site basis.

#### Methodology

#### Literature Search

Documentation pertinent to the biological resources in the vicinity of the site was reviewed and analyzed. Information reviewed included: (1) the Federal Register listing package for the federally listed endangered DSFF; (2) literature pertaining to habitat requirements of DSFF; (3) the California Natural Diversity Data Base (CNDDB 2015) information regarding sensitive species potentially occurring on the site for the "Corona North" and "Prado Dam" USGS 7.5-minute quadrangle maps, and (4) review of any available reports from the general vicinity of the site.

#### 2015 Habitat-Suitability Evaluation

Ecological Sciences conducted a reconnaissance-level field survey on the subject site to evaluate potential habitat for DSFF on November 5, 2015. The survey was conducted by Scott Cameron, Principal Biologist of Ecological Sciences, Inc. Mr. Cameron holds a current federal permit to conduct focused survey for this species (TE-808642-8). Ecological Sciences biologists have observed numerous DSFF in the field since 1995, and have extensive experience conducting both focused surveys and habitat evaluations for this sensitive taxon. Ecological Sciences is well versed with the biotic characteristics of a range of habitats occupied by DSFF, as well as other sensitive wildlife species potentially occurring in the area. The site was examined on foot by walking a series of meandering transects across the subject property. As mentioned, the primary objective of the one-day field visit was to generally evaluate the site's potential to support DSFF. Dominant plant species and other habitat characteristics present at the site were identified to assess the overall habitat value. Weather conditions included clear skies, 0-1 breezes, and ambient temperatures of 65-68 °F.

# Existing Biological Environment

The subject site is characterized by various active agricultural activities including dairy, sod farms, and a small area located within the Chino Airport. The site contains a single-family residence, multiple dairy-related structures (sheds, corrals, etc.), feeding preparation areas, detention basins, ruderal pastureland, debris dumping areas, and equipment storage areas. The ruderal/disturbed areas support mostly



invasive, non-native annual species. Manure, associated with the ongoing dairy operation, is present throughout much of the dairy and pasture. A deep carpet of exotic grasses generally covers on-site pasturelands and manure spreading areas. Cattle feeding areas were barren ground covered in manure and mud. Surrounding land uses include agricultural areas similar to the subject site, the Chino Airport, and commercial development. *Plates 4a-4c* photographically illustrate existing conditions.

#### Vegetation

Ruderal plants recorded on site included non-native grasses and weedy species such as foxtail chess (*Bromus madritensis spp. rubens*), ripgut grass (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), Mediterranean grass (*Schismus barbatus*), filaree (*Erodium* sp.), Lamb's quarter's (*Chenopodium album*), milk thistle (*Silybum marianum*), Russian thistle (*Salsola tragus*), golden crownbeard (*Verbesina encelioides*), puncture vine (*Tribulus terrestris*), black mustard (*Brassica nigra*), cheeseweed (*Malva parviflora*), pigweed (*Chenopodium* sp.), gum tree windrow (*Eucalyptus* sp.), and salt cedar (*Tamarix* sp.). Vegetative was generally absent in corrals, concrete corral service areas. One native plant was recorded on site, common sunflower (Helianthus annuus). Overall non-native vegetative cover is about 90-95 percent in the pastureland/spreading areas and 100 percent in the sod areas.

#### General Soils Analysis / Soil Conservation Map Review

A review of soil maps prepared for the area by the Natural Resource Conservation Service (NRCS 2015) indicate that the subject site is located within an area mapped as containing Chino silt loam (Cb), Delhi fine sand (Db), Grangeville fine sandy loam (Gr) and Hilmar loamy fine sand (Hr). Various long-standing anthropogenic site disturbances such as agriculture have significantly altered the site's mapped surface soil characteristics. A general soils analysis was conducted due to the close association of DSFF to mostly open, sandy friable soils. No characteristic Db soils were recorded and this soil type is only mapped in a small portion located in the northeast corner of the site. *Plate 5* illustrates mapped soils.

### Discussion

DSFF have relatively narrow habitat requirements that are determined by appropriate plant species and open sand as defining characteristics (Kingsley 1996). It has long been established that a gradient of suitability exists composed of varying degrees of natural and artificial conditions. Observations such as the DSFFs apparent avoidance of dense (both native and non-native) vegetation (>75% coverage) or general avoidance of vegetation that is sparse or not present at all (<5% coverage) appear to suggest that DSFF generally select habitats with a combination of some vegetation, including several species of plants, and some open space with bare sand (Kiyani 1996). The presence of Delhi soils appears to be the most determinative factor of whether an area can provide suitable DSFF habitat. Delhi sands constitute the primary component of a complex ecosystem. A variety of microhabitat characteristics generally constitute potential DSFF habitat (e.g., Delhi soils, vegetation composition, soil chemistry, topography, percent vegetative cover, frequency of non-native plant species, exposure to disturbances, etc.).

While the aforementioned microhabitat conditions are considered optimal/essential to support DSFF, DSFF sometimes occur in areas not typically considered suitable for this taxon. Although individual DSFF have been recorded from sites supporting mostly ruderal, non-native vegetation, most known DSFF-occupied sites contain areas, or are adjacent to areas, of relatively undisturbed exposed patches of friable, sandy soils in association with selected native plant species. History of DSFF colony sites indicates that previously disturbed (by grading, certain types of agriculture, etc.) Delhi sands formations may revert over a few years (through erosion, aeolian processes, fossorial animal activity, and natural vegetative succession) back to conditions capable of supporting DSFF populations. However, these natural processes are dependent upon a cessation of disturbance-related land uses, which prevent the natural reestablishment of a more characteristic Delhi sand community (associated with potential DSFF habitat).







plate **4a** 

Site Photographs 180-acre Chino Site



View to southwest



plate 4b

Site Photographs 180-acre Chino Site



ECOLOGICAL SCIENCES December 2015 plate **4c** 

Site Photographs 180-acre Chino Site



Source: Natural Resources Conservation Service (NRCS-website accessed November 2015)





= = Study Area Boundary

= Extent of Soil Analysis

Site Vicinity Soils 180-acre Chino Site

December 2015

Absent changes in existing land uses, or implementation of a revegetation/restoration effort, the establishment of a more characteristic Delhi sand community (associated with potential DSFF habitat) on the site would be prevented due to deleterious changes in soil chemistry and/or recurring soil disturbances associated with long standing and routine dairy operations. Approaches to habitat restoration will vary from simple, relatively inexpensive, and predictably successful (in cases of enhancing partially occupied sites that are weed overgrown) to complex, costly, and unpredictable (in cases of manured or imported fill sites). Disruption of substrate is deleterious to DSFF habitat because it destroys the cryptoflora crust, which is important to resisting microorganisms and maintaining ecosystem integrity (Belnap 1994 in USFWS 1997). Similarly, the presence of extensive amounts of manure greatly reduces or eliminates the potential use of the site by DSFF. The presence of manure degrades potential DSFF habitat, as manure smothers animals, plants, and habitat where it is dumped (USFWS 1997). According to the DSFF Recovery Plan (USFWS 1997), manure also provides high levels of nutrients for invasive exotic plants such as those recorded in dense coverages on the site. Moreover, restoration of manured sites, although possible, is of the lowest priority according to the DSFF Recovery Plan (USFWS 1997). There exists, in our opinion, no possibility of DSFF to occur on the subject property or on such habitats as exemplified by this property, and were DSFF introduced to the site in its current condition, DSFF could not become established or persist on the site.

There is no connectivity to the subject site from the nearest known (to us) DSFF population ( $\pm$ 5.5 miles northeast of the site) due to the presence of existing development that entirely surrounds the site. While this species likely has the capability of dispersing over relatively large distances of seemingly unsuitable habitats under certain circumstances, it would be reasonable to assume (based on our current knowledge of the species) that the likelihood of DSFF dispersing to the subject site from the nearest known off-site occupied (or historically occupied) site would be extremely low despite the fact that variables such as the length, width, and structural characteristics of dispersal corridors are not fully understood. Accordingly, the subject site would not be considered a viable property for preservation or restoration due to current land use, absence of suitable habitat, geographic location. isolation from undeveloped areas or areas supporting DSFF populations, and surrounding land uses which have long since fragmented potential DSFF habitat in the area.

# Conclusion

Based on results of the December 2015 habitat suitability evaluation, existing conditions present at the site are not consistent with those known or expected to support DSFF. No exposed natural or seminatural open areas with unconsolidated wind-worked granitic soils or dunes are present. Exposure to intensive and recurring substrate disturbances (e.g. active dairy operations) have substantial negative effects on potential DSFF habitat and prevents potentially suitable DSFF microhabitat conditions from developing. Substrate conditions are not consistent with those most often correlated with potential DSFF habitat and no DSFF plant associations are present on site.

Under current conditions, the site would generally be considered prohibitive to DSSF occupation. The underlying soil environment appears to be the most definitive factor of whether an area could potentially support DSFF. Accordingly, the quality of Delhi soils present within the study area was rated for its potential to support DSFF. The area mapped as Delhi soils was visually inspected and rated based on a scale of 1 to 5, with 5 being the best quality and most suitable habitat in the biologist's judgment:

- 1. Soils dominated by heavy deposits of alluvial material including coarse sands and gravels with little or no Delhi sands and evidence of soil compaction. *Unsuitable.*
- 2. Delhi sands are present but the soil characteristics include a predominance of alluvial materials (Tujunga Soils). *Very Low Quality.*
- 3. Although not clean, sufficient Delhi sands are present to prevent soil compaction. Some sandy soils exposed on the surface due to fossorial animal activity. *Low Quality*.



- 4. Abundant clean Delhi sands with little or no alluvial material or Tujunga soils present. Moderate abundance of exposed sands on the soil surface. Low vegetative cover. Evidence of moderate degree of fossorial animal activity by vertebrates and invertebrates. *Moderate Quality*
- 5. Sand dune habitat with clean Delhi sands. High abundance of exposed sands on the soil surface. Low vegetative cover. Evidence (soil surface often gives under foot) of high degree of fossorial animal activity by vertebrates and invertebrates. *High Quality*

Based on the above ratings and existing site conditions, the ±180-acre study area would be considered *Unsuitable* for DSFF. In view of the site's highly disturbed and isolated condition, exposure to extensive and recurring surface disturbances, and analyses of correlative habitat information from a wide range (e.g., relatively disturbed to more natural habitats) of occupied DSFF habitats in the region, the subject site does not contain habitat suitable to support or sustain a viable DSFF population. Therefore, no impacts to DSFF are expected and no mitigation is required for less than significant impacts under CEQA.

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological survey, and that the facts, statements, and information presented herein are true and correct to the best of my knowledge and belief.

Sincerely,

Ecological Sciences, Inc.

Scott D. Cameron Principal Biologist



#### References

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