COLONY COMMERCE CENTER EAST SPECIFIC PLAN

Biological Resources Assessment

Prepared for
Caprock Partners

March 2017

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Biological Resources Assessment

Prepared for
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March 2017

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COLONY COMMERCE CENTER EAST SPECIFIC PLAN

Biological Resources Assessment

1 Introduction

1.1 Background and Purpose

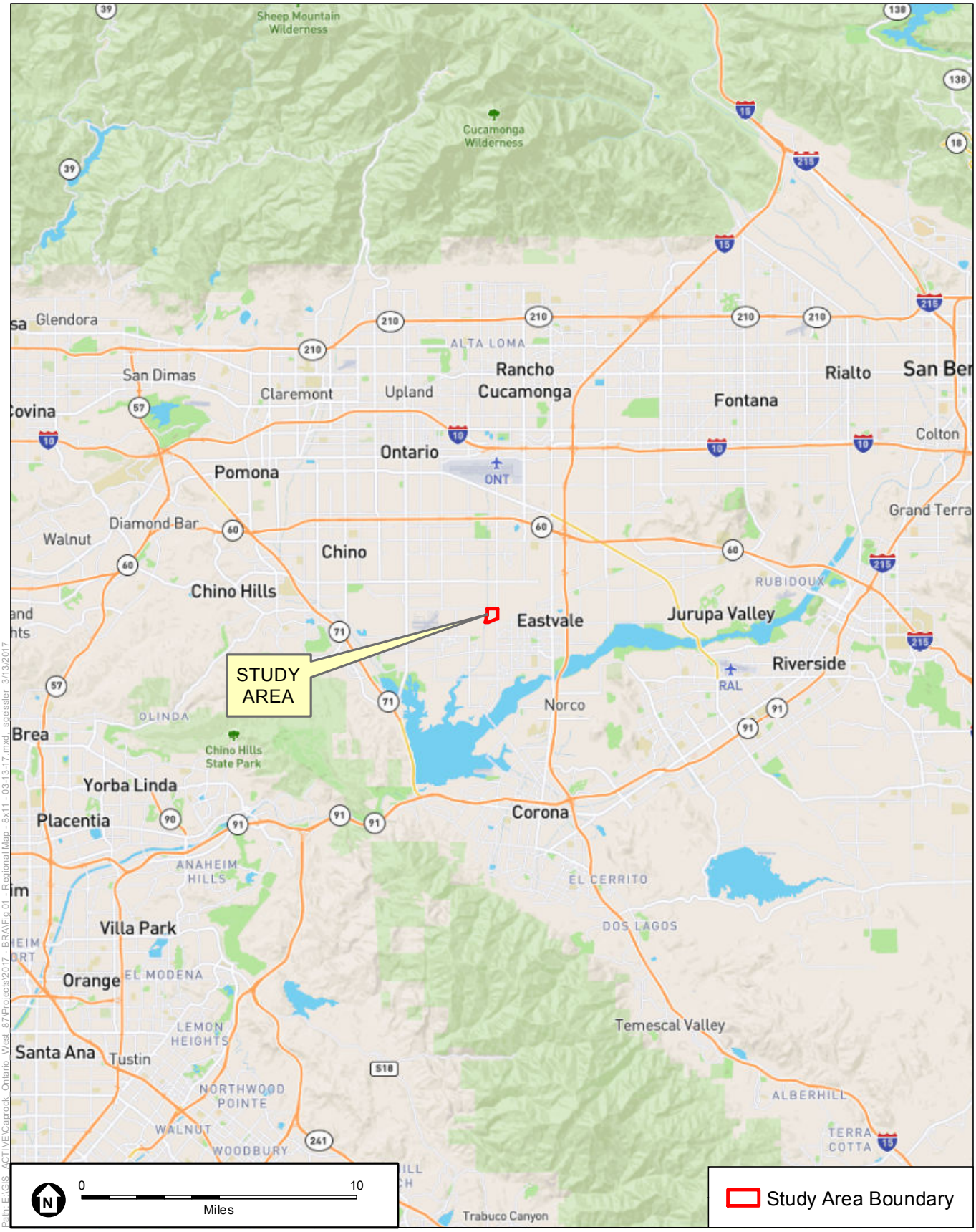
This report presents the findings of a Biological Resources Assessment (BRA) conducted by Environmental Science Associates (ESA) for the approximately 103.38-acre Colony Commerce Center East Specific Plan (project) located in the City of Ontario, San Bernardino County, California. The project includes Assessor's Parcel Numbers (APNs) 218-311-02, -03, -07, -08, -10, -13 (project site) in addition to 0.39 acre of associated infrastructure improvements for a total of 103.77 acres (study area). The purpose of this study is to satisfy the requirements of the California Environmental Quality Act (CEQA), and to supplement subsequent regulatory applications pursuant to Sections 404 and 401 of the Clean Water Act (CWA) and Section 1602 of the California Fish & Game Code (CF&G).

1.2 Sources

This BRA is based on information compiled through field reconnaissance and appropriate reference materials. A general biological survey, habitat assessment, vegetation mapping, and investigation of jurisdictional waters and wetlands was conducted by ESA. The information sources used in preparation of this BRA are provided in Section 9.0, *References*.

1.3 Study Area Location

The study area is generally located approximately 2.5 miles to the east of Interstate (I) 15 and 4.45 miles to the northeast of State Route (SR) 71 (**Figure 1**, *Regional Map*). Specifically, the study area is located south of Merrill Avenue, north of County Line Channel, west of South Archibald Avenue, and east of Cucamonga Creek Channel. The study area can be found on the U.S. Geological Survey (USGS) 7.5-minute Corona North topographic quadrangle map within Section 22, Township 2 South, Range 7 West, as shown in **Figure 2**, *Vicinity Map* (USGS 1967, Earth Survey 2017). The study area is also shown on an aerial as **Figure 3**, *Study Area Map*, and includes the proposed project area and associated infrastructure improvements, as described in Section 2.0 below.



SOURCE: Open Street Map, 2017.

Colony Commerce Center East Specific Plan

Figure 1
Regional Map

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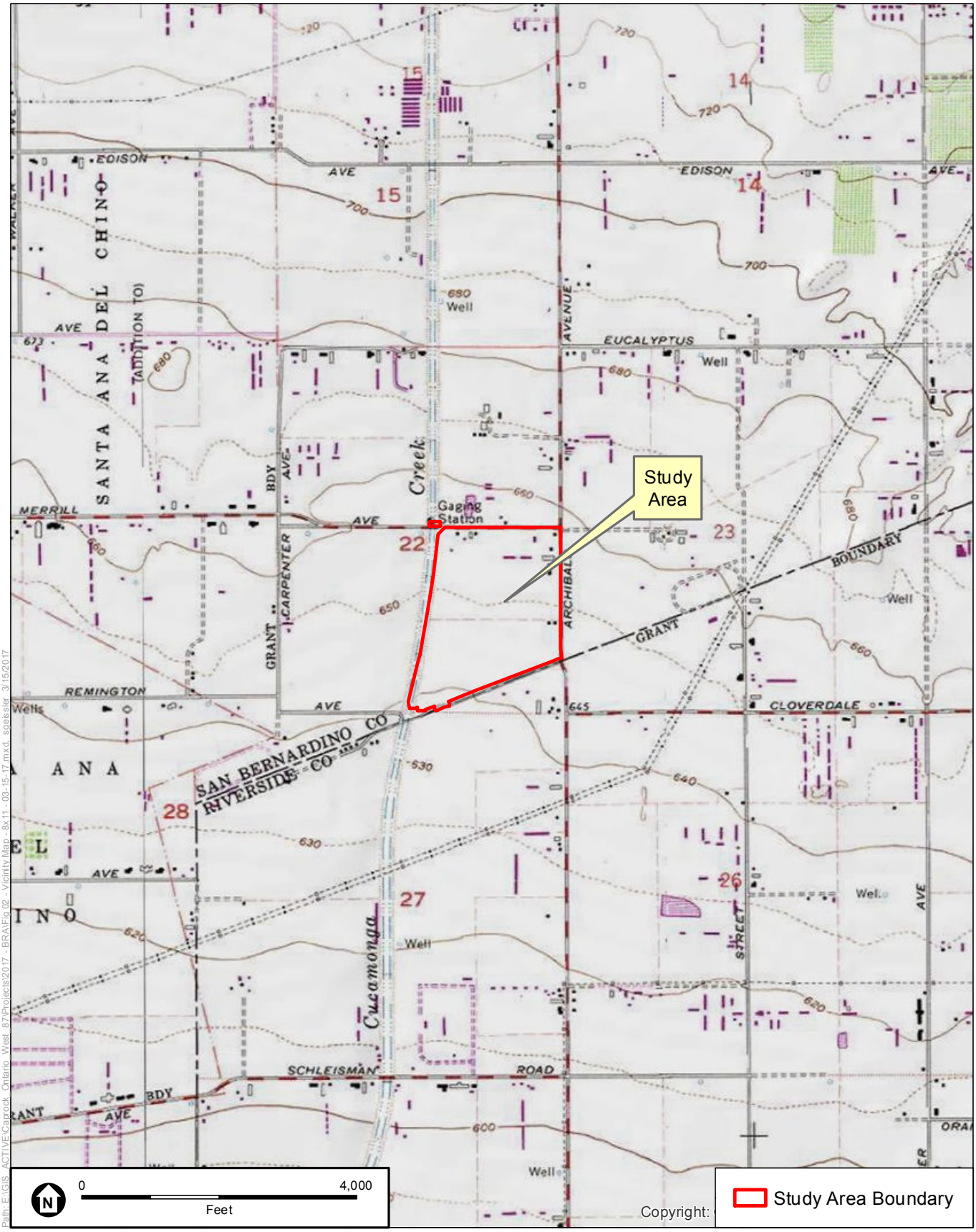

SOURCE: USGS Topographic Series (Corona North, CA).

Colony Commerce Center East Specific Plan

Figure 2
Vicinity Map

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SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 3
Study Area Map

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1.4 Scope of Study

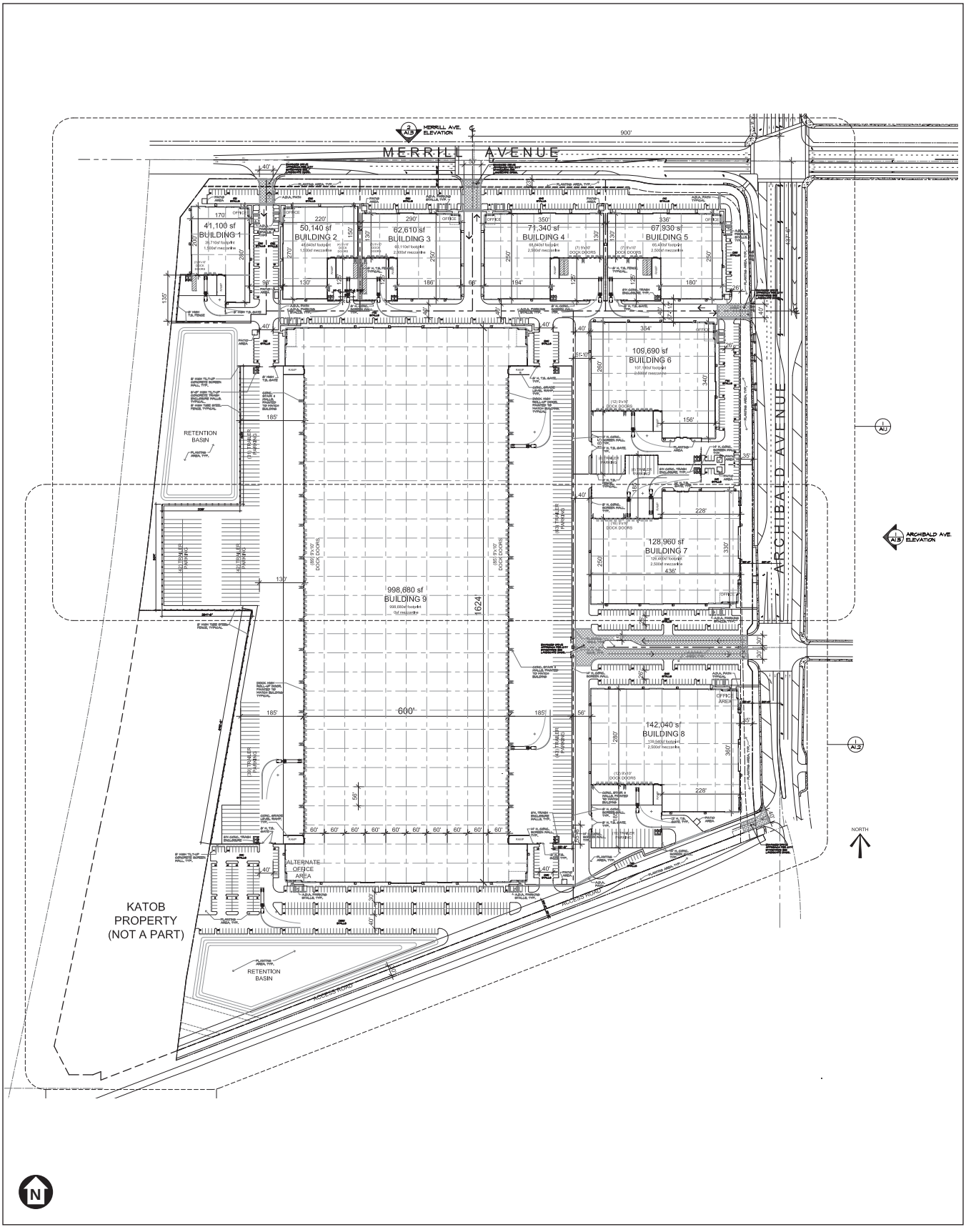
The scope of this BRA encompasses descriptions of the project, methods of study, and existing site conditions including vegetation communities and the potential for special-status biological resources. This BRA evaluates impacts to biological resources pursuant to CEQA thresholds and regulatory requirements, including the project's consistency with the City of Ontario's (the City) General Plan. Avoidance, minimization, and/or mitigation measures are proposed to reduce any significant impacts.

2 Project Description

The project site encompasses approximately 103.38 acres that will provide for future development of an industrial and business park development, as shown in **Figure 4**, *Site Plan*. The Specific Plan is divided into PA-1 in the eastern portion, PA-2 in the western portion, and PA-3 in the southwestern portion. Development of PA-1 and PA-2 are anticipated to occur first, with development of the PA-3 expected to occur at some point in the future. The Specific Plan includes a Land Use Plan, Infrastructure Plan, Design Guidelines, and Development Regulations. For development standards not addressed in the Specific Plan, the City of Ontario Development Code shall govern. The Ontario Plan adopted by the City of Ontario on January 26, 2010 serves as the City's General Plan, and designates the project site for development of industrial uses up to 2.36 million square feet at a maximum 0.55 floor area.

Nine buildings for office and industrial uses are proposed to be developed within PA-1 and PA-2. Each building would have independent park and loadings docks. Landscaping is proposed along the northern, eastern, and southern boundaries of the project site. Two large retention basins are proposed, including one along western project boundary near the northwestern corner and one along the southern project boundary near the southwestern corner. Although no specific development proposal has been submitted for PA-3, similar type of development is anticipated.

Associated infrastructure is also proposed and included as part of the study area, including half-width road improvements to existing Merrill Avenue and Archibald Avenue, bridge widening at Merrill Avenue across Cucamonga Creek Channel, and a storm drain connection from the project site to County Line Channel. Road improvements to Merrill Avenue include four travel lanes, a bikeway, and a sidewalk. Improvements to Archibald Avenue include six travel lanes, a raised median, and a sidewalk. An access road will be developed along the southern project boundary, which will provide access to future development proposed within PA-3.



SOURCE: Douglas Franz Architects, Inc., 2017

Colony Commerce Center East Specific Plan

Figure 4
Site Plan

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Widening of the bridge crossing over Cucamonga Creek Channel at Merrill Avenue may be required by San Bernardino County (the County) as part of the project. Cucamonga Creek Channel occurs to the west of the project site. A small portion of the channel is within the study area and includes the existing impact footprint to widen the bridge and a 30-foot buffer around the footprint for construction related disturbance and access. The study area also includes a small portion of County Line Channel, which is a concrete channel located in the southern portion of the study area. A small portion of the channel is proposed for impacts to install a new storm drain connection, which includes the proposed connection and a 100-foot buffer on either side of the proposed outlet for construction related disturbance and access.

Both Cucamonga Creek Channel and County Line Channel are subject to regulation as jurisdictional waters by the U.S. Army Corps of Engineers (USACE), Santa Ana Regional Water Quality Control Board (RWQCB), and California Department of Fish & Wildlife (CDFW) (collectively, the "resource agencies") and may therefore require authorization pursuant to Section 404 of the Clean Water Act (CWA), Section 401 of the CWA, and Section 1602 of the California Fish & Game Code, respectively. However, given both channels within the study area are entirely concrete channels, all disturbance to jurisdictional areas proposed for bridge widening and storm drain installation activities are anticipated to be considered temporary in nature by the resource agencies. The impact footprint and construction buffer are included within the study area analyzed by this BRA.

The study area analyzed for biological resources in this BRA includes the approximate 103.77 acres proposed for an industrial and business park development, in addition to the entire right-of-way for the proposed half-width road improvements along Merrill Avenue and Archibald Avenue, the area of potential bridge widening within Cucamonga Creek Channel, and the storm drain connection to County Line Channel. Development of the Colony Commerce Center East will be governed by the Specific Plan, the City's Ontario Plan, and a development agreement to include methods for financing, acquisition, and construction of infrastructure. The Ontario Plan establishes policies governing land use, circulation, housing, conservation and open space, noise, safety, and public facilities within the Specific Plan area.

3 Methods of Study

3.1 Approach

This BRA is based on information compiled through field reconnaissance and appropriate reference materials. Surveys included a general biological survey, habitat assessment, vegetation mapping, and investigation of jurisdictional waters and wetlands. Focused surveys for burrowing owl (*Athene cunicularia*) are currently being conducted and will be completed within the 2017 survey window.

3.2 Literature Review

Assessment of the study area began with a review of relevant literature on the biological resources of the study area and surrounding vicinity. The California Natural Diversity Database (CNDDB), a CDFW species account database, was reviewed for all pertinent information regarding the localities of known observations of special-status species and habitats in the vicinity of the study area (CDFW 2017). The vicinity of the study area included the following USGS topographic quadrangles: Black Star Canyon, Corona South, Fontana, Guasti, Lake Mathews, Ontario, Prado Dam, and Riverside West. Federal Register listings, survey protocols, and species data provided by the U.S. Fish and Wildlife Service (USFWS) (USFWS 2017a) and the California Native Plant Society (CNPS) (CNPS 2017) were reviewed in conjunction with anticipated Federal and State listed species potentially occurring within the vicinity. Other data sources reviewed included USFWS critical habitat maps (USFWS 2017b), United States Department of Agriculture Natural Resources Conservation Service (NRCS) soils mapping (NRCS 2017), and eBird (2012). In addition, numerous regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats, in addition to relevant local policies. A list of all relevant references reviewed is included in Section 9.0, *References*.

3.3 Field Investigations

A general biological survey, habitat assessment, vegetation mapping, and investigation of jurisdictional waters and wetlands were conducted by ESA Senior Biologist and Regulatory Scientist Ezekiel Cooley and Biologist Lauren Singleton on December 14, 2016 and January 25, 2017. The observed vegetation communities, jurisdictional features, and other biological features or species observations of interest were mapped on aerial photographs. Survey coverage of the entire study area was ensured using the aerial photographs, with special attention to special-status habitats or those areas potentially supporting special-status flora or fauna, or jurisdictional features.

3.3.1 Plant Community Mapping

Plant communities were mapped directly in the field utilizing a 125-scale (1”=125’) aerial photograph focusing on dominant plant species or land cover, if unvegetated. Plant community names, codes, and descriptions follow *A Manual of California Vegetation, Second Edition*, where applicable (Sawyer et al. 2009). After completing the fieldwork, the plant community polygons were digitized using Geographic Information System (GIS) technology to calculate acreages.

3.3.2 General Plant Inventory

All plant species observed during the general surveys were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Baldwin (2012). Common plant names, when not available from Baldwin, were taken from Munz (1974) and/or Clarke (2007). Since common names vary significantly between references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All plant species observed were recorded in field notes. Special-status plant species are discussed below in Section 3.3.7, *Special-Status Plant Species*.

3.3.3 General Wildlife Inventory

All wildlife species observed within the study area, as well as any diagnostic sign (call, tracks, nests, scat, remains, or other sign), were recorded in field notes. Binoculars and regional field guides were utilized for the identification of wildlife, as necessary. Wildlife taxonomy follows Stebbins (2003) and California Herps (2017) for amphibians and reptiles, the American Ornithologists' Union (1998) for birds, and Jameson and Peeters (1988) for mammals. Since common names vary significantly between references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All wildlife species detected were recorded in field notes. Special-status wildlife species are discussed below in Section 3.3.8, *Special-Status Wildlife Species*.

3.3.4 Wildlife Movement Corridor

An analysis of wildlife movement was conducted based on information compiled from the literature, analysis of aerial photographs and topographic maps, and direct observations made in the field during survey work. Relative to corridor issues, the focus of this assessment was to determine if the change of the existing land use within the study area would have significant impacts on the regional wildlife movement associated with the study area and the immediate vicinity. The *South Coast Missing Linkages: A Wildland Network* for the South Coast Ecoregion document was reviewed to identify any linkage or core areas proposed for preservation within the study area (South Coast Wildlands 2008).

3.3.5 Jurisdictional Delineation

A jurisdictional delineation of existing drainages and wetland features on the study area was conducted by ESA Senior Biologist and Regulatory Scientist Ezekiel Cooley and Biologist Lauren Singleton on December 14, 2016 and January 25, 2017. The purpose of the delineation was to assess the location, extent, and acreage of "waters of the U.S." and/or wetlands under the jurisdiction of the USACE/RWQCB and/or streambed and associated riparian habitat under the jurisdiction of the CDFW. All areas were delineated using the protocol stipulated by the CDFW under Section 1600-1607 of the California Fish and Wildlife Code and by the USACE under Section 404 of the Clean Water Act (CWA). Any potential wetlands or vernal pools were assessed using the procedures stipulated in the USACE Wetland Delineation Manual (Environmental Laboratory 1987) and Arid West Supplement (USACE 2008a and USACE 2008b).

The potential for USACE jurisdictional "waters of the U.S." was based primarily on the presence or absence of jurisdictional field indicators consistent with the USACE guidelines (USACE 2008a), such as the presence of an ordinary high water mark (OHWM) and/or secondary indicators of hydrology, including evidence of the deposition of debris, scour, sediment sorting, and changes in vegetation. The extent of CDFW jurisdiction was assessed based on the limits of the defined bed and bank and includes riparian streambed associated vegetation, where applicable. Areas outside of the streambed that did not exhibit a bed and bank but were deemed to support USACE jurisdiction based on the presence of an OHWM were also presumed to support CDFW jurisdiction. If these criteria were met, data were collected to estimate the acreage of

jurisdictional features potentially regulated by the resource agencies. Upon completion of the field work, documentation of all jurisdictional waters was compiled. The documentation included a map illustrating the location, extent, and acreage of all jurisdictional features (see Section 4.6). Downstream surface connections to known USACE jurisdictional waters were also evaluated in the field and by using satellite imagery and mapping, for the purpose of establishing a connection to downstream "waters of the U.S.," where applicable. The results of the ESA jurisdictional assessment are subject to review and approval by the resource agencies as part of future regulatory permits for the project, if required.

3.3.6 Sensitive Plant Communities

Sensitive plant communities are listed by CDFW on their *Natural Communities List* (CDFW 2010).[1] Communities on this list are given a global (G) and state (S) rarity ranking on a scale of 1 to 5, where communities with a ranking of 5 are the most common and communities with a ranking of 1 are the rarest and of the highest priority to preserve. These high priority communities are denoted on the CDFW list with asterisks. For the purpose of this report, sensitive habitats are those communities that have a state ranking of S3 or rarer. Any sensitive habitats observed on the study area were identified based on the mapped plant communities (see Section 3.3.1, *Plant Community Mapping*).

3.3.7 Special-Status Plant Species

The potential for special-status plant species was assessed based upon the known occurrence of species in the area as identified from CDFW, USFWS, and CNPS databases (see Section 3.2, *Literature Review*), and the presence or absence of suitable habitat within the study area based on plant community mapping (see Section 3.3.1, *Plant Community Mapping*). Suitable habitat was defined as areas with appropriate vegetation communities, soils and/or topography (elevation at mean sea level [MSL]) to support the species based on known occurrences in those habitats and/or CDFW and CNPS documented habitat descriptions for the species. The definitions of suitable habitat were then compared against the vegetation mapping conducted for the study area and local knowledge. A table of special-status plant species was prepared, and the potential for each species to occur was determined based on whether the study area supported potentially suitable habitat for the species.

3.3.8 Special-Status Wildlife Species

The potential for special-status wildlife species was assessed based upon the known occurrence of species in the area as identified from CDFW and USFWS databases (see Section 3.2, *Literature Review*), and the presence or absence of suitable habitat within the study area based on plant community mapping (see Section 3.3.1, *Plant Community Mapping*). Suitable habitat was defined as areas with appropriate vegetation communities and/or topography (elevation at MSL) to support the species based on known occurrences in those habitats and/or CDFW and USFWS documented habitat descriptions for the species. The definitions of suitable habitat were then

[1] *Available online at https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List.*

compared against the vegetation mapping conducted for the study area and local knowledge. A table of special-status wildlife species was prepared, and the potential for each species to occur was determined based on whether the study area supported potentially suitable habitat for the species.

4 Existing Conditions

4.1 Characteristics of the Study Area

4.1.1 Study Area Characteristics

The study area is located in the City of Ontario in San Bernardino County. The northern portion of the study area is currently occupied by an active dairy farm. The soils on the dairy operation area are heavily disturbed by cattle and support scattered ruderal vegetation, such as prickly Russian thistle (*Salsola tragus*) and cheeseweed (*Malva parviflora*). There is a eucalyptus grove in the center of study area that extends from South Archibald Avenue west to Cucamonga Creek Channel. The understory of the eucalyptus grove supports a small linear patch of cattails (*Typha* spp.) and other hydrophytic vegetation associated with runoff from the irrigation mainline that provides water to the crops. The southern portion of the study area is an active crop field. Due to the type of crops planted within this portion of the study area, the fields are heavily irrigated and harvested multiple times a year. In addition to the agricultural areas and eucalyptus grove described above, the study area supports some patches of ruderal vegetation and developed areas comprised of three existing residential homes along South Archibald Avenue and paved and compact dirt roadways along the periphery of the site.

The study area includes one small area within Cucamonga Creek Channel and one small area within County Line Channel, which are both concrete-lined channels that support field indicators associated with USACE, RWQCB and CDFW (collectively “the resource agencies”) jurisdictional waters. Cucamonga Creek Channel is located along the western study area boundary and County Line Channel is located along the southern boundary. Within the dairy operation area in the northern portion of the study area, there is a large excavated pit that is approximately 450 feet in length, 100 feet wide, and 10 feet deep. Within the crop field in the southern portion of the study area, there is a mainline irrigation trench that runs in an east-west direction parallel to the eucalyptus grove. The trench supports a mainline irrigation pipe that provides water to the crops. The excess water collects in an artificial temporary irrigation ditch that runs along the southern study area boundary. Due to the heavy and regular irrigation of the crop fields, the excess water flows southwest within the irrigation ditch and collects at a topographic low point in the most southwestern corner of the study area. A small portion of this area was determined to be wetland.

The topography on the study area is generally flat with an elevation range from the lowest of approximately 639 feet above mean sea level (MSL) on the southwest corner to a high of approximately 663 feet above MSL on the northwest corner of the site. Mapped soils on the study area include three soil types (NRCS 2017), as shown in **Figure 5**, *Soils Map* and described below:

- Hilmar loamy fine sand;
- Grangeville fine sandy loam; and
- Psamments, Fluvents, and frequently flooded soils.

Immediate surrounding land uses include agricultural and farm land to the north, south, and west and a residential development to the east. The San Bernardino-Riverside County line is along the southernmost study area boundary.

4.2 Plant Communities

Descriptions of each of the plant communities found within the study area with the Manual of California Vegetation (MCV) codes are provided below, and locations of each of the plant communities are shown in **Figure 6**, *Plant Communities*.[2] **Table 1**, *Plant Communities* lists each of the communities observed as well as the acreage within the study area. Representative photographs of plant communities found within the study area are included in **Figures 7a** and **7b**, *Site Photographs*.

TABLE 1
PLANT COMMUNITIES

Plant Communities	Acres
Eucalyptus Grove	3.41
Agriculture	88.09
Ruderal	2.82
Developed	9.45
Total	**103.77**

SOURCE: ESA, 2017

4.2.1 Eucalyptus Grove (79.100.00)

Eucalyptus grove is dominated by gum eucalyptus species and occasionally has a shrub or herbaceous layer. Eucalyptus trees are typically planted as windrows or groves, but can also occur naturally in upland areas or along streams. On the study area, a eucalyptus grove dominated by red gum eucalyptus (*Eucalyptus camaldulensis*) was observed in the center of the study area, which extended from South Archibald Avenue west to the Cucamonga Creek Channel. The understory of the eucalyptus grove was primarily comprised of non-native species, such as

[2] *Plant communities include non-vegetated and/or developed areas in order to map the entire project site and account for the acreage studied.*

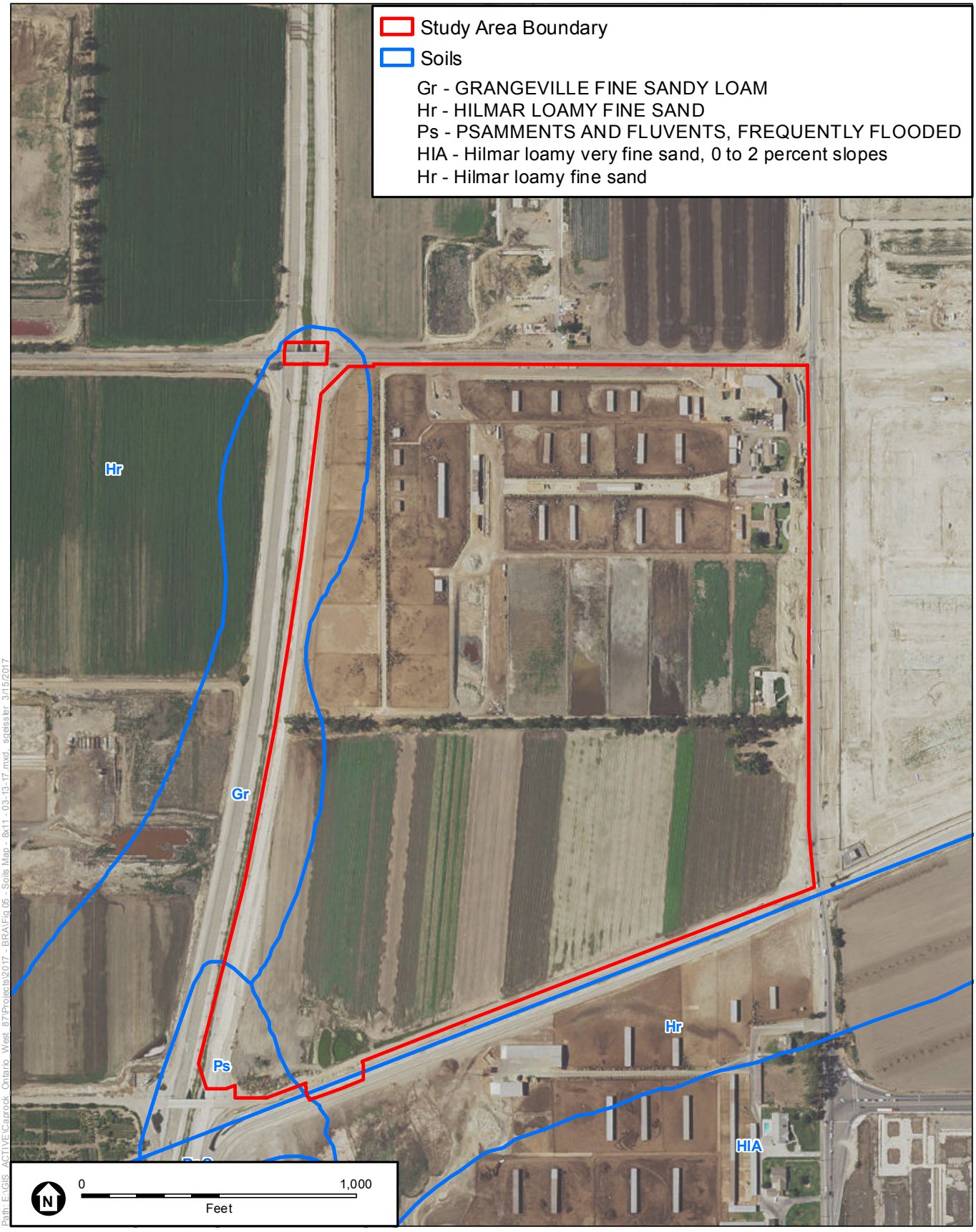
Australian saltbush (*Atriplex semibaccata*), Bermuda grass (*Cynodon dactylon*), juniper (*Juniperus* sp.), nettle-leaved goosefoot (*Chenopodium murale*), prickly Russian thistle, tamarisk (*Tamarix* sp.), and tuna cactus (*Opuntia ficus-indica*).

Although the understory was dominated by non-native species, there was a small linear patch of cattails that was also observed within the understory, which occupied approximately 0.16 acre. The patch was co-dominated by narrow-leaved cattail (*Typha angustifolia*) and broad-leaved cattail (*Typha latifolia*). Other herbaceous species observed within the cattail stand included annual beardgrass (*Polypogon monspeliensis*), barnyard grass (*Echinochloa crus-galli*), curly dock (*Rumex crispus*), nettle-leaved goosefoot, and tall cyperus (*Cyperus eragrostis*). The cattail stand is associated with irrigation activities; however, no drainages or wetlands were observed within the cattail stand. There is an irrigation mainline that runs just south and parallel to this community, which conveys water to the crop field via lateral irrigation lines. The irrigation mainline was originally located further north within the cattails, which likely created favorable conditions for the cattails and other hydrophytic vegetation. However, at the time of the site visit, the irrigation mainline was shifted south of the cattails, which the cattails seem to be declining due to removal of the irrigation water. See Section 4.6.4 below for further discussion on the mainline irrigation trench.

The eucalyptus grove occupied approximately 3.41 acres of the study area.

4.2.2 Agriculture

Agricultural areas consist of land that is actively being used for agricultural operations and do not support natural plant communities. Active agricultural areas occupied the majority of the study area and included a dairy farm in the northern portion and crop fields in the southern portion. The dairy farm is primarily unvegetated due to the disturbance from the cattle, although some scattered ruderal vegetation, such as prickly Russian thistle and cheeseweed, was observed. The field is planted with crops in addition to some scattered ruderal species, such as those described in Section 4.2.3 below. The excess irrigation water is collected in an irrigation ditch along the southern study area boundary and directed to the southwest corner. The irrigation ditch supports herbaceous vegetation, such as barnyard grass, cheeseweed, curly dock, London rocket (*Sisymbrium irio*), nettle-leaved goosefoot, perennial pepperweed (*Lepidium latifolium*), dwarf nettle (*Urtica urens*), and water speedwell (*Veronica anagallis-aquatica*). The vegetation is periodically cleared to maintain water flow in the ditch. Agricultural areas occupied approximately 88.09 acres of the study area.



SOURCE: NAIP, 2014 (Aerial), NRCS, 2005.

Colony Commerce Center East Specific Plan

Figure 5
Soils Map

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SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 6
Plant Communities

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PHOTOGRAPH 1: Overview of the agricultural field in the southern portion of the study area with the eucalyptus grove in the background, facing northwest.

PHOTOGRAPH 2: View of the eucalyptus grove, facing northwest.

PHOTOGRAPH 3: View of the cattail stand within the understory of the eucalyptus grove, facing northwest.

PHOTOGRAPH 4: View of the agricultural field in the southern portion of the study area, facing southwest.

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SOURCE: ESA, 2017

Colony Commerce Center East Specific Plan

Figure 7a
Site Photographs

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PHOTOGRAPH 5: View of a small patch of tree tobacco and black willows located in the southwestern corner of the agricultural field, facing south.

PHOTOGRAPH 6: View of the dairy farm operation in the northern portion of the study area, facing east.

PHOTOGRAPH 7: View of one of the ruderal areas located near the western study area boundary, facing north.

PHOTOGRAPH 8: View of the developed road that runs adjacent to the western study area boundary, facing north.

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SOURCE: ESA, 2017

Colony Commerce Center East Specific Plan

Figure 7b
Site Photographs

ESA

4.2.3 Ruderal

Ruderal vegetation is found in areas heavily disturbed by human activities, such as roadsides, graded fields, and manufactured slopes and frequently weedy, non-native plants are introduced as a consequence. On the study area, non-native species observed within this community included species such as Australian saltbush, cheeseweed, and golden crownbeard (*Verbesina encelioides*). Although the ruderal areas were dominated by non-native species, native species observed included Jimson weed (*Datura wrightii*) and a few mule fat (*Baccharis salicifolia*) sprouts. Ruderal areas were primarily found along the western boundary of the study area, adjacent to Cucamonga Creek Channel. Ruderal areas occupied approximately 2.82 acres of the study area.

4.2.4 Developed

Developed areas consist of man-made structures, such as roadways and buildings. On the study area, developed areas included three residential homes located along the eastern study area boundary off of South Archibald Avenue, the paved and compact dirt roadways along the periphery of the site, and small portions of Cucamonga Creek Channel and County Line Channel. Developed areas occupied approximately 9.45 acres of the study area.

4.3 General Plant Inventory

The plant communities discussed above are composed of a number of plant species. Observations regarding the plant species present were made during the field visit to the study area, and a list of all plant species observed is provided in **Appendix A**, *Floral and Faunal Compendium*. Special-status plant species occurring or potentially occurring within the study area are discussed below in Section 4.7.5, *Special-Status Plant Species*.

4.4 General Wildlife Inventory

The plant communities discussed above provide habitat for common wildlife species. Observations regarding the wildlife species present were made during the field visits to the study area, and a list of all species observed is provided in Appendix A. Special-status wildlife species occurring or potentially occurring within the study area are discussed below in Section 4.7.6, *Special-Status Wildlife Species*.

4.5 Wildlife Movement Corridor

4.5.1 Overview

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and

genetic material (MacArthur and Wilson 1967; Soulé 1987; Harris and Gallagher 1989; Bennett 1990).

Corridors effectively act as links between different populations of a species. A group of smaller populations (termed "demes") linked together via a system of corridors is termed a "metapopulation." The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population's genetic variability is generally associated with an increase in a population's health and long-term viability.

Corridors mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983; Fahrig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and, (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Although the nature of each of these types of movement is species specific, large open spaces will generally support a diverse wildlife community representing all types of movement. Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds on a "local" level to home ranges encompassing many square-miles for large mammals moving on a "regional" level. A number of terms have been used in various wildlife movement studies, such as "wildlife corridor," "travel route," and "wildlife crossing" to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

Travel Route: A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den areas). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.

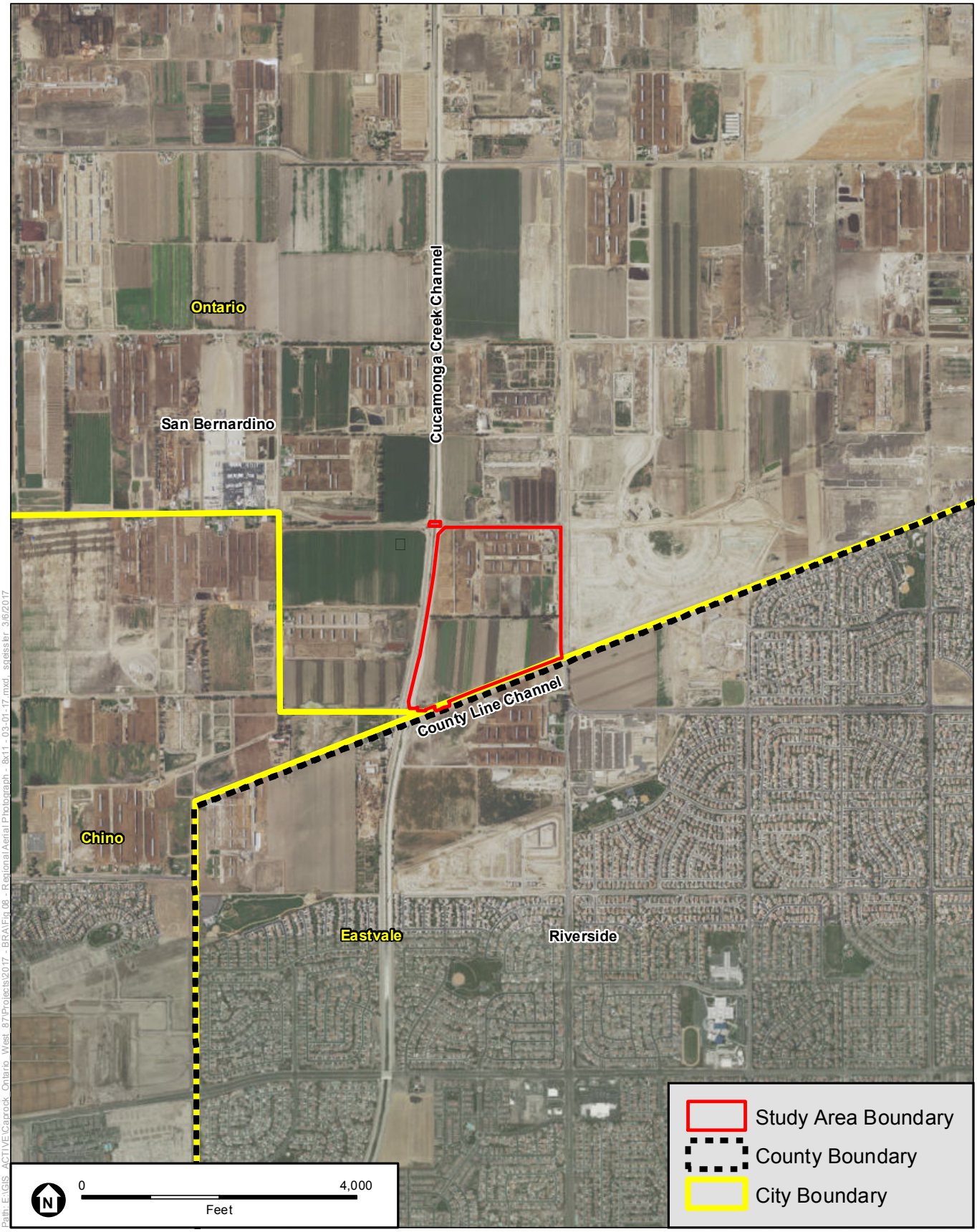
Wildlife Corridor: A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat or landscape linkages") can provide both transitory and resident habitat for a variety of species.

Wildlife Crossing: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often "choke points" along a movement corridor.

4.5.2 Wildlife Movement Within the Study Area

The entire study area is an active agriculture operation and supports limited habitat for wildlife due to continuous disturbance from agricultural activities that occur daily. The northern portion of the study area is an operational dairy farm and supports only scattered ruderal, non-native species. The southern portion of the study area is a planted crop field that is harvested multiple times throughout the year and thus provides little vegetative cover. The study area does not support any native habitat, with the exception of a small, disturbed patch of black willows intermixed with non-native tree tobacco (*Nicotiana glauca*) in the southwestern corner and a linear patch of cattails underneath the eucalyptus grove located in the center of the site. Both patches of native habitat are isolated, small in acreage, and are subjected to disturbance during agricultural activities. Due to the presence of cattle in the northern portion, harvesting of crops in the southern portion, farming equipment operated in the northern and southern portions, and lack of substantial native habitat, wildlife presence is limited on the study area.

The study area is located approximately 2.5 miles west of I-15, 3.3 miles south of SR-60, and 4.6 miles northeast of SR-71. As shown on **Figure 8,** *Regional Aerial Photograph*, the study area is immediately surrounded by crop fields and dairy farms to the north, south, and west and a residential development to the east. Residential development within the City of Eastvale is located approximately 0.4 mile to the south and 0.5 mile to the east of the study area. The Preserve, a large residential development in the City of Chino, is located approximately 0.8 mile to the southwest of the study area. Since the land surrounding the study area is dominated by active crop fields and dairy farms, the surrounding area does not support large patches of natural communities that would provide habitat, resources, and cover for wildlife.



SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 8
Regional Aerial Photograph

ESA

As previously described, wildlife movement activities occur at a variety of scales from a "local" level to a "regional" level. Regional movement through the study area is unlikely due to limited vegetation (e.g., for habitat and cover) and development/disturbance present on the study area and surrounding vicinity. There may be some potential for regional movements via Cucamonga Creek Channel located to the west of the study area. The majority of Cucamonga Creek is channelized and surrounded by chain link fence, thus reducing its use by wildlife for movement within the region. Cucamonga Creek originates in the San Bernardino Mountains to the east of Mount Baldy and to the west of Lytle Creek. Once it exits the San Bernardino Mountains via Cucamonga Canyon, the creek becomes channelized and flows south for approximately 13.0 miles before it reaches the northwest corner of the study area. Cucamonga Creek Channel flows south adjacent to the western boundary of the study area for approximately 0.5 miles.

Cucamonga Creek Channel continues to flow south/southwest within the concrete channel for approximately 2.0 miles, at which point it becomes soft-bottomed and flows into the Santa Ana River at Prado Basin. Wildlife could potentially use Cucamonga Creek to travel regionally through the area to Prado Basin, such as waterfowl and shorebirds. However, habitat within the concrete-lined channel is limited since the portion of the channel adjacent to the study area does not support vegetation for wildlife to use for cover.

A small portion of another concrete channel, County Line Channel, is located within the southern study area boundary and is a tributary to Cucamonga Creek Channel. This channel flows underground approximately 0.75 miles upstream/northeast from the study area. As such, this channel most likely does not facilitate wildlife movement.

The study area is not within any linkages identified by the South Coast Missing Linkages report; the nearest linkage design identified is for the San Gabriel-San Bernardino Connection located approximately 13 miles north (South Coast Wildlands 2008). Since the study area is not identified as a linkage by the South Coast Wildlands, and it does not support habitat that connects two or more habitat patches that would otherwise be fragmented or isolated from one another, the study area is not considered a wildlife corridor. The study area may provide limited opportunities for wildlife movement, more likely for local wildlife movement as described below.

Movement on a smaller or "local" scale could occur within the study area for species that are less restricted in movement pathway requirements or are adapted to urban areas (e.g., raccoon [*Procyon lotor*], coyote [*Canis latrans*], and bird species in general). Although the study area is dominated by agricultural areas (e.g, on the active dairy farm and crop fields) that lack natural vegetation and do not contain habitat to support wildlife (with the exception of some limited foraging areas for bird species), the eucalyptus grove supporting a small stand of cattails within the understory and scattered ruderal areas provide some limited patches of habitat that wildlife can use for cover and resources. As such, it likely supports some local wildlife movement within the study area and/or nearby areas for foraging and shelter. Data gathered from the biological survey indicates that the study area contains habitat that supports common species of invertebrates, reptiles, birds, and small mammals.

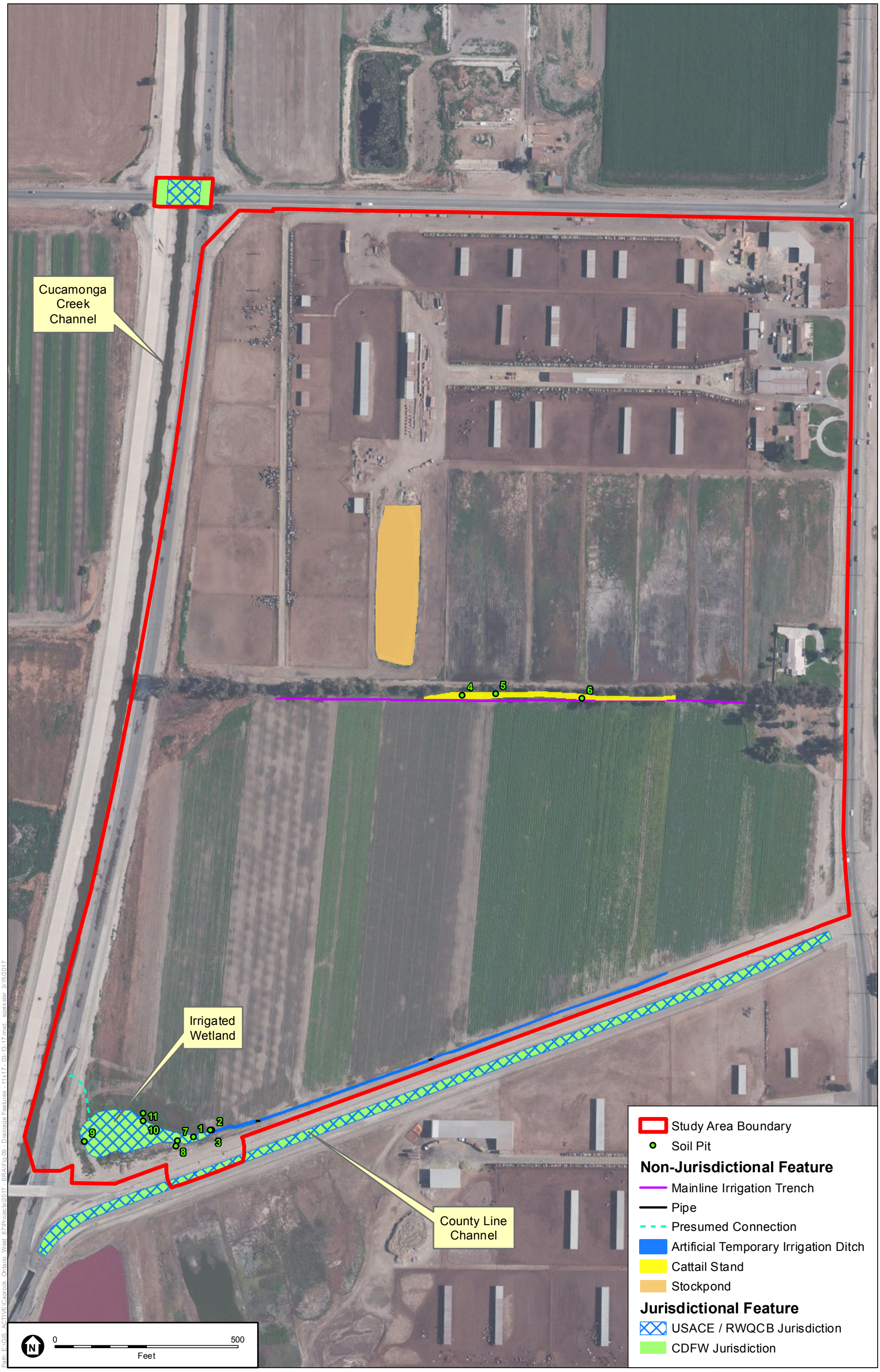
Populations of animals such as insects, reptiles, small mammals, and a few bird species may find all their resource requirements without moving far or outside of the study area at all. The home range and average dispersal distance of many of these species may be entirely contained within the study area and immediate vicinity. Occasionally, individuals expanding their home range or dispersing from their parental range could attempt to move outside of the study area, if feasible, based on the surrounding restrictions to movement from development (see above).

In summary, the study area may support some limited live-in and movement habitat for common species adapted to urban areas on a local scale (i.e., some live-in and at least marginal movement habitat for invertebrates, reptiles, birds, and small mammal species). However, due to the active agricultural activities and dairy farm on the study area and surrounding areas as well as the developed nature of the adjacent Cucamonga Creek Channel and County Line Channel, the study area likely provides little to no function to facilitate movement for wildlife species on a regional scale and it is not identified as a regionally important dispersal or seasonal migration corridor by South Coast Wildlands.

4.6 Jurisdictional Waters and Wetlands

An investigation of jurisdictional waters on the study area was performed by ESA Senior Biologist and Regulatory Scientist Ezekiel Cooley and Biologist Lauren Singleton on December 14, 2016 and January 25, 2017. Based on the results of the investigation, the study area was determined to support a small portion of County Line Channel located along the southern study area boundary, which is a tributary to Cucamonga Creek Channel located to the west of the study area. In addition, a small portion of Cucamonga Creek Channel at Merrill Avenue is within the northwestern portion of the study area. County Line Channel and the small portion of Cucamonga Creek Channel that are within the study area were determined to support approximately 0.11 acre and 0.16 acre of non-wetland USACE/RWQCB "waters of the U.S." and 0.11 acre and 0.28 acre of CDFW jurisdictional streambed, respectively. In addition, a wetland area has formed at a topographic low point in the southwest corner where water collects due to the heavy and regular irrigation of the crop fields in the southern portion of the study area. The irrigated wetland was determined to support a total of approximately 0.55 acre of wetland USACE/RWQCB "waters of the U.S." and CDFW jurisdictional streambed and associated vegetation (**Appendix B**, *Wetland Data Sheets*). The jurisdictional features are shown on **Figure 9**, *Drainage Features* and a summary of the jurisdictional features assessed within the study area is provided below and in **Table 2**, *Jurisdictional Drainage Features*. Photographs of the jurisdictional features are provided in **Figures 10a** and **10b***, Drainage Feature and Stock Pond Photographs*.

In addition to jurisdictional features described above, three non-jurisdictional features were observed within the study area. These included a mainline irrigation trench, an artificial temporary irrigation ditch, and a stock pond, which are entirely related to the agricultural activities that historically and currently occur on the study area. The non-jurisdictional features are also described in detail below and representative photographs are included on Figure 10.



SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 9
Drainage Features

ESA

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PHOTOGRAPH 1: View of the County Line Channel located to the south of the study area, facing southwest (jurisdictional).

PHOTOGRAPH 2: View of the irrigated wetland area, facing northeast (jurisdictional).

PHOTOGRAPH 3: View of the irrigated wetland area, facing west (jurisdictional).

PHOTOGRAPH 4: View of soil pit #1 located within the irrigated wetland.

D170027.00

SOURCE: ESA, 2017

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Figure 10a
Drainage Feature and Stock Pond Photographs

ESA

PHOTOGRAPH 5: View of the cattail stand within the eucalyptus grove understory to the right and the irrigation mainline and associated trench to the left, facing west (non-jurisdictional).

PHOTOGRAPH 7: View of the temporary artificial irrigation ditch located along the southern study area boundary, facing northwest (non-jurisdictional).

PHOTOGRAPH 6: View of the lateral irrigation lines that convey water from the mainline to the agricultural field, facing north. The excess water collects in a temporary artificial irrigation ditch located along the southern study area boundary (non-jurisdictional).

PHOTOGRAPH 8: View of the stock pond within the dairy operation in the northern portion of the study area, facing north (non-jurisdictional).

D170027.00

SOURCE: ESA, 2017

Colony Commerce Center East Specific Plan

Figure 10b
Drainage Feature and Stock Pond Photographs

ESA

TABLE 2
JURISDICTIONAL DRAINAGE FEATURES[a]

Drainage	USACE/RWQCB (acres)	CDFW (acres)
County Line Channel	0.11	0.11[b]
Cucamonga Creek Channel	0.16	0.28
Irrigated Wetland	0.55	0.55
Total	**0.82**	**0.94**

NOTES:
[a] USACE/RWQCB acres are included within the CDFW acres, therefore the numbers are not cumulative.
[b] Within County Line Channel, USACE/RWQCB jurisdiction is equivalent to CDFW jurisdiction since the channel has vertical walls.

SOURCE: ESA, 2017

4.6.1 County Line Channel (Jurisdictional)

County Line Channel is a regional, vertical-walled concrete channel that accepts runoff from San Bernardino County and conveys flows to Cucamonga Creek Channel. The channel was created as part of the Master Plan of Drainage for the New Model Colony (L. D. King, Inc. 2000). County Line Channel originates at the intersection of Milliken Avenue and Bellegrave Avenue, approximately 2.15 miles to the northwest of the study area. The channel extends southwest along Bellegrave Avenue/Remington Avenue and flows along the southern study area boundary for approximately 0.40 mile, draining into Cucamonga Creek Channel to the southwest of the study area.

County Line Channel totals approximately 0.11 acres of non-wetland USACE/RWQCB "waters of the U.S." and CDFW jurisdictional streambed within the study area.

4.6.2 Cucamonga Creek Channel (Jurisdictional)

The small portion of Cucamonga Creek within the study area is a trapezoidal concrete channel. Cucamonga Creek originates to the north of the study area in the San Bernardino Mountains to the east of Mount Baldy and to the west of Lytle Creek headwaters. Once it exits the San Bernardino Mountains via Cucamonga Canyon, the creek becomes channelized and flows south for approximately 13.0 miles before it reaches the northwest corner of the study area. Cucamonga Creek flows south adjacent to the eastern project boundary for approximately 0.5 miles, after which it continues to flow within the concrete channel for an additional 2.15 miles before becoming soft-bottomed for another 2.15 miles where it merges with the Santa Ana River at the Prado Flood Control Basin in Riverside County. Ultimately, it discharges into the Pacific Ocean south of Huntington Beach in Orange County.

Cucamonga Creek Channel totals approximately 0.16 acre of non-wetland USACE/RWQCB "waters of the U.S." and 0.28 acre of CDFW jurisdictional streambed within the study area.

4.6.3 Irrigated Wetland (Jurisdictional)

A small wetland area was observed in the southwest corner of the study area, which also extends off-site to the southwest of the study area. The crops planted in the southern portion of the study area require a large amount of irrigation water. The excess water used to irrigate the crop field collects in a non-jurisdictional irrigation ditch that was excavated along the southern study area boundary (see Section 4.6.5 below for description of the irrigation ditch). The excess water flows southwest within the irrigation ditch and collects at a topographic low point in the southwest corner of the study area. The hydrology of the wetland area is entirely tied to the heavy irrigation that occurs regularly within the crop field. Based on historic aerials, the study area has been used for agricultural purposes prior to 1938, at which time the wetland area was not present (Historic Aerials 1938). Ponded water in the southwest corner is not evident in a historic aerial from 1980, but does appear to be present in 1994 (Historic Aerials 1980, 1994). Therefore, based on historic imagery of the study area, the wetland is presumed to not be natural and was created by excess runoff from the agricultural activities between 1980 and 1994.

The wetland area experiences a significant amount of disturbance from agricultural activities throughout the year, which is visible on historic aerials of the study area. The irrigation water appears to be controlled by berms that are created and removed throughout the year. A large berm was constructed in the southwestern corner sometime between June 2012 and March 2013 and was observed during the site visit. The berm was presumably created to prevent the irrigation water from overflowing into the adjacent Cucamonga Creek Channel and County Line Channel (Google Earth 2012, 2013). During significant storm events, the southwest corner does appear to flood, overtopping the berm and spilling over a paved access road into Cucamonga Creek Channel. Evidence of flow from the wetland area into Cucamonga Creek Channel was observed during the site visits and is shown as a dashed line on the Figure 9; however, this non-jurisdictional, presumed connection is not an ordinary condition. The wetland area supports hydrophytic plant species, including barnyard grass, curly dock, London rocket, perennial pepperweed, dwarf nettle, tree tobacco, and water speedwell. In addition, approximately four black willows (*Salix goodingii*) were observed within the wetland area. The vegetation within the wetland area appears to be periodically removed and machinery associated with the agricultural activities is driven through the area, which is evident on the historic aerials available on Google Earth. Soils within the irrigated wetland are comprised of sandy clay loam and sandy loam.

The wetland area is not considered to support suitable habitat for fairy shrimp due to the consistent disturbance associated with the agricultural activities and the fact that its hydrology is entirely fed by irrigation of the crop field, which is continuous and does not experience significant drying for a prolonged period. The nearest fairy shrimp observation on CNDDB is approximately 14 miles to the southwest of the study area near Villa Park Dam in Orange County. There are no USFWS fairy shrimp critical habitat mapped within the vicinity of the study area and the study area does not support any plants listed by USACE as vernal pool indicator species (USACE 1997). Based on the lack of significant clay soils and vernal pool plant indicator species within the wetland area; lack of fairy shrimp observations or critical habitat within the vicinity of the study area; and because the study area did not historically support vernal pool habitat based on aerial review, the study area does not likely support suitable habitat for fairy shrimp species.

Soil pits were examined at the most saturated locations and along the fringes of the wettest portions of the southwest corner, which are shown on Figure 9. The completed wetland determination data forms are provided in Appendix B. Based on the delineation, the irrigated wetland was determined to support a total of approximately 0.55 acre of wetland USACE/RWQCB "waters of the U.S." and CDFW jurisdictional streambed and associated vegetation. However, since the wetland area formed as recent as 1994, is entirely dependent on the heavy irrigation that occurs on the crop fields, and experiences constant disturbance from agricultural activities, the functions and values of the wetland are limited in comparison to a wetland that has been formed under more natural conditions. Although the irrigated wetland is presumed to be under the jurisdiction of USACE/RWQCB and CDFW for the purposes of this report, the resource agencies may determine during the permitting process that the irrigated wetland is not jurisdictional due to its dependence on the irrigation.

4.6.4 Mainline Irrigation Trench (Non-Jurisdictional)

The crop field in the southern portion of the study area is irrigated by a mainline pipe that runs in an east-west direction parallel to the eucalyptus grove in the center of the study. The water from the mainline is then conveyed to the crops south via lateral irrigation lines. The mainline pipe is located within a swale-like feature that supports pockets of standing water and some herbaceous plant species, such as cheeseweed, Bermuda grass, and dwarf nettle. Since the mainline irrigation trench is manmade and serves to irrigate the crops, it is ESA's opinion that this feature should not be considered USACE, RWQCB or CDFW jurisdictional.

The mainline pipe was originally located slightly north within the mapped cattail stand (see Figure 9). At the time of the site visit, the mainline was relocated further south of the cattail stand and no water was present within the cattail stand at the time of the survey. The cattails and other hydrophytic vegetation appear to be dependent on the water from the mainline since the vegetation seemed to be declining at the time of the site visit due to the repositioning of the mainline. Although the cattails are not associated with a drainage feature, cattails are typically considered hydrophytic vegetation and are often an indicator of wetlands; however, soil pits were examined within the cattails (see Figure 9), which were negative for hydric soil and wetland hydrology as shown on the data sheets provided in Appendix B. Since the cattail stand does not exhibit jurisdictional field indicators associated with streambeds, such as the presence of an OHWM or a defined bed and bank, and the soil pits were negative for the presence of wetlands, the cattail stand was not considered to be USACE/RWQCB or CDFW jurisdictional.

4.6.5 Artificial Temporary Irrigation Ditch (Non-Jurisdictional)

The excess water used to irrigate the crop field in the southern portion of the study area collects in an artificial temporary irrigation ditch located along the southern boundary, which conveys the irrigation water to the wetland observed in the southwestern corner (see Section 4.6.3 above). The artificial temporary irrigation ditch is entirely fed by the excess irrigation that occurs within the crop field immediately to the north. There are two earthen crossings that allow farming equipment access the crop field from existing dirt road along the southern boundary of the study area. Water is conveyed under these crossings by a small PVC pipe. Herbaceous vegetation

associated with the irrigation ditch included barnyard grass, cheeseweed, dwarf nettle, nettle-leaved goosefoot, and water speedwell. The vegetation appears to be periodically cleared to maintain water flow through the irrigation ditch. Since the artificial temporary irrigation ditch does not exhibit jurisdictional field indicators associated with streambeds, such as the presence of an OHWM or a defined bed and bank, and is outside the limits of the wetland area, the irrigation ditch is not considered to be USACE/RWQCB or CDFW jurisdictional.

4.6.6 Stock Pond (Non-Jurisdictional)

A stock pond is located in the northern portion of the study area, just east of the cattle pens along the western study area boundary, and was created as part of the ongoing dairy operations. The stock pond was approximately 450 feet by 100 feet wide and 10 feet deep. The stock pond was mostly dry at the time of the field survey, but held a small amount of water presumed to be associated with waste from the dairy operations. The stock pond is mostly unvegetated but supports some scattered ruderal species, such as prickly Russian thistle. The stock pond feature does not appear to support biological functions and values. The stock pond does not support a surface connection to Cucamonga Creek Channel located approximately 560 feet to the west. Based on this, the stock pond is not considered USACE, RWQCB or CDFW jurisdictional.

4.7 Special-Status Biological Resources

The following discussion describes the plant and wildlife species present, or potentially present, within the study area that have been afforded special recognition by Federal, State, or local resource conservation agencies and organizations. These species have declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife. Protected special-status species are classified by either Federal or State resource management agencies, or both, as threatened or endangered, under provisions of the Federal and State Endangered Species Acts (FESA and CESA, respectively).

4.7.1 Federal Special-Status Resource Protection and Classifications

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species which 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, unless properly permitted, it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA as: "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 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 which could affect a

federally listed plant or animal species, the property owner and agency are required to consult with USFWS pursuant to Section 7 of the ESA if there is a federal nexus, or consult with USFWS and potentially obtain a permit pursuant to Section 10 of the ESA in the absence of a federal nexus. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

All references to Federally-protected species in this BRA include the most current published status or candidate category to which each species has been assigned by USFWS. For purposes of this assessment the following acronyms are used for Federal status species, as applicable:

- FE: Federally-listed as Endangered
- FT: Federally-listed as Threatened
- FPE: Federally proposed for listing as Endangered
- FPT: Federally proposed for listing as Threatened
- FPD: Federally proposed for delisting
- FC: Federal candidate species (former C1 species)

Some of the USFWS offices maintain a database of listed species within their jurisdiction, for example the Sacramento[3] and Carlsbad[4] offices. The Carlsbad USFWS Office jurisdiction encompasses the counties of Los Angeles, Orange, Riverside, San Bernardino, Imperial, and San Diego.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) protects individuals as well as any part, nest, or eggs of any bird listed as migratory. In practice, Federal permits issued for activities that potentially impact migratory birds typically have conditions that require pre-disturbance surveys for nesting birds. In the event nesting is observed, a buffer area with a specified radius must be established, within which no disturbance or intrusion is allowed until the young have fledged and left the nest, or it has been determined that the nest has failed. If not otherwise specified in the permit, the size of the buffer area varies with species and local circumstances (e.g., presence of busy roads, intervening topography, etc.), and is based on the professional judgment of a monitoring biologist. A list of migratory bird species protected under the MBTA is published by USFWS.

Federal Clean Water Act, Section 401

The mission of the RWQCB is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the state's waters, recognizing local differences in climate, topography, geology, and hydrology. The California RWQCB is responsible for implementing compliance not only with state codes such as the California Water Code, but also some federal acts such as Section 401 of the CWA. Section 401 of the CWA requires that any applicant for a federal permit for activities that involve a discharge to waters of the state shall

3 *http://www.fws.gov/sacramento/ES_Species/Lists/es_species_lists-overview.htm*
4 *http://www.fws.gov/carlsbad/SpeciesStatusList/CFWO_Species_Status_List.htm*

provide the federal permitting agency with a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal CWA.[5] As such, before the USACE will issue a CWA Section 404 permit, applicants must apply for and receive a Section 401 water quality certification (WQC) from the RWQCB. The RWQCB regulates "discharging waste, or proposing to discharge waste, within any region that could affect "waters of the state" (Water Code § 13260 (a)), pursuant to provisions of the Porter-Cologne Water Quality Control Act which defines RWQCB jurisdictional "waters of the state" as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code § 13050 (e)).

With the exception of isolated waters and wetlands, most discharges of fill to waters of the state are also subject to a CWA Section 404 permit. If a CWA Section 404 permit is not required for the project, the RWQCB may still require issuance of Waste Discharge Requirements (WDR) under the Porter-Cologne Water Quality Control Act. The RWQCB may regulate isolated waters that are not under jurisdiction of the USACE through issuance of WDR's. However, projects that obtain a Section 401 WQC are simultaneously enrolled in a statewide general WDR. Processing of Section 401 WQC's generally requires submittal of 1) a construction storm water pollution prevention plan (SWPPP), 2) a final water quality technical report that demonstrates that post-construction storm water Best Management Practices (BMPs) comply with the local design standards for municipal storm drain permits (MS4 permits) implemented by the State Water Resources Control Board effective January 1, 2011, and 3) a conceptual Habitat Mitigation and Monitoring Plan (HMMP) to compensate for permanent impacts to RWQCB waters, if any. In addition to submittal of a CEQA document, a WQC application typically requires a discussion of avoidance and minimization of impacts to RWQCB jurisdictional resources, and efforts to protect beneficial uses as defined by the local RWQCB basin plan for the project. The RWQCB cannot issue a Section 401 WQC until the project CEQA document is certified by the lead agency.

Federal Clean Water Act, Section 404

Section 404 of the CWA regulates the discharge of dredged material, placement of fill material, or excavation within "waters of the U.S." and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. "Waters of the U.S." are defined by the CWA as "rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands." Wetlands are defined by the CWA as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." The permit review process entails an assessment of potentially adverse impacts to USACE jurisdictional "waters of the U.S.".

Over the years, the USACE has modified its regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters, memorandums, or more expansive instruction guidebooks. These guidance documents help to update and define how jurisdiction is claimed, and how these waters of the U.S. will be regulated. The most recent, significant modification occurred on June 5, 2007, subsequently updated in December 2008,

5 *33 USC 1341 (a) (1).*

when the USACE and the U.S. Environmental Protection Agency (EPA) issued a series of guidance documents outlining the requirements and procedures, effective immediately, to establish jurisdiction under Section 404 of the CWA and the Section 10 of the Rivers and Harbors Act of 1899. These documents are intended to be used for all jurisdictional delineations and provide specific guidance for the jurisdictional determination of potentially jurisdictional features affected by the U.S. Supreme Court rulings in *Rapanos v. the United States* and *Carabell v. the United States* 547 U.S. 715 (2006) (jointly referred to as "*Rapanos*").

The *Rapanos* case outlines the conditions and criteria used by the USACE to assess and claim jurisdiction over non-navigable, ephemeral tributaries. Under a plurality ruling, the Court noted that certain "not relatively permanent" (i.e., ephemeral), non-navigable tributaries must have a "significant nexus" to downstream traditional navigable waters to be jurisdictional. An ephemeral tributary has a significant nexus to downstream navigable "waters" when it has "more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a Traditional Navigable Water (TNW)." A significant nexus is established through the consideration of a variety of hydrologic, geologic and ecological factors specific to the particular drainage feature in question. A significant nexus determination is provided by the USACE to the EPA for the final determination of federal jurisdiction. Drainage features that do not meet the significant nexus criteria based on completion of an USACE/EPA approved final significant nexus determination and/or are determined to be isolated pursuant to the SWANCC ruling (see below) may still be regulated by CDFW under Fish and Game Code Section 1600 or the RWQCB under the Porter-Cologne Water Quality Act.

On January 15, 2003, the USACE and EPA issued a Joint Memorandum to provide clarifying guidance regarding the United States Supreme Court ruling in the *Solid Waste Agency of Northern Cook County V. United States Army Corps of Engineers*, No. 99-1178 (January 9, 2001) ("the SWANCC ruling"), (Federal Register: Vol. 68, No. 10.). This ruling held that the CWA does not give the federal government regulatory authority over non-navigable, isolated, intrastate waters. As a result of this decision, some previously regulated depressional areas such as mudflats, sandflats, wetlands, prairie potholes, wet meadows, playa lakes, natural ponds, and vernal pools, which are not hydrologically connected to other intra- or inter-state "waters of the U.S.," are no longer regulated by the USACE.

4.7.2 State of California Special-Status Resource Protection and Classifications

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 Wildlife Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened or endangered 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."

Additionally, some special-status mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Wildlife Code, Sections 4700 and 3511, respectively.

California Species of Special Concern are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. Informally listed species are not protected per se, but warrant consideration in the preparation of biological resource assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest areas.

For the purposes of this BRA, the following acronyms are used for State special-status species, as applicable:

- 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
- SSC: California Species of Special Concern

Protection of Birds

Section 3503.5 of the California Fish and Game Code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Activities that result in the abandonment of an active bird of prey nest may also be considered in violation of this code. In addition, California Fish and Game Code, Section 3511 prohibits the taking of any bird listed as fully protected, and California Fish and Game Code, Section 3515 states that is it unlawful to take any non-game migratory bird protected under the MBTA.

State of California Fish and Game Code, Section 1602

Section 1602 of the California Fish and Game Code requires any entity (e.g., person, state or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake to notify the CDFW of the proposed project. In the course of this notification process, the CDFW will review the proposed project as it affects streambed habitats within the project area. The CDFW may then place conditions in the Section 1602 Streambed Alteration Agreement to avoid, minimize, and mitigate any potentially significant adverse impacts within CDFW jurisdictional limits.

4.7.2.4 California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of special-status species in California. 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 (CNPS 2012). The species ranked by degrees of concern using the California Rare Plant Ranking System (CRPR). The rankings serve as the candidate list for listing as Threatened and Endangered by CDFW. CNPS has developed six categories of rarity, of which Ranks 1A, 1B, 2A, and 2B are particularly considered special-status:

- 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 if Needed – A Review List.

- Rank 4: Plants of Limited Distribution – A Watch List.

The CNPS also adds "threat ranks", which parallel the ranks used by the CNDDB. These ranks are added as a decimal code after the CNPS Ranks (e.g., Rank 1B.1). The threat codes are as follows:

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

Special-status species that occur or potentially could occur within the study area are based on one or more of the following: (1) the direct observation of the species within the study area during any field surveys; (2) a record reported in the CNDDB; and (3) the study area is within known distribution of a species and contains appropriate habitat.

Sensitive Plant Communities

Sensitive plant communities include those habitat types considered rare by resource agencies, namely the CDFW, due to their scarcity and/or their ability to support state and federally-listed Endangered, Threatened, and Rare vascular plants, as well as several special-status bird and reptile species. CDFW maintains a natural plant community list, the *Natural Communities List* (CDFW 2010).[6] Special-status natural communities (also referred to by CDFW as 'rare' or 'special concern') are identified on the list by an asterisk and are considered high priority vegetation types (CDFW 2010).

4.7.3 Local Special-Status Resource Protection and Classifications

City of Ontario General Plan and Ordinances

This section outlines the City of Ontario's policies and ordinances pertaining to biological resources that are outlined in The Ontario Plan and the City's Municipal Code.

The Ontario Plan is a Policy Plan that serves as the City of Ontario's General Plan. The Ontario Plan's Environmental Resources Element (ER) outlines goals and policies related to Water & Wastewater (ER1), Solid Waste & Recycling (ER2), Energy (ER3), Air Quality (ER4), and Biological, Agricultural & Mineral Resources (ER5). The biological goal of ER5 is protect high value habitat, including policies to support protection of biological resources through habitat conservation areas (policy ER5-1) and to comply with state and federal regulations regarding protected species (ER5-2).

6 *Available online at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List.*

The City's Municipal Code, Volume II, Chapter 2 contains a provision for "Parkway Tree Regulations" (Ordinance 1664, effective October 5, 1967), to preserve parkway trees and to regulate the maintenance and removal of such trees. Parkway is defined in the chapter as "…that portion of any public street right-of-way between the right-of-way boundary line and the curb line, and also the area enclosed within the curblines of a medial divider." The property owner abutting upon public rights-of-way is responsible to water any tree located in the parkway and for trimming that can be done from the ground to preserve the neat appearance and non-obstructed use of the parkway, while the City is responsible for all major pruning. Removal or relocation of any parkway tree requires prior authorization from the Public Works Agency of the City through a permit process, and planting of a replacement tree, whenever feasible, shall be a condition included in any permit issued by the City for the removal of any parkway tree. Alternatively, a cash-in-lieu deposit may be accepted by the City as an alternate to the actual planting of any required parkway tree based on a fair value established by the Public Facilities Manager.

According to Section 10-2.07 (Planting: Permits) of the chapter, trees planted within parkway areas are subject to the following criteria:

(a) Planting stock shall be of normal shape or conformation and not less than one (1) inch caliper at its base.

(b) Container stock shall not be root bound or have serious root deformations due to confinement in the container.

(c) When planted, trees shall be staked in the manner prescribed by the City.

(d) Parkway trees shall be planted at approximately sixty (60) foot intervals or one (1) per lot frontage. On corner lots, two (2) or more trees may be required on the side frontage; provided, however, no tree shall be planted within twenty five (25) feet of any curb return; and provided further, the owner may plant more of the same tree if the species permits and visual safety is not impaired.

(e) In any commercial or industrial zone, consideration of tree planting proposals to be incorporated in landscaping of the site may be requested in writing accompanied by a site plan and/or planting diagram.

(f) Trees shall be planted in line with existing trees, or midway between the back of the curb and the near edge of the standard sidewalk, or on a line equivalent thereto if a curb and/or sidewalk has not been constructed.

(g) The construction of a sidewalk in addition to the standard sidewalk extending to the curb shall provide openings not less than four (4) feet square centered around existing trees or located as directed by the City. The provision of such tree wells shall include the planting of the parkway tree. Specifications shall be included in the Official Parkway Tree List provided for in § 10-2.08 of this chapter.

(h) No parkway trees shall be planted in a parkway abutting property which is undeveloped and unoccupied. In any such case where the planting of a parkway tree is required, the cash-in-lieu deposit, as provided in § 10-2.09 of this chapter, shall be accepted and used by the City for the purchase and planting of such trees when the property has been occupied.

The Public Facilities Manager is responsible for maintaining an Official Parkway Tree List that designates the variety, planting stock specifications, and other information regarding trees to be

planted on each block of each public street or highway within the City. The City encourages the planting and maintenance of drought tolerant trees and shrubs.

4.7.4 Sensitive Plant Communities

The study area does not support any communities considered by CDFW as sensitive habitats.

4.7.5 Special-Status Plant Species

Special-status plants include those species listed or candidates for listing by the USFWS and CDFW, and species considered special-status by CNPS (Lists 1A, 1B, 2A, and 2B). Several plant species were reported in the vicinity based on CNDDB and CNPS, totaling 40 species within the 9-quadrangle search (**Appendix C**, *Special-Status Plant Species*). The study area is not within critical habitat for any listed plant species (USFWS 2017b). A total of two (2) species, mesa horkelia (*Horkelia cuneata* var. *puberula*) and smooth tarplant (*Centromadia pungens* ssp. *laevis*), were identified as having a low potential to occur on the study area based on the literature review and marginal suitable habitat observed on the study area as listed in Appendix C. Focused plant surveys have not yet been conducted and are scheduled to occur in summer of 2017 in order to encompass their blooming periods. The remaining 38 species are not expected to occur on the study area due to one or more of the following reasons: 1) the lack of suitable habitat within the study area, 2) the study area is located outside of the species' elevation range or distribution, or 3) the lack of suitable microhabitat (e.g., soils, hydrology, etc.) on the study area.

4.7.6 Special-Status Wildlife Species

Special-status wildlife include those species listed as Endangered or Threatened under the FESA or CESA, candidates for listing by the USFWS or CDFW, and species of special concern to the CDFW. Several special-status wildlife species were reported in the vicinity based on CNDDB, totaling 43 species. A total of seven (7) species were identified as having a potential to occur on the study area or use the study area based on the literature review and habitat on the study area, as detailed in **Appendix D**, *Special-Status Wildlife Species*. Of the seven (7) species with the potential to occur, focused surveys in accordance with CDFW protocol are recommended for burrowing owl. The species with a potential to occur on the study area are discussed below, in addition to the migratory birds and raptors assessment.

Special-Status Wildlife Species with Potential to Occur On-site

Golden eagle (Aquila *chrysaetos*): This raptor is a state fully protected species and is protected by the Bald and Golden Eagle Protection Act. This species nests typically prefers to nest on cliff faces, but will occasionally nest in tall trees. Foraging habitat includes open country, including grasslands and early successional stages of forest and shrub habitats.

Golden eagle was determined to have a low potential to forage on the study area and no potential to nest. This species is not expected to nest on the study area since it is highly disturbed, preferred nesting habitat is not present (cliff faces), and there are no records of nesting within the immediate vicinity of the study area. The nearest known eagle nesting pair is in Chino Hills State

Park, which is approximately 5.4 miles to the southwest of the study area. All CNDDB occurrence records of this species within the vicinity of the study area were recorded in Chino Hills State Park. The crop field located in the southern portion of the study area supply open areas with some suitable habitat for burrowing animals, and therefore may provide a limited food source for this species. It is possible the study area may be used for foraging by the State Park pair since territory sizes of this species are typically extensive, especially in areas with low quality habitat. However, the active agricultural activities reduces the likelihood of an abundant food source on the study area and higher quality foraging habitat exists in the State Park and Black Star Canyon to the south.

Swainson's hawk (*Buteo swainsoni*): This bird species is listed as threatened by the state and prefers Great Basin grasslands, riparian forests, riparian woodlands, and valley and foothill grasslands.

Swainson's hawk was determined to have a low potential to forage on the study area and no potential to nest. Swainson's hawk is not expected to breed on the study area since their most recent southern breeding range is recorded in the Lancaster/Palmdale region (England 2006). Furthermore, this species has not been recorded on CNDDB within the vicinity of the study area in almost 100 years, with the most recent observation recorded in 1920 near Chino. However, Swainson's hawk is known to migrate long distances and there is a potential for this species to pass through the area (The Planning Center 2006). A number of sightings have been recorded on eBird between 2010 and 2016 to the northwest of the study area (eBird 2012). The crop fields located on the southern portion of the study area supply open areas with some suitable habitat for burrowing animals, which may provide a limited food source for migrants flying over the study area. However, the active agricultural activities reduces the likelihood of an abundant food source on the study area.

White-tailed kite (*Elanus leucurus*): This bird species is a state fully protected species and requires open grasslands, meadows or marshes for foraging near isolated-full-canopied trees for nesting.

White-tailed kite was determined to have a low potential to nest and forage on the study area. The eucalyptus grove in the center of the study area may provide suitable nesting habitat for this species, although proximity to human disturbance from the farming activity and dairy operation may limit the presence of this species. The crop fields on the study area and surrounding vicinity supply open areas with some suitable habitat for burrowing animals, which may provide a limited food source for this species. However, the active agricultural activities reduces the likelihood of an abundant food source on the study area. The nearest CNDDB occurrence record of this species was recorded in 2009, approximately 0.4 mile to the southwest of the study area near Prado Flood Control Basin in the City of Chino.

Burrowing owl: This bird species is a state species of special concern and prefers coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, valley and foothill grassland, and disturbed habitats.

Burrowing owl was determined to have a moderate potential to nest and forage on the study area based on the presence of suitable habitat, including disturbed, low-growing vegetation, bare ground, and a few small fossorial mammal burrows. Although burrowing owl surveys have not been completed on the study area, focused surveys are currently being conducted during the 2017 survey window in accordance with CDFW protocol. The nearest CNDDB occurrence record of this species was recorded in 2006, approximately 0.4 mile to the northeast of the study area.

Western mastiff bat (*Eumops perotis californicus*): This mammal species is a state species of special concern. This species forages for moths within dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, and grassland chaparral, cismontane woodlands, coastal scrub, and valley and foothill grassland habitats. Western mastiff bat primarily roosts in crevices within cliff faces and occasionally small crevices in large boulders and buildings.

Western mastiff bat was determined to have a low potential to forage on the study and no potential to roost. The study area does not support this species' preferred roosting habitat (cliff faces). However, the study area may support this species' preferred food source (moths). Bats in this family are known to be strong fliers and can fly long distances to forage, but the foraging potential was considered low based on the high level of human disturbance on the study area and surrounding development. The nearest CNDDB occurrence record of this species was recorded in 1993, approximately 3.6 miles to the southeast of the site in Norco.

Big free-tailed bat (*Nyctinomops macrotis*): This mammal species is a state species of special concern. This species prefers low-lying arid habitats and required high cliffs or rocky outcrops for roosting.

Big free-tailed bat was determined to have a low potential to forage on the study and no potential to roost. The study area does not support this species' preferred roosting habitat (high cliffs/rocky outcrops). However, the study area may support this species' preferred food source (moths). Bats in this family are known to be strong fliers and can fly long distances to forage, but the foraging potential was considered low based on the high level of human disturbance on the study area and surrounding development. The nearest CNDDB occurrence record of this species was recorded in 1987, approximately 10.8 miles to the northwest of the site in City of Pomona.

Pallid bat (*Antrozous pallidus*): This bat species is a state species of special concern. This species is associated with desert, grassland, shrubland, woodland, and forest habitats and mostly occurs within open, dry habitats. This species roosts within rocky areas and are very sensitive to disturbance.

Pallid bat was determined to have a low potential to forage on the study area and no potential to roost. The study area does not support this species' preferred roosting habitat (rocky areas and riparian woodland), although the study area does support a few black willows in the southwestern corner. However, roosts are very sensitive to disturbance and the agricultural activities on the study area and surrounding development reduces the likelihood of this species to roost on the study area. Since the study area is within a few miles of the Santa Ana River, which would support suitable roosting habitat within the riparian woodland, there is a low potential the open areas on the study area may provide suitable foraging habitat for this species. The nearest

CNDDB occurrence record is from 1951, approximately 6.0 miles northwest of the site in a now developed area of Ontario.

Migratory Birds and Raptors

The study area supports some potential nesting and foraging habitat for migratory birds and raptors. Several common species of birds were observed on the study area, including songbird species (e.g., black phoebe [*Sayornis nigricans*], American pipit [*Anthus rubescens*], lesser goldfinch [*Cardeulis psaltria*]) and raptor species (e.g., Cooper's hawk [*Accipiter cooperii*], red-tailed hawk [*Buteo jamaicensis*], American kestrel [*Falco sparverius*]). A complete list of bird species observed within the study area is listed in Appendix A.

5 Thresholds of Significance

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

"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 State 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...."

Appendix G of the State CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including: candidate, sensitive, or special status species; riparian habitat or other sensitive natural communities; Federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and, adopted Habitat Conservation Plans (HCPs). This is done in the form of a

checklist of questions to be answered during the Initial Study leading to the preparation of the appropriate environmental documentation for a project [i.e., Negative Declaration, Mitigated Negative Declaration, or Environmental Impacts Report (EIR)]. Because these questions are derived from standards in other laws, regulations, and other commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds in an EIR. 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 conditions would result from implementation of the proposed project.

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

For the purposes of this impact analysis the following definitions apply:

"Substantial adverse effect" means loss or harm of a magnitude which, based on current scientific data and knowledge would: (1) substantially reduce population numbers of a listed, candidate, sensitive, rare, or otherwise special status species; (2) substantially reduce the distribution of a sensitive plant community/habitat type; or (3) eliminate or substantially impair the functions and values of a biological resource (e.g., streams, wetlands, or woodlands) in a geographical area defined by interrelated biological components and systems. In the case of this analysis, the prescribed geographical area is considered to be the region that includes the USGS topographic quadrangle for the study area, namely Corona North. For some species, the geographic area may extend to the vicinity of the study area based on known distributions of the species. The vicinity of the study area is considered to comprise the following USGS topographic quadrangles: Black Star Canyon, Corona South, Fontana, Guasti, Lake Mathews, Ontario, Prado Dam, and Riverside West.

"Conflict" means contradiction of a magnitude, which based on foreseeable circumstances, would preclude or prevent substantial compliance.

"Rare" means: (1) that the species exists in such small numbers throughout all, or a significant portion of, its range that it may become endangered if its environment worsens; or (2) the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the FESA.

6 Project Related Impacts

6.1 Regulatory Setting

Special-status species are provided protection by either federal or state resource management agencies, or both, under provisions of the FESA and CESA.

There are a number of performance criteria and standard conditions that must be met as part of any review and approval of the proposed project. These include compliance with all of the terms, provisions, and requirements with applicable laws that relate to Federal, State, and local regulating agencies related to potential impacts to special-status plant and wildlife species, wetlands, riparian habitats, and blue-lined stream courses. The following summarizes federal and state regulations, and CNPS, as previously discussed in Section 4.7, *Special-Status Biological Resources*.

6.2 Project Related Impacts

The analysis in Section 6.3 *Impact Analysis* of this BRA examines the potential impacts to plant and wildlife resources that may occur as a result of implementation of the project. For the purpose of this assessment, project-related impacts take two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to study area.

The determination of impacts in this analysis is based on both the proposed project development and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Any recommended mitigation measures to address impacts are discussed in Section 7.0

below, and compliance with existing regulations are also outlined in Section 7.0 as Conditions of Approval.

The biological values of resources within, adjacent to, and outside the area to be affected by the project were determined by consideration of several factors, as applicable. These included the overall size of habitats to be affected, the previous land uses and disturbance history, the surrounding environment and regional context, the on-site biological diversity and abundance, the presence of special-status plant and wildlife species, the importance to regional populations of these species, and the degree to which on-site habitats are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves. Therefore, the focus of this impacts analysis is on sensitive plant communities/habitats, resources that play an important role in the regional biological systems, and special-status species.

6.3 Impact Analysis

6.3.1 Impacts to Special-Status Species

Threshold BIO-A: Would the project 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 Wildlife or U.S. Wildlife Service?

Special-Status Plant Species

Lees than Significant Impacts with Mitigation

Development of the study area would result in the direct removal of a number of ornamental tree species and other common plant species; a list of plant species observed within the study area is included in Appendix A. Common plant species present within the study area occur in large numbers throughout the region and their removal does not meet the significance thresholds defined in Section 5.0, *Thresholds of Significance* above. Therefore, impacts to common plant species would not be considered a significant impact and no mitigation measures are required.

Of the 40 special-status plant species identified in available databases as occurring within the vicinity of the study area (see Section 4.7.5 above), 38 species are not expected to occur on the study area due to the lack of suitable habitat or because the site is outside the known distribution or elevation range for the species. These species are listed in Appendix C. As discussed in above in Section 4.7.5, the remaining two (2) special-status plant species were determined to have a potential to occur on the study area, including mesa horkelia and smooth tarplant. Mesa horkelia and smooth tarplant are both CNPS-ranked 1B.1 species. Rank 1B species are plant species that are considered rare, threatened, or endangered in California and elsewhere and plants with a threat rank of 0.1 are considered seriously threated in California, with over 80% of the known occurrences being highly threatened. A focused survey is scheduled for summer (June-July) 2017, which is included as a condition of approval (COA BIO-1). If mesa horkelia and/or smooth tarplant individuals are observed during the focused survey and impacts to the species are

determined to be regionally significant by a qualified biologist, impacts would be considered significant and as such, a mitigation measure (MM BIO-1) is recommended to reduce potential impacts to these species. Compliance with COA BIO-1 and implementation of MM BIO-1, if needed, would reduce any direct impacts to special-status plant species to less than significant.

Special-Status Wildlife Species

Less than Significant Impacts with Mitigation

Development of the study area would result in the disruption and removal of non-native vegetation communities and the loss and displacement of common wildlife species. A list of wildlife species observed within the study area is included in Appendix A. Due to the high level of existing disturbance from human activity both on the study area from agriculture and within the vicinity (e.g., nearby agriculture and development), these species are likely adapted to human presence and are expected to persist in the area following development (e.g., on adjacent agricultural lands). As such, impacts would not be expected to reduce the general wildlife populations below self-sustaining levels within the region since these species and impacts to common wildlife species do not meet the significance thresholds defined in Section 5.0, *Thresholds of Significance* above. Therefore, impacts to common wildlife species would not be considered a significant impact and no mitigation measures are required.

A total of 36 special-status wildlife species of the 43 species identified as occurring in the project vicinity in available databases (see Section 4.7.6 above) are not considered to have a potential to occur within the study area due to the lack of suitable habitat or because the site is outside the known distribution range for the species. These species are listed in Appendix D. Since these species are not expected to be present within the study area, no impacts would occur as a result of development and no mitigation measures are required.

As discussed in Section 4.7.5 above, the remaining 7 special-status wildlife species were determined to have a potential to occur on site. Burrowing owl was determined to have a moderate potential to nest and forage on the study area due to the presence of suitable habitat, including disturbed, low-growing vegetation, bare ground, and a few small fossorial mammal burrows. Implementation of the project could result in significant direct impacts to burrowing owl if present on the study area. A condition of approval (COA BIO-2) is required, which requires focused surveys during the breeding season to determine the presence or absence of this species on the study area in accordance with CDFW protocol (CDFW 2012), which are currently being conducted during the 2017 survey window. If burrowing owl is observed during the focused surveys, impacts would be considered significant and as such, a mitigation measure (MM BIO-2) is recommended to reduce potential impacts to burrowing owls. Mitigation is proposed consistent with the burrowing owl mitigation guidelines published by CDFW (CDFW 2012). Compliance with COA BIO-2 and implementation of MM BIO-2 would reduce any direct impacts to burrowing owl to less than significant.

The remaining six species with a potential to occur were determined as having a low potential based on the quality of habitat on the study area and in the surrounding area, and known occurrence data. Five of the six species were determined to only have a potential to forage and

not nest or roost on the study area (golden eagle, Swainson's hawk, western mastiff bat, big free-tailed bat, and pallid bat). As such, no direct impacts would occur to these species, and impacts to foraging habitat would be considered less than significant based on the limited and low quality habitat on-site (the site is predominately active agriculture), as well as the availability of adjacent agricultural land and foraging habitat that will still be remaining throughout the City of Ontario, the City of Chino to the west, areas of unincorporated San Bernardino and Riverside Counties to the south down to Prado Dam, and Chino Hills State Park to the southwest. Thus, no mitigation measures are required.

One species, white-tailed kite, was considered to have a potential to nest as well as to forage on the study area. However, this potential was considered low due to the proximity to human disturbance from the active farming and dairy operation. Regardless, if white-tailed kite is present and nesting on-site, impacts to nesting habitat would be considered potentially significant. Since the study area has the potential to support other migratory birds and raptors, a nesting bird survey is required prior to ground disturbance (see Section 6.3.4.2 below). If white-tailed kites are observed during the nesting bird survey, compliance with MM BIO-4 in accordance with MBTA would reduce impacts to less than significant. As discussed above, impacts to foraging habitat would be considered less than significant based on the limited and low quality habitat on-site (the site is predominately active agriculture), as well as the availability of adjacent agricultural land and foraging habitat that will still be remaining throughout the City of Ontario, the City of Chino to the west, areas of unincorporated San Bernardino and Riverside Counties to the south down to Prado Dam, and Chino Hills State Park to the southwest; therefore, impacts to potential foraging habitat are not considered significant and no mitigation measures are required.

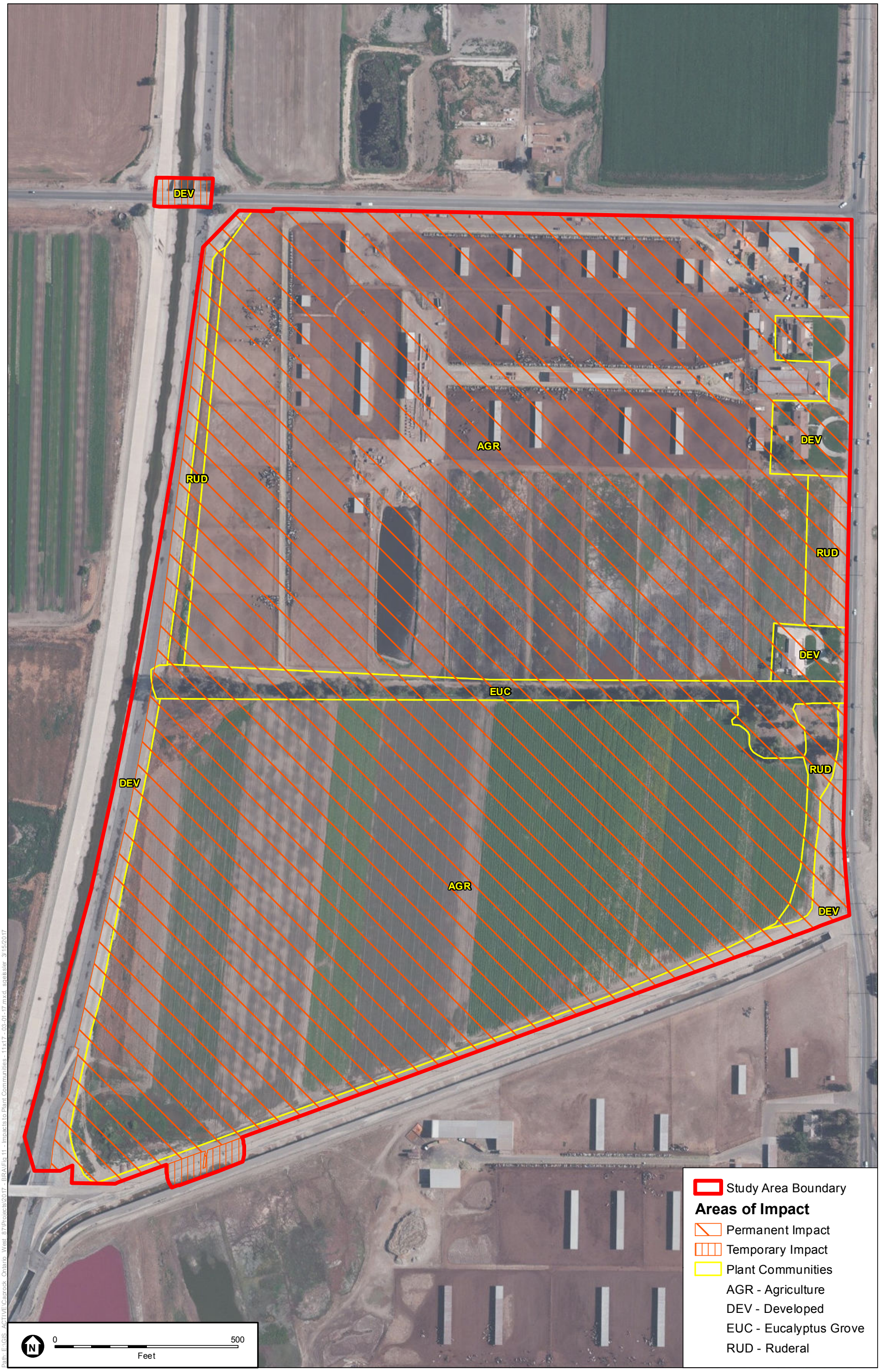
6.3.2 Impacts to Sensitive Plant Communities

Threshold BIO-B: Would the project have a substantial adverse effect on any riparian habitat or other sensitive plant community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?

Sensitive Plant Communities

No Impacts

Sensitive plant communities were not observed within the study area; therefore, no impacts would occur and no mitigation is required. The plant communities observed within the study area that would be impacted are dominated by agriculture (88.09 acres), in addition to eucalyptus grove (3.41 acres) supporting a small cattail stand within the understory, ruderal vegetation (2.82 acres), and developed areas (6.80 acres). No impacts are proposed along the western study area boundary within Cucamonga Creek, with the exception of the bridge widening at Merrill Avenue. Impacts to plant communities are shown on **Figure 11,** *Impacts to Plant Communities*.



SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 11
Impacts to Plant Communities

ESA

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CDFW Jurisdiction

Less than Significant Impacts with Regulatory Compliance

The study area supports an irrigated wetland that may be considered jurisdictional pursuant to Section 1602 of the California Fish and Game Code as regulated by CDFW. The entire irrigated wetland is proposed for permanent impacts, which includes 0.55 acre of potential CDFW jurisdiction, as shown in **Figure 12**, *Impacts to Drainage Features*. Since the irrigated wetland is entirely supported by irrigation of the existing crop field on the study area, the resource agencies may determine during the permitting process that the wetland area is not jurisdictional due to its dependence on the irrigation. Once irrigation ceases on the study area, an updated wetland delineation is recommended to determine whether or not the wetland area persists prior to commencement of the permitting process. However, for the purposes of this report, the irrigated wetland is assumed to be CDFW jurisdictional.

If the City requires the bridge crossing over Cucamonga Creek Channel at Merrill Avenue to be widened, temporary impacts would occur to approximately 0.28 acre within Cucamonga Creek Channel of jurisdictional streambed pursuant to Section 1602 of the California Fish and Game Code, as regulated by CDFW and shown on Figure 12. In addition, temporary impacts would occur to approximately 0.11 acre of jurisdictional streambed within County Line Channel in order to install storm drain connection from the project site to County Line Channel.

Impact acreages to CDFW jurisdiction are summarized in **Table 3**, *Proposed Impacts to USACE/RWQCB and CDFW Jurisdictional Features*. The mainline irrigation trench, artificial temporary irrigation ditch, cattail stand, and stock pond is not considered jurisdictional, as discussed in Section 4.6, *Jurisdictional Waters and Wetlands*, of this BRA. Impacts to CDFW jurisdictional features would be considered significant. As such, a condition of approval is proposed in Section 7.2.3 of this BRA (COA BIO-3) to comply with Section 1602 of the California Fish and Game Code and obtain regulatory permits. In addition, MM BIO-3 is proposed for compensatory mitigation, subject to approval by CDFW. Compliance with COA BIO-3 and implementation of MM BIO-3, if needed, would reduce any direct impacts to CDFW jurisdiction to less than significant.

TABLE 3
PROPOSED IMPACTS TO USACE/RWQCB AND CDFW JURISDICTIONAL FEATURES

	Permanent Impacts		Temporary Impact	
Drainage Feature (Study Area)	**USACE/RWQCB Jurisdiction (acres)**	**CDFW Jurisdiction (acres)**	**USACE/RWQCB Jurisdiction (acres)**	**CDFW Jurisdiction (acres)**
County Line Channel	-	-	0.11	0.11
Cucamonga Creek Channel	-	-	0.16	0.28
Irrigated Wetland	0.55	0.55	-	-
Total	**0.55**	**0.55**	**0.27**	**0.39**

SOURCE: ESA PCR, 2017

6.3.3 Impacts to Wetlands

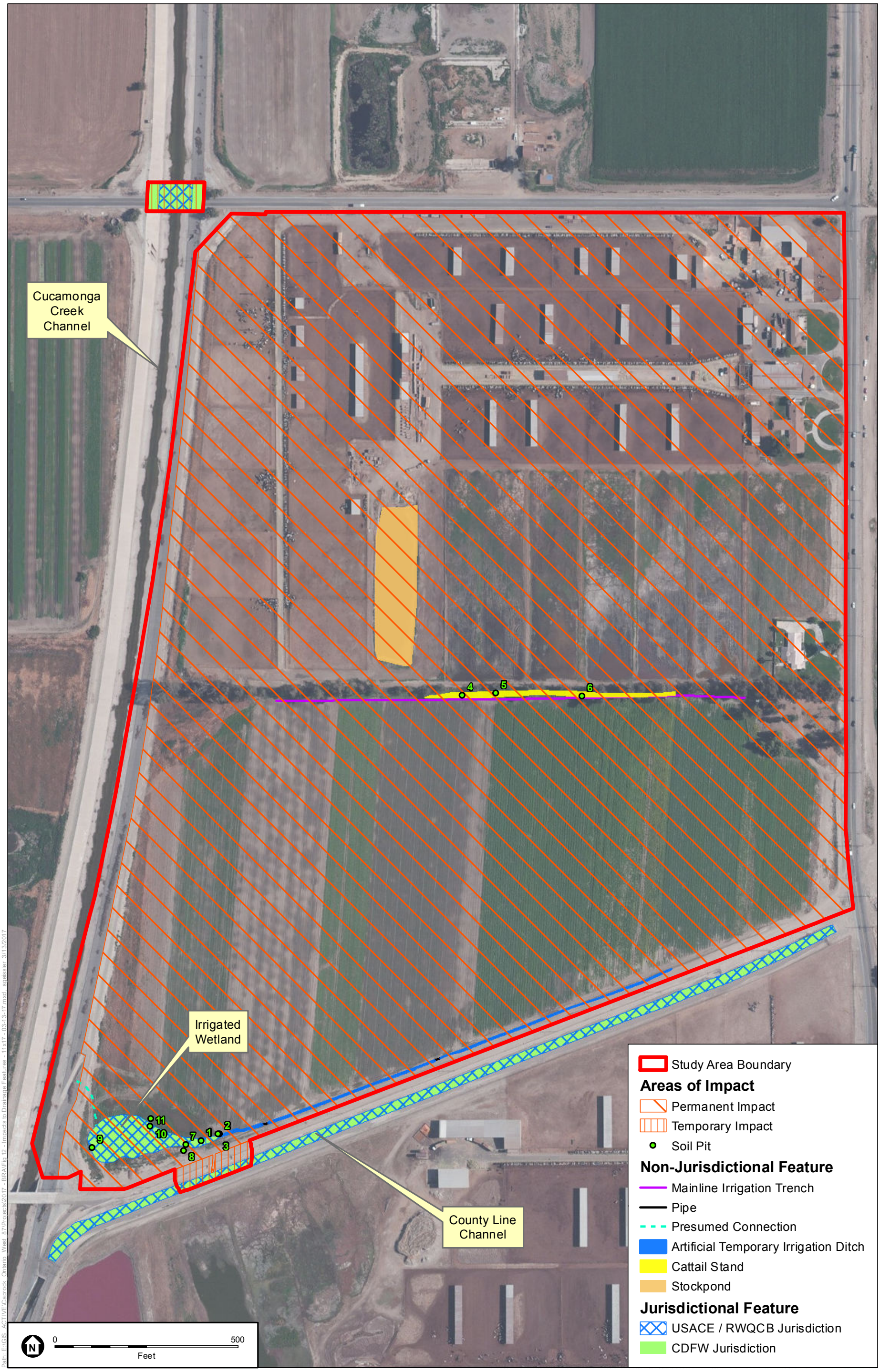
Threshold BIO-C: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant Impacts with Regulatory Compliance

The study area supports an irrigated wetland that may be considered a USACE/RWQCB federally protected wetlands, which is regulated under Sections 404/401 of the Clean Water Act (CWA). The entire irrigated wetland is proposed for impacts, which includes 0.55 acre of potential USACE/RWQCB jurisdiction, as shown in Figure 12. Since the irrigated wetland is entirely supported by irrigation of the existing crop field on the study area, the resource agencies may determine during the permitting process that the wetland area is not jurisdictional due to its dependence on the irrigation. Once irrigation ceases on the study area, an updated wetland delineation is recommended to determine whether or not the wetland area persists prior to commencement of the permitting process. However, for the purposes of this report, the irrigated wetland is assumed to be USACE/RWQCB jurisdictional.

If the City requires the bridge crossing over Cucamonga Creek Channel at Merrill Avenue to be widened, temporary impacts would occur to approximately 0.16 acre of USACE/RWQCB jurisdiction pursuant to Sections 404/401, as shown on Figure 12. In addition, temporary impacts would occur to approximately 0.11 acre of USACE/RWQCB jurisdiction within County Line Channel in order to install a storm drain connection from the project site to County Line Channel.

Impact acreages to USACE/RWQCB jurisdiction are summarized in Table 3. The mainline irrigation trench, artificial temporary irrigation ditch, cattail stand, and stock pond are not considered jurisdictional, as discussed in Section 4.6, *Jurisdictional Waters and Wetlands*, of this BRA. Impacts to USACE and/or RWQCB jurisdictional features would be considered significant. As such, a condition of approval is proposed in Section 7.2.3 of this BRA (COA BIO-3) to apply for permits from USACE and/or RWQCB. In addition, MM BIO-3 is proposed for compensatory mitigation, subject to approval by USACE and RWQCB. Compliance with COA BIO-3 and implementation of MM BIO-3, if needed, would reduce any direct impacts to CDFW jurisdiction to less than significant.



SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 12
Impacts to Drainage Features

ESA

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6.3.4 Impacts to Wildlife Movement and Migratory Species

Threshold BIO-D: Would the project 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 areas?

Wildlife Movement

Less than Significant

As described in Section 4.5.2 above, the study area supports limited potential live-in and marginal movement habitat for species on a local scale (i.e., some reptile, bird, and small mammal species), but it likely provides little to no function to facilitate wildlife movement for species on a regional scale and is not identified as a regionally important dispersal or seasonal migration corridor. The only potential for regional scale movement would be within Cucamonga Creek, although the majority of the creek is channelized and surrounded by chain link fence. However, impacts to Cucamonga Creek Channel would only include the temporary bridge widening at Merrill Avenue, which would not impede any regional wildlife movement. As such, impacts to regional wildlife movement are less than significant and no mitigation measures are required.

Movement on a local scale likely occurs with species adapted to urban environments due to the development and disturbances on-site and in the vicinity of the study area. Although implementation of the project would result in disturbances to local wildlife movement within the study area, those species adapted to urban areas would be expected to move to adjacent agricultural areas and landscaping within developed areas. As such, impacts to local wildlife movement would be less than significant and no mitigation measures would be required.

Since the study area does not function as a regional wildlife corridor and is not known to support wildlife nursery area(s), no impacts would occur and no mitigation measures would be required.

Migratory Birds and Raptors

Less than Significant with Mitigation

As previously discussed in Section 4.7.6, *Special-Status Wildlife Species*, the site supports limited potential nesting and foraging habitat for migratory birds, in addition to potential foraging habitat for raptors. Based on the disturbed nature of the site from active agriculture and development, the quality of foraging habitat is considered to be very low. Higher quality foraging habitat is considered to occur in less developed areas with larger expanses of open space. The loss of a relatively small acreage of low quality foraging habitat as a result of the project would not be expected to impact the foraging of any species. In addition, due to the availability of adjacent agricultural land and foraging habitat that will still be remaining throughout the City of Ontario, the City of Chino to the west, areas of unincorporated San Bernardino and Riverside Counties to the south down to Prado Dam, and Chino Hills State Park to the southwest, impacts to foraging habitat would be considered less than significant and no mitigation measures are considered required.

The study area has the potential to support songbird and raptor nests due to the presence of shrubs, ground cover, and limited trees on-site. Nesting activity typically occurs from February 15 to August 31 for songbirds and January 15 to August 31 for raptors. Disturbing or destroying active nests is a violation of the MBTA (16 U.S.C. 703 et seq.). In addition, nests and eggs are protected under Fish and Wildlife Code Section 3503. As such, direct impacts to breeding birds (e.g. through nest removal) or indirect impacts (e.g. by noise causing abandonment of the nest) is considered a potentially significant impact as defined by the thresholds of significance (Threshold BIO-D) in Section 6.0 above. Compliance with the MBTA would reduce impacts to a less than significant level, as detailed in MM BIO-4 (see Section 7.2 below).

6.3.5 Consistency with Local Policies and Ordinances

Threshold BIO-E: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impacts

The Ontario Plan supports the protection of high value habitat areas by establishing Habitat Conservation Areas, and complying with state and federal regulations regarding protected species. Since the study area does not support high value habitats or protected species, the project will not conflict with the policies.

The City's Municipal Code has a provision to protect parkway trees within public right-of-ways and requires a permit to remove or relocate any trees, and planting of replacement trees or a cash-in-lieu compensation for any tree removed. The study area supports eucalyptus trees that were planted as windrows and a few other ornamental tree species associated with the residential homes. However, none of these trees are considered parkway trees maintained within public right-of-way, and therefore would not be required to comply with this ordinance.

6.3.6 Consistency with Adopted Natural Community Conservation Plan

Threshold BIO-F: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impacts

There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan with which the proposed Project would conflict.

7 Mitigation Measures

7.1 Approach

Mitigation measures are recommended for those impacts determined to be significant to special-status biological resources. Mitigation measures for impacts considered to be "significant" were developed in an effort to reduce such impacts to a level of "insignificance," while at the same time allowing an opportunity to realize development goals under the proposed project. As stated in State CEQA Guidelines Section 15370 mitigation includes:

1. Avoiding the impact altogether by not taking a certain action or parts of an action.
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
3. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
5. Compensating for the impact by replacing or providing substitute resources or environments.

Where compliance with existing regulations and the issuance of permits by regulatory agencies would reduce impacts to a less than significant level, those measures are proposed as conditions of approval.

7.2 Mitigation Measures for Significant Impacts

The following mitigation measures (MM) and Conditions of Approvals (COAs) address potentially significant impacts from the proposed project.

7.2.1 Mitigation for Potentially Significant Impacts to Special-Status Plant Species

COA BIO-1 Focused surveys should be conducted within suitable habitat on the study area during the appropriate blooming period for mesa horkelia (*Horkelia cuneata* var. *puberula*) and smooth tarplant (*Centromadia pungens* ssp. *laevis*). The focused surveys should be conducted prior to ground disturbance by a qualified biologist in accordance with published agency guidelines (CDFW 2009, CDFW 2000, USFWS 2000). If special-status plant species are observed during the focused surveys and impacts to the species are determined to be regionally significant by a qualified biologist, the mitigation measure outlined in MM BIO-1 below would be required to avoid significant impacts.

MM BIO-1 If special-status plants are found during focused surveys and impacts to the species are determined to be regionally significant by a qualified biologist, mitigation should include one or more of the following:

- Seed collection of the special-status plant species at the end of the growing season and prior to ground disturbance, or obtain special-status plant species seeds from a native plant nursery if available, and plant collected seeds within an appropriate on-site or off-site mitigation area, which will be conserved as open space in perpetuity;

- Payment into a mitigation bank and/or in-lieu fee program that has mitigation available for the special-status plant species; and/or
- Preservation of land that contains the special-status plant species.

Mitigation for significant impacts to special-status plant species will be implemented in consultation with the City of Ontario and CDFW.

7.2.2 Mitigation for Potentially Significant Impacts to Special-Status Wildlife Species

COA BIO-2 Due to the presence of suitable habitat and burrows, burrowing owl focused surveys should be conducted during the breeding season (February 1 through August 31) prior to construction to determine the presence or absence of burrowing owls on the study area. The surveys should be conducted by a qualified biologist pursuant to the survey protocol provided in Appendix D of the CDFW *Staff Report on Burrowing Owl Mitigation* dated March 7, 2012. If burrowing owls are observed on the study area during the surveys, the mitigation measure outlined in MM BIO-2 below would be required.

MM BIO-2 If burrowing owls are determined present following the focused surveys, occupied burrows shall be avoided to the greatest extent feasible, following the guidelines in the Staff Report on Burrowing Owl Mitigation published by CDFW (March 7, 2012) including, but not limited to, conducting pre-construction surveys, avoiding occupied burrows during the nesting and non-breeding seasons, implementing a worker awareness program, biological monitoring, establishing avoidance buffers, and flagging burrows for avoidance with visible markers. If occupied burrows cannot be avoided, acceptable methods may be used to exclude burrowing owl either temporarily or permanently, pursuant to a Burrowing Owl Exclusion Plan that shall be prepared and approved by CDFW. The Burrowing Owl Exclusion Plan shall be prepared in accordance with the guidelines in the Staff Report on Burrowing Owl Mitigation.

7.2.3 Mitigation for Potentially Significant Impacts to Jurisdictional Features

COA BIO-3 Prior to the issuance of any grading permit for permanent impacts in the areas designated as jurisdictional features, the project applicant shall obtain regulatory permits from the USACE, RWQCB, and CDFW.

MM BIO-3 If the regulatory agencies or an updated jurisdictional delineation determine that the area(s) identified as jurisdictional features are not jurisdictional, no mitigation is required. Otherwise, the following shall be incorporated into the permitting, subject to approval by the regulatory agencies:

1. On-site or off-site enhancement, restoration, and/or creation of USACE/RWQCB jurisdictional "waters of the U.S." within the Santa Ana Watershed at a ratio no less than 0.5:1 or within an adjacent watershed at a ratio no less than 1:1 for permanent impacts, and for any temporary impacts to restore the impact area to pre-project conditions (i.e., pre-project contours and revegetate, where applicable). Off-site mitigation may occur on land acquired for the purpose of in-perpetuity preservation, permittee-responsible mitigation, or through the purchase of mitigation credits at an agency-approved off-site mitigation bank or in-lieu fee program.

2. On-site or off-site enhancement, restoration and/or creation of CDFW jurisdictional streambeds within the Santa Ana Watershed at a ratio no less than 0.5:1 or within an adjacent watershed at a ratio no less than 1:1 for permanent impacts, and for any temporary impacts to restore the impact area to pre-project conditions (i.e., pre-project contours and revegetate where applicable). Off-site mitigation may occur on land acquired for the purpose of in-perpetuity preservation, permittee-responsible mitigation, or through the purchase of mitigation credits at an agency-approved off-site mitigation bank or in-lieu fee program.

Purchase of any mitigation credits through an agency-approved mitigation bank or in-lieu fee program should occur prior to any impacts to jurisdictional drainages. Any mitigation proposed on land acquired for the purpose of in-perpetuity mitigation that is not part of an agency-approved mitigation bank or in-lieu fee program shall include the preservation, enhancement, restoration, and/or creation, of similar habitat pursuant to a future Habitat Mitigation and Monitoring Plan (HMMP) that may be required as part of regulatory permitting. The HMMP shall be prepared prior to any impacts to jurisdictional features, and shall provide details as to the implementation of the mitigation, maintenance, and future monitoring. The goal of the compensatory mitigation shall be to preserve, enhance, restore, and/or create similar habitat with equal or greater function and value than the impacted habitat.

7.2.4 Mitigation for Potentially Significant Impacts to Migratory or Nesting Birds

MM BIO-4 Prior to the issuance of any grading permit that would remove potentially suitable nesting habitat for raptors or songbirds, the project applicant shall demonstrate to the satisfaction of the City of Ontario that either of the following have been or will be accomplished:

1. Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds.
2. Any construction activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) will require that all suitable habitat be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected a buffer of 300 feet (500 feet for raptors) around the nest adjacent to construction will be delineated, flagged, and avoided until the nesting cycle is complete. The buffer may be modified and/or other recommendations proposed as determined appropriate by the biological monitor to minimize impacts.

8 Impact After Mitigation

8.1 Level of Significance after Mitigation

The proposed project, inclusive of mitigation measures and conditions of approval, would have less than significant impacts to special-status plant species, special-status wildlife species, jurisdictional features, and migratory and/or nesting birds.

8.2 Cumulative Impacts

Cumulative impacts are defined as the direct and indirect effects of a proposed project which, when considered alone, would not be deemed a substantial impact, but when considered in addition to the impacts of related projects in the area, would be considered significant. "Related projects" refers to past, present, and reasonably foreseeable probable future projects, which would have similar impacts to the proposed Project. CEQA deems a cumulative impact analysis to be adequate if a list of "related projects" is included in the EIR or the proposed project is consistent with an adopted general, specific, master, or comparable programmatic plan [Section 15130(b)(1)(B)]. CEQA also states that no further cumulative impact analysis is necessary for impacts of a proposed project consistent with an adopted general, specific, master, or comparable programmatic plan [Section 15130(d)].

The proposed project will comply with the Colony Commerce Center East Specific Plan and the City of Ontario's General Plan. Furthermore, biological resources within the study area are limited to special-status plants (if present), burrowing owl (if present), migratory bird species, and jurisdictional resources. Cumulative impacts to these biological resources are considered to be less than significant based on implementation of the mitigation measures and conditions of approval outlined above in Section 7.0, *Mitigation Measures*. Therefore, with implementation of the proposed mitigation and conditions of approval, impacts would not be considered cumulatively significant. A summary is provided below. Since the project site and off-site study areas were determined not to support any sensitive plant communities or regulated trees, these biological resources are not included below.

- Special-status plant species (i.e., mesa horkelia, smooth tarplant);
- Special-status wildlife species (i.e., burrowing owl);
- Migratory and/or nesting birds; and
- Jurisdictional drainages (i.e., USACE, RWQCB and CDFW jurisdictional features).

Special-Status Plant Species: For potential impacts to mesa horkelia and smooth tarplant, if present, with the proposed mitigation, there would be no cumulative loss of special-status plant species and impacts would not be considered cumulatively significant.

Special-Status Wildlife Species: If any burrowing owls are observed within the study areas in the future, mitigation is proposed that would avoid direct impacts in compliance with the Staff Report on Burrowing Owl Mitigation. With these mitigation measures, any impacts would not be considered cumulatively significant.

Migratory and/or Nesting Birds: Mitigation is proposed to avoid direct impacts to raptors and migratory bird species through compliance with the MBTA. The loss of potential foraging habitat for raptor species, bats, and other state species of species concern identified in Section 6.0, *Project Related Impacts* is not expected to substantially affect these species to a point where their survival in the region is threatened. These species are relatively mobile and are expected to locate additional foraging habitat remaining in the region (e.g., throughout agricultural areas within the City of Ontario, the City of Chino to the west, areas of unincorporated San Bernardino and Riverside Counties to the south down to Prado Dam, and Chino Hills State Park to the southwest). Even with the development of the reasonably foreseeable future projects within the area, there will still be agricultural areas and open space area along the Santa Ana River, Prado Dam, and Chino Hills State Park which provide additional foraging habitat. As such, impacts would not be considered cumulatively significant.

Jurisdictional Drainages: Impacts to jurisdictional features would be subject to permitting with the regulatory agencies, including USACE, RWQCB and/or CDFW. With the proposed mitigation and compliance with existing regulations through the permitting process, there would be no net loss of the biological function and value of the jurisdictional resources and impacts would not be considered cumulatively significant.

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Appendix A
Floral and Faunal Compendium

Appendix A
Floral and Faunal Compendium

Scientific Name	Common Name
GYMNOSPERMS	
Cupressaceae	**Cypress Family**
Juniperus sp.	juniper
EUDICOTS	
Amaranthaceae	**Amaranth Family**
Amaranthus palmeri	carelessweed
Asteraceae	**Sunflower Family**
Baccharis salicifolia	mule fat
* *Eclipta prostrata*	false daisy
* *Senecio vulgaris*	old-man-in-the-spring
* *Sonchus oleraceus*	common sow-thistle
* *Verbesina encelioides*	golden crownbeard
Xanthium strumarium	rough cocklebur
Brassicaceae	**Mustard Family**
* *Capsella bursa-pastoris*	shepherd's purse
* *Lepidium latifolium*	perennial pepperweed
* *Sisymbrium irio*	London rocket
Cactaceae	**Cactus Family**
* *Opuntia ficus-indica*	tuna cactus
Chenopodiaceae	**Goosefoot Family**
* *Atriplex semibaccata*	Australian saltbush
* *Chenopodium album*	lamb's quarters
* *Chenopodium murale*	nettle-leaved goosefoot
* *Kochia scoparia*	common red sage
* *Salsola tragus*	prickly Russian thistle
Fabaceae	**Legume Family**
* *Medicago sativa*	alfalfa
Malvaceae	**Mallow Family**
* *Malva parviflora*	cheeseweed
Myrtaceae	**Myrtle Family**
* *Eucalyptus camaldulensis*	red gum

* Non-native species

Scientific Name	Common Name
Plantaginaceae	**Plantain Family**
* *Veronica anagallis-aquatica*	water speedwell
Polygonaceae	**Buckwheat Family**
* *Rumex crispus*	curly dock
Salicaceae	**Willow Family**
Salix gooddingii	black willow
Solanaceae	**Nightshade Family**
Datura wrightii	jimson weed
* *Nicotiana glauca*	tree tobacco
Tamaricaceae	**Tamarix Family**
* *Urtica urens*	dwarf nettle
Urticaceae	**Nettle Family**
* *Tamarix* sp.	tamarisk
MONOCOTYLEDONS	
Arecaceae	**Palm Family**
* *Washingtonia robusta*	Mexican fan palm
Agavaceae	**Agave Family**
* *Yucca* sp.	ornamental yucca
Cyperaceae	**Sedge Family**
Cyperus eragrostis	tall cyperus
Lemnaceae	**Duckweed Family**
Lemna sp.	duckweed
Poaceae	**Grass Family**
* *Cynodon dactylon*	Bermuda grass
* *Echinochloa crus-galli*	barnyard grass
* *Polypogon monspeliensis*	annual beard grass
Typhaceae	**Cattail Family**
Typha angustifolia	narrow-leaved cattail
Typha latifolia	broad-leaved cattail

* Non-native species

REPTILES	
Phrynosomatidae	**Zebratail, Earless, Horned, Spiny, Fringe-Toed Lizards**
Sceloporus occidentalis	western fence lizard
BIRDS	
Threskiornithidae	**Ibises**
Plegadis chihi	white-faced ibis
Cathartidae	**New World Vultures**
Cathartes aura	turkey vulture
Accipitridae	**Hawks**
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Falconidae	**Falcons**
Falco sparverius	American kestrel
Columbidae	**Pigeons and Doves**
* *Columba livia*	rock pigeon
* *Streptopelia decaocto*	Eurasian collared-dove
Zenaida macroura	mourning dove
Charadriidae	**Plovers**
Charadrius vociferus	killdeer
Recurvirostridae	**Stilts and Avocets**
Himantopus mexicanus	black-necked stilt
Scolopacidae	**Sandpipers**
Tringa melanoleuca	greater yellowlegs
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
Corvidae	**Jays and Crows**
Corvus brachyrhynchos	American crow
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Sturnidae	**Starlings**
* *Sturnus vulgaris*	European starling
Motacillidae	**Pipits**
Anthus rubescens	American pipit
Parulidae	**Wood Warblers**
Setophaga coronata	yellow-rumped warbler
Emberizidae	**Emberizine Sparrows and Allies**
Melozone crissalis	California towhee

* Non-native species

REPTILES	
Icteridae	**Blackbirds**
* *Molothrus ater*	brown-headed cowbird
Fringillidae	**Finches**
Carpodacus mexicanus	house finch
Carduelis psaltria	lesser goldfinch
Spinus tristis	American goldfinch
Passeridae	**Old World Sparrows**
* *Passer domesticus*	house sparrow
MAMMAL	
Canidae	**Wolves and Foxes**
Canis latrans	coyote

* Non-native species

Appendix B
Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario / San Bernardino Sampling Date: 12/14/16

Applicant/Owner: Caprock Partners State: CA Sampling Point: 1

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.975730 Long: -117.599230 Datum: NAD 83

Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Veronica anagallis-aquatica	30	Y	OBL
2. Echinochloa crus-galli	5	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 30	x 1 = 30
FACW species 5	x 2 = 10
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 35 (A)	40 (B)

Prevalence Index = B/A = 1.1

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	70					sandy clay loam	
	2.5Y 2.5/1	30					sandy clay loam	
10-18	10YR 4/1	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ✓ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5) 2:0

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario / San Bernardino Sampling Date: 12/14/16
Applicant/Owner: Caprock Partners State: CA Sampling Point: 2
Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): _____ Lat: 33.975783 Long: -117.599078 Datum: NAD 83
Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation ✓, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Chenopodium murale	20	Y	FACU
2. Malva parviflora	5	N	UPL
3. Veronica anagallis-aquatica	5	N	OBL
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust 5

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 5	x 1 = 5
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species 20	x 4 = 80
UPL species 5	x 5 = 25
Column Totals: 30 (A)	110 (B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
A portion of the vegetation plot is within an active agriculture field and is constantly tilled.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					sandy clay loam	
10-18	10YR 4/1	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5) 1:2

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario / San Bernardino Sampling Date: 12/14/16

Applicant/Owner: Caprock Partners State: CA Sampling Point: 3

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.975782 Long: -117.599082 Datum: NAD 83

Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation ✓, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Malva parviflora	20	Y	UPL
2. Chenopodium murale	15	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	15	x 4 =	60
UPL species	20	x 5 =	100
Column Totals:	35 (A)		160 (B)

Prevalence Index = B/A = 4.6

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

A portion of the vegetation plot is within an active agriculture field and is constantly tilled.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					sandy clay loam	
12-18	10YR 4/1	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5) 0:2

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario/San Bernardino Sampling Date: 12/14/16

Applicant/Owner: Capreal Partners State: CA Sampling Point: 4

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.979071 Long: -117.596863 Datum: NAD83

Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Typha latifolia	45	Y	OBL
2. Typha angustifolia	45	Y	OBL
3. Urtica urens	10	N	UPL
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 90	x 1 = 90
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species 10	x 5 = 50
Column Totals: 100 (A)	140 (B)

Prevalence Index = B/A = 1.4

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3	100					Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5) 2:1

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario / San Bernardino Sampling Date: 12/14/16

Applicant/Owner: Caprock Partners State: CA Sampling Point: S

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.979085 Long: -117.596556 Datum: NAD 83

Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus camaldulensis	60	Y	FAC
2.			
3.			
4.			
	60 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Typha latifolia	30	Y	OBL
2. Rumex crispus	10	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	_____	x 2 =	_____
FAC species	70	x 3 =	210
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	100 (A)		240 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5) 1:0

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario/San Bernardino Sampling Date: 12/14/16

Applicant/Owner: Caprock Partners State: CA Sampling Point: 6

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.979063 Long: -117.595775 Datum: NAD83

Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Typha latifolia	70	Y	OBL
2. Urtica urens	10	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 70	x 1 = 70
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species 10	x 5 = 50
Column Totals: 80 (A)	120 (B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	100					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5) 1-1

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario/San Bernardino Sampling Date: 1/25/17

Applicant/Owner: Caprock Partners State: CA Sampling Point: 7

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.975701 Long: -117.599374 Datum: NAD83

Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ✓, Soil ___, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ✓ No ___
Hydric Soil Present?	Yes ✓	No ___	
Wetland Hydrology Present?	Yes ✓	No ___	

Remarks:
Site visit occurred after a significant storm event; water level on-site was not typical.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
	___ = Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	___ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Rumex crispus	10	Y	FAC
2. Malva parviflora	5	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	15 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum 85 % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species 10	x 3 = 30
FACU species ___	x 4 = ___
UPL species 5	x 5 = 25
Column Totals: 15 (A)	55 (B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks:
Site is within an active agricultural field and is constantly disced throughout the year. Hydrophytic vegetation was observed within this area during prior site visits.

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	95	2.5 YR 4/8	5	C	M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Clay pan

Depth (inches): 16"

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5) 0:1

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): 3"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site is heavily irrigated for cultivation of vegetables.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario/San Bernardino Sampling Date: 1/25/17
Applicant/Owner: Caprock Partners State: CA Sampling Point: B
Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): _____ Lat: 33.975659 Long: -117.599390 Datum: NAD 83
Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___
Are Vegetation ✓, Soil ___, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ___ No ✓
Hydric Soil Present?	Yes ___	No ✓	
Wetland Hydrology Present?	Yes ✓	No ___	

Remarks: Site visit occurred after a significant storm event; water level on-site was not typical.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	___ = Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	___ = Total Cover		
Herb Stratum (Plot size: 15')			
1. Malva parviflora	5	Y	UPL
2. Sisymbrium irio	15	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	20 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species 20	x 5 = 100
Column Totals: 20 (A)	100 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: Site is within an active agricultural field and is constantly disced throughout the year. Hydrophytic vegetation was observed within this area during prior site visits.

SOIL

Sampling Point: B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	10 YR 4/3	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5) 0:2

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ✓ No ___ Depth (inches): 3"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2"

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site is heavily irrigated for cultivation of vegetables.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario/San Bernardino Sampling Date: 1/25/17

Applicant/Owner: Caprock Partners State: CA Sampling Point: 9

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.975684 Long: -117.600215 Datum: NAD83

Soil Map Unit Name: Psamments, Fluvents, & Freq. flooded soils NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ✓, Soil ___, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ✓ No ___
Hydric Soil Present?	Yes ✓	No ___	
Wetland Hydrology Present?	Yes ✓	No ___	

Remarks: Site visit occurred after a significant storm event; water level on-site was not typical.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 15')			
1. Urtica urens	20	Y	UPL
2. Lepidium latifolium	10	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ___	x 1 = ___	
FACW species ___	x 2 = ___	
FAC species 10	x 3 = 30	
FACU species ___	x 4 = ___	
UPL species 20	x 5 = 100	
Column Totals: 30 (A)	130 (B)	

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: Site is w/in an active agricultural field and is constantly disced throughout the year. Hydrophytic vegetation was observed w/in this area during prior site visits

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					Sandy loam	
12-18	7.5YR 2.5/2	95	2.5 YR 3/6	5	C	M	sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5) 0:1

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site is heavily irrigated for cultivation of vegetables

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario/San Bernardino Sampling Date: 1/25/17

Applicant/Owner: Caprock Partners State: CA Sampling Point: 10

Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33.975844 Long: -117.591690 Datum: NAD83

Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ✓, Soil ___, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ___	**Is the Sampled Area within a Wetland?** Yes ✓ No ___
Hydric Soil Present?	Yes ✓	No ___	
Wetland Hydrology Present?	Yes ✓	No ___	

Remarks: Site visit occurred after a significant storm event; water level on-site was not typical.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	___ = Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	___ = Total Cover		
Herb Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	___ = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ___ (A)

Total Number of Dominant Species Across All Strata: ___ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ___ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: Site is within an active agricultural field and is constantly disced throughout the year.

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10 YR 3/2	100					sandy loam	
12-18	7.5 YR 2.5/2	95	2.5 YR 3/6	5	C	M	sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site is heavily irrigated for cultivation of vegetables

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Colony Commerce Center East City/County: Ontario/San Bernardino Sampling Date: 1/25/17
Applicant/Owner: Caprock Partners State: CA Sampling Point: 11
Investigator(s): E. Cooley, L. Singleton Section, Township, Range: S 22, T2S, R7W
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): _____ Lat: 33.975901 Long: -117.599687 Datum: NAD83
Soil Map Unit Name: Hilmar loamy fine sand NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✓ (If no, explain in Remarks.)
Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___
Are Vegetation ✓, Soil ___, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No ✓	**Is the Sampled Area within a Wetland?** Yes ___ No ✓
Hydric Soil Present?	Yes ___	No ✓	
Wetland Hydrology Present?	Yes ___	No ✓	

Remarks: Site visit occurred after a significant storm event; water level on-site was not typical.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	___ = Total Cover		
Sapling/Shrub Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
	___ = Total Cover		
Herb Stratum (Plot size: ___)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	___ = Total Cover		
Woody Vine Stratum (Plot size: ___)			
1.			
2.			
	___ = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ___ (A)
Total Number of Dominant Species Across All Strata: ___ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ___ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1 = ___
FACW species ___	x 2 = ___
FAC species ___	x 3 = ___
FACU species ___	x 4 = ___
UPL species ___	x 5 = ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = ___

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
✓ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: Site is within an active agricultural field and is constantly disced throughout the year.

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10 YR 3/2	100					loamy sand	No redox or H_2S

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Site is heavily irrigated for cultivation of vegetables.

Appendix C
Special-Status Plant Species

Appendix C
Special-Status Plant Species

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
GYMNOSPERMS							
Cupressaceae	**Cypress Family**						
Hesperocyparis forbesii	Tecate cypress	N/A	NONE	NONE	1B.1	Clay, gabbroic or metavolcanic soils associated with closed-cone coniferous forest and chaparral. 80-1500 meters.	**NONE**
EUDICOTS							
Asteraceae	**Sunflower Family**						
Ambrosia pumila	San Diego ambrosia	Apr.-Oct.	FE	NONE	1B.1	Chaparral, coastal scrub, valley and foothill grassland, vernal pools; often in disturbed areas; sometimes alkaline sandy loam or clay soils. 20-415 meters.	**NONE**
Baccharis malibuensis	Malibu baccharis	Aug.	NONE	NONE	1B.1	Chaparral, cismontane woodland, coastal scrub, riparian woodland. 150-305 meters.	**NONE**
Centromadia pungens ssp. *laevis*	smooth tarplant	Apr.-Sep.	NONE	NONE	1B.1	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland; alkaline. 0-640 meters.	**POTENTIAL**

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	Feb.-Jun.	NONE	NONE	1B.1	Marshes and swamps (coastal salt), playas, vernal pools. 1-1220 meters.	**NONE**
Pentachaeta aurea ssp. *allenii*	Allen's pentachaeta	Mar.-Jun.	NONE	NONE	1B.1	Open coastal scrub, valley and foothill grassland. 75-520 meters.	**NONE**
Senecio aphanactis	chaparral ragwort	Jan.-Apr.	NONE	NONE	2B.2	Chaparral, cismontane woodland, coastal scrub; sometimes alkaline soil. 15-800 meters.	**NONE**
Pseudognaphalium leucocephalum	white rabbit-tobacco	Jul.-Dec.	NONE	NONE	2B.2	Sandy, gravelly, chaparral, cismontane woodland, coastal scrub, riparian woodland. 0-2100 meters.	**NONE**
Symphyotrichum defoliatum	San Bernardino aster	Jul.-Nov.	NONE	NONE	1B.2	Near ditches, springs, and streams; cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic) 2-2040 meters.	**NONE**
Berberidaceae	**Barberry Family**						
Berberis nevinii	Nevin's barberry	Mar.-June	FE	CE	1B.1	Sandy soils in low-gradient washes, alluvial terraces, and canyon bottoms, along gravelly wash margins, or on coarse soils on steep, generally north-facing slopes in alluvial scrub, cismontane (e.g., chamise) chaparral, coastal sage scrub, oak woodland, and/or riparian scrub or woodland. 274-825 meters.	**NONE**

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
Boraginaceae	**Borage Family**						
Phacelia keckii	Santiago Peak phacelia	May-Jun.	NONE	NONE	1B.3	Within openings in closed-cone coniferous forest and chaparral; occasionally found along streams. 545-1600 meters.	**NONE**
Phacelia stellaris	Brand's star phacelia	Mar-Jun.	FC	NONE	1B.1	Open areas within coastal dunes and scrub habitats. 1-400 meters.	**NONE**
Brassicaceae	**Mustard Family**						
Thysanocarpus rigidus	rigid fringepod	Feb.-May	NONE	NONE	1B.2	Pinyon and juniper woodland; prefers dry, rocky slopes and ridges within oak and pine woodland in arid mountains. 425-2165 meters.	**NONE**
Caryophyllaceae	**Pink Family**						
Arenaria paludicola	marsh sandwort	May-Aug.	FE	SE	1B.1	Marshes and swamps(freshwater or brackish)/sandy, openings 3-170 meters.	**NONE**
Chenopodiaceae	**Goosefoot Family**						
Atriplex coulteri	Coulter's saltbush	Mar.-Oct.	NONE	NONE	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland; alkaline or clay soils. 10-440 meters.	**NONE**
Crassulaceae	**Stonecrop Family**						
Dudleya multicaulis	many-stemmed dudleya	Apr.-Jul.	NONE	NONE	1B.2	Chaparral, coastal scrub, and valley and foothill grassland; often on clay soils. 15-790 meters.	**NONE**

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
Fabaceae	**Pea Family**						
Astragalus brauntonii	Braunton's milk-vetch	Jan.-Aug.	FE	NONE	1B.1	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland; found in burned or disturbed areas in shallow soils on hilltops, saddles, bowls between hills; prefers saline and somewhat alkaline soil (soil specialist). 200-650 meters.	**NONE**
Geraniaceae	**Geranium Family**						
California macrophylla	round-leaved filaree	Mar.-May	NONE	NONE	1B.1	Cismontane woodland, valley and foothill grassland, clay soils. 15-1200 meters.	**NONE**
Lamiaceae	**Mint Family**						
Lepechinia cardiophylla	heart-leaved pitcher sage	Apr.-Jul.	NONE	NONE	1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland. 520-1370 meters.	**NONE**
Monardella australis ssp. *jokersti*	Jokerst's monardella	Jul.-Sep.	NONE	NONE	1B.1	Steep scree or talus slopes between breccias, secondary alluvial benches along drainages and washes; chaparral, lower montane coniferous forest. 1350 - 1750 meters.	**NONE**
Monardella hypoleuca ssp. *intermedia*	intermediate monardella	Apr.-Sep.	NONE	NONE	1B.3	Chaparral, cismontane woodland, lower montane, occasionally coniferous forest; generally grows on steep hillsides with dense brush. 400-1250 meters.	**NONE**

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
Monardella pringlei	Pringle's monardella	May-Jun.	NONE	NONE	1A	Coastal scrub (sandy). 300 to 400 meters.	**NONE**
Malvaceae	**Mallow Family**						
Sidalcea neomexicana	salt spring checkerbloom	Mar.-Jun.	NONE	NONE	2.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas; alkaline and mesic soils; typically found in alkali springs and marshes. 15-1530 meters.	**NONE**
Nyctaginaceae	**Four O'Clock Family**						
Abronia villosa var. *aurita*	chaparral sand-verbena	Jan.-Sep.	NONE	NONE	1B.1	Chaparral, coastal scrub, desert dunes; sandy. 75-1600 meters.	**NONE**
Orobanchaceae	**Broomrape Family**						
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	May-Oct.	FE	SE	1B.2	Coastal salt marsh, coastal dunes; restricted to upper salt marsh habitats. 0-30 meters.	**NONE**
Plantaginaceae	**Plantain Family**						
Penstemon californicus	California beardtongue	May-Jun.	NONE	NONE	1B.2	Sandy, chaparral, lower montane coniferous forest, Pinyon and juniper woodlands. 1170-2300 meters.	**NONE**
Polemoniaceae	**Phlox Family**						
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	Apr.-Sep.	FE	SE	1B.1	Chaparral, coastal scrub (alluvial fan); sandy or gravelly soils. 91-610 meters.	**NONE**

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
Navarretia prostrata	prostrate vernal pool navarretia	Apr.-Jul.	NONE	NONE	1B.1	Coastal sage scrub, wetland-riparian; occurs almost always under natural conditions in wetlands. 15-1210 meters.	**NONE**
Polygonaceae	**Buckwheat Family**						
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Apr.-Jul.	FC	FE	1B.1	Coastal scrub (sandy), valley and foothill grassland. 150-1220 meters.	**NONE**
Chorizanthe parryi var. *parryi*	Parry's spineflower	Apr.-Jun.	NONE	NONE	1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; sandy or rocky, openings. 275-1220 meters.	**NONE**
Chorizanthe polygonoides var. *longispina*	long-spined spineflower	Apr.-Jul.	NONE	NONE	1B.2	Primarily associated with clay soils but also found on sandy or gravelly soils within open areas of chaparral, sage scrub, or needlegrass grassland 30-1530 meters.	**NONE**
Chorizanthe xanti var. leucotheca	white-bracted spineflower	Apr.-June	NONE	NONE	1B.2	Coastal scrub (alluvial fans), Mojavean desert scrub, pinyon and juniper woodland; sandy or gravelly soils. 300-1200 meters.	**NONE**
Dodecahema leptoceras	slender-horned spineflower	Apr.-Jun.	FE	SE	1B.1	Scrub and chaparral in sandy soils and alluvial fans. 200-760 meters.	**NONE**

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
Horkelia cuneata var. *puberula*	mesa horkelia	Feb.-Jul. (uncommonly Sep.)	NONE	NONE	1B.1	Chaparral (maritime), cismontane woodland, coastal scrub/sandy or gravelly. 70-810 meters.	**POTENTIAL**
Solanaceae	**Nightshade Family**						
Lycium parishii	Parish's box thorn	Mar.-Apr.	NONE	NONE	2B.3	Coastal scrub, Sonoran desert scrub. 135 - 1000 meters.	**NONE**
MONOCOTYLEDONS							
Cyperaceae	**Sedge Family**						
Cladium californicum	California sawgrass	Jun.-Sep.	NONE	NONE	2B.2	Meadows and seeps, marshes, swamps/alkaline or freshwater. 0 - 2,000 meters.	**NONE**
Liliaceae	**Lily Family**						
Allium munzii	Munz's onion	Mar.-May	FE	ST	1B.1	Prefers chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland; mesic, clay. 297-1070 meters.	**NONE**
Calochortus weedii var. *intermedius*	intermediate mariposa lily	May-Jul.	NONE	NONE	1B.2	Coastal scrub, chaparral, valley and foothill grassland on rocky soil and rocky outcrops. 105-855 meters.	**NONE**
Poaceae	**Grass Family**						
Sphenopholis obtusata	prairie wedge grass	Apr.-Jul.	None	None	2B.2	Cismontane woodland, Meadows and seeps/mesic 300 - 2000 meters.	**NONE**
Ruscaceae	**Ruscus Family**						

Scientific Name	Common Name	Blooming Period	Federal	State	CNPS	Preferred Habitat	Potential For Occurrence
Nolina cismontana	chaparral nolina	May-Jul.	NONE	NONE	1B.2	Xeric Diegan sage scrubs, open chaparral, coastal scrub; generally grows within sandstone and shale substrates and occasionally within gabbro. 140-1275 meters.	**NONE**

NONE = species not expected to occur due to the lack of suitable habitat, or the site's location outside of the species' range;

OBSERVED = species was observed on the project site.

NOT EXPECTED = preferred habitat was considered present based on the literature review and observed habitat on the project site, however no individuals were observed during the focused special-status plant survey;

POTENTIAL = preferred habitat was considered present based on the literature review and habitat observed on the project site.

Key to Species Listing Status Codes

FE	Federally Endangered	SE	State Listed as Endangered
FTT	Federally Threatened	ST	State Listed as Threatened
FC	Federal Candidate	SCE	State Candidate for Endangered
FPE	Federally Proposed as Endangered	SCT	State Candidate for Threatened
FPT	Federally Proposed as Threatened	SFP	State Fully Protected
FPD	Federally Proposed for Delisting	SSC	California Species of Special Concern

SOURCE: ESA, 2017

Appendix D
Special-Status Wildlife Species

Appendix D
Special-Status Wildlife Species

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
ARACHNIDS					
Branchinectidae	**Fairy Shrimp**				
Branchinecta sandiegonensis	San Diego fairy shrimp	FE	NONE	Endemic to San Diego and Orange County mesas; vernal pools.	**NONE** The study area does not support vernal pool habitat. The entire watershed on the study area is tied to irrigation activities. The nearest observation of this species on CNDDB is approximately 14 miles to the southwest of the study area near Villa Park Dam.
INSECTS					
Mydidae	**Mydas Flies**				
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	FE	NONE	Found in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside Counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation.	**NONE** The study area does not support Delhi Sands.
FISH					
Catostomidae	**Suckers**				
Catostomus santaanae	Santa Ana sucker	FT	SSC	Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, & algae.	**NONE** The study area does not support suitable perennial water.
Cyprinidae	**Carps and Minnows**				
Gila orcutti	arroyo chub	NONE	SSC	Aquatic and south coast flowing waters; slow water stream sections with mud or sand bottoms; feeds heavily on aquatic vegetation and associated invertebrates.	**NONE** The study area does not support suitable perennial water.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	NONE	SSC	Permanent flowing streams with summer water temperatures of 17-20 C. Typically these streams are maintained by outflows of cool springs. The dace inhabits shallow cobble and gravel riffles.	**NONE** The study area does not support suitable perennial water.
AMPHIBIANS					
Bufonidae	**True Toads**				
Anaxyrus californicus	arroyo toad	FE	SSC	Rivers, washes or intermittent streams with sandy banks, willows, cottonwoods and sycamores within valley-foothill, desert riparian and desert wash communities in semi-arid regions; loose gravelly areas of streams in drier parts of range.	**NONE** The study area does not support suitable stream habitat with sandy banks.
Ranidae	**True Frogs**				
Lithobates pipiens	northern leopard frog	NONE	SSC	Distribution is east of Sierra-Nevada Cascade Crest. Highly aquatic, requires shoreline cover with abundant submerged and emergent aquatic vegetation.	**NONE** Although the study area supports two irrigation ditches with some emergent vegetation, water within the ditches is dependent on irrigation of the agricultural fields and is not a perennial water source. Additionally, the irrigation ditches are highly disturbed and subjected to activity associated with the harvesting of crops. The study area is outside of the historic native range of this species, although there are small scattered populations that were introduced throughout southern California. There nearest CNDDB occurrence record of this species was recorded in 1967, approximately 6.1 miles to the southwest of the study area within the Santa Ana River at Prado Dam.
Salamandridae	**Newts**				
Taricha torosa	Coast Range newt	NONE	SSC	Chaparral, oak woodland, and valley and foothill grasslands. Terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs and slow-moving streams.	**NONE** The study area does not support suitable terrestrial or breeding habitat.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Scaphiopodidae	**North American Spadefoots**				
Spea hammondii	western spadefoot	NONE	SSC	Primary habitat is vernal pools or other standing water free of exotic species below 1500 meters. Secondary habitats include adjacent chaparral, sage scrub, grassland and alluvial scrub.	**NONE** The study area does not support suitable primary or secondary habitat.
REPTILES					
Emydidae	**Box and Water Turtles**				
Emys marmorata	western pond turtle	NONE	SSC	Requires basking sites, such as partially submerged logs, vegetation mats, open mud banks, or grassy open fields within 0.5 km of permanent water. Suitable nesting sites are within or near permanent or near permanent bodies of water below 2,000 meters.	**NONE** The study area does not support suitable basking or nesting habitat.
Anniellidae	**Legless Lizards**				
Anniella pulchra pulchra	silvery legless lizard	NONE	SSC	Frequents sparse vegetation of beaches, chaparral, pine-oak woodland, and streamside growth of sycamores, cottonwoods, and oaks. Needs loose soil for burrowing, moisture, warmth, and plant cover. Moisture is essential.	**NONE** The study area does not support suitable beach, chaparral, pine-oak woodland, or stream habitat.
Gekkonidae	**Geckos**				
Coleonyx variegatus abbotti	San Diego banded gecko	NONE	SSC	Coastal & cismontane southern California; prefers granite or rocky outcrops within coastal scrub and chaparral.	**NONE** The study area does not support suitable granite or rocky outcrops within coastal scrub or chaparral habitats.
Phrynosomatidae	**Zebratail, Earless, Horned, Spiny, Fringe-Toed Lizards**				
Phrynosoma blainvillii	coast horned lizard	NONE	SSC	Chaparral; cismontane woodland; coastal bluff scrub; coastal scrub; desert wash; pinyon and juniper woodlands; riparian scrub; riparian woodland; valley and foothill grassland.	**NONE** Suitable native habitat is not preset on the study area.
Teiidae	**Whiptail Lizards**				
Aspidoscelis tigris stejnegeri	coastal whiptail	NONE	SSC	Various habitats in firm, sandy or rocky soils within sparse vegetation, open areas, woodlands and riparian communities of deserts and semi-arid areas.	**NONE** Suitable native habitat is not preset on the study area.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Colubridae	**Colubrid Snakes**				
Thamnophis hammondii	two-striped garter snake	NONE	SSC	Riparian and freshwater marshes with perennial water.	**NONE** The study area does not support suitable perennial water.
Salvadora hexalepis virgultea	coast patch-nosed snake	NONE	SSC	Coastal chaparral, coastal scrub, desert scrub, washes, sandy flats, and rock areas; small mammal burrows are necessary for overwintering.	**NONE** The study area does not support suitable native habitat.
Viperidae	**Vipers**				
Crotalus ruber	red-diamond rattlesnake	NONE	SSC	Chaparral, woodland, grassland, and desert. In rocky areas and dense vegetation.	**NONE** The study area does not support suitable native habitat with dense vegetation or rocky areas.
BIRDS					
Accipitridae	**Hawks**				
Aquila chrysaetos	golden eagle	NONE	SFP	Mountains, deserts, and open country; prefer to forage over grasslands, deserts, savannahs and early successional stages of forest and shrub habitats. Nests on cliff-walled canyons and occasionally within large trees in open areas.	**NONE [N]; POTENTIAL [F, LOW]** This species is not expected to nest on the study area. Although this species occasionally nests in large trees within open areas, it prefers to nests on cliffs, which are not present on the study area. The nearest known eagle nesting pair is in Chino Hills State Park, which is approximately 5.4 miles to the southwest of the project site. Agricultural fields on the study area and surrounding vicinity supply open areas with some suitable habitat for burrowing animals, and therefore may provide a limited food source for this species. It is possible the site may be used for foraging by the State Park pair (territory sizes of this species are typically extensive, especially in areas with low quality habitat). However, higher quality foraging habitat exists in the State Park and in Black Star Canyon to the south. All CNDDB occurrence records were from Chino Hills State Park.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Buteo swainsoni	Swainson's hawk	NONE	ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires suitable foraging areas adjacent to breeding areas such as grasslands that support rodent populations.	**NONE [N]; POTENTIAL [F, LOW]** The study area is outside of the species known breeding range (Palmdale/ Lancaster is the furthest south this species has been recorded in southern California). However, the agricultural fields on the study area and surrounding vicinity supply open areas with some suitable habitat for burrowing animals, which may provide a limited food source for migrants flying over the study area.
Elanus leucurus	white-tailed kite	NONE	SFP	Cismontane woodland; marsh and swamp; riparian woodland; valley and foothill grassland; wetland. Requires open grasslands, meadows, or marshes for foraging near isolated full-canopied trees for nesting.	**POTENTIAL [N, LOW]; POTENTIAL [F, LOW]** The eucalyptus grove in the center of the study area may provide suitable nesting habitat for this species, although proximity to human disturbance from farming activity and dairy operation may limit the presence of this species. The agricultural fields on the study area and surrounding vicinity supply open areas with some suitable habitat for burrowing animals, which may provide a limited food source for this species. The nearest CNDDB occurrence record of this species was recorded in 2009, approximately 0.4 mile to the southwest of the study area near Prado Flood Control Basin in the City of Chino.
Haliaeetus leucocephalus	bald eagle	NONE	SE	Lower montane coniferous forest; old growth.	**NONE [F]; NONE [N]** The study area does not support suitable montane coniferous forest habitat.
Cuculidae	**Cuckoos and Roadrunners**				
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FC	SE	Inhabits broad lower flood-bottoms of large river systems. Nests within dense willows often intermixed with cottonwoods with a dense understory of blackberries, nettle, and/or wild grape.	**NONE [F]; NONE [N]** The study area and the surrounding vicinity do not support suitable riparian habitat.
Strigidae	**True Owls**				
Asio otus	long-eared owl	NONE	SSC	Riparian bottomlands with tall willows & cottonwoods; also found in live oak patches along streams. Require adjacent open land with mice and old nests of crows, hawks, or magpies for breeding.	**NONE [F]; NONE [N]** The study area does not support suitable riparian habitat.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Athene cunicularia	burrowing owl	NONE	SSC	Disturbed; low-growing vegetation within coastal prairie, coastal scrub, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, valley and foothill grassland; bare ground, disturbed.	**POTENTIAL [N, MODERATE]; POTENTIAL [F, MODERATE]** The study area supports suitable nesting and foraging habitat for this species. The nearest CNDDB occurrence record of this species was recorded in 2006, approximately 0.4 mile to the northeast of the study area.
Tyrannidae	**Tyrant Flycatchers**				
Empidonax traillii extimus	southwestern willow flycatcher	FE	SE	Dense willow thickets are required for nesting and roosting. Nesting site usually near languid stream, standing water, or seep. Most numerous where extensive thickets of low, dense willows edge on wet meadows, ponds, or backwaters.	**NONE [N]; NONE [F]** The study area does not support suitable riparian habitat for this species.
Emberizidae	**Sparrow Family**				
Ammodramus savannarum	grasshopper sparrow	NONE	SSC	Dense grasslands on rolling hills, lowland plains, in valleys & on hillsides on lower mountain slopes; prefers native grasslands with a mixture of grass and forb species with some shrubs. Somewhat colonial during nesting.	**NONE [N]; NONE [F]** The study area does not support suitable native habitat for this species.
Vireonidae	**Vireos**				
Vireo bellii pusillus	least Bell's vireo	FE	SE	Riparian forest; riparian scrub; riparian woodland.	**NONE [N]; NONE [F]** Although the study area supports a small stand of black willows in the southwestern corner, the stand lacks the density and structure required by this species and does not connect to any other suitable habitat.
Troglodytidae	**Wrens**				
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	NONE	SSC	Coastal scrub. Requires tall, mature *Opuntia* or cholla cactus for nesting.	**NONE [N]; NONE [F]** The study area does not support *Opuntia* or cholla stands.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Parulidae	**Wood Warblers**				
Icteria virens	yellow-breasted chat	NONE	SSC	Nests in low, dense riparian willow thickets & other brushy tangles (e.g. blackberry, wild grape) near water. Forages and nests within 10 feet of ground.	**NONE [N]; NONE [F]** Although the study area supports a small stand of black willows in the southwestern corner, the stand lacks the density and structure required by this species and does not connect to any other suitable habitat.
Setophaga petechia	yellow warbler	NONE	SSC	Riparian woodlands, montane chaparral, open ponderosa pine and mixed coniferous habitat with significant brush.	**NONE [N]; NONE [F]** Although the study area supports a small stand of black willows in the southwestern corner, the stand lacks the density and structure required by this species and does not connect to any other suitable habitat.
Polioptilidae	**Gnatcatchers**				
Polioptila californica californica	coastal California gnatcatcher	FT	SSC	Coastal bluff scrub; coastal scrub.	**NONE [N]; NONE [F]** The study area does not support suitable coastal sage scrub habitat.
Icteridae	**Blackbirds**				
Agelaius tricolor	tricolored blackbird	NONE	SSC	Highly colonial species. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**NONE [N]; NONE [F]** Suitable open water habitat is not present on the study area.
MAMMALS					
Leporidae	**Hares and Rabbits**				
Lepus californicus bennettii	San Diego black-tailed jackrabbit	NONE	SSC	Open brushlands and scrub habitats between sea level and 1,219 meters in elevation.	**NONE** The study area supports only a limited number of shrubs that could be used as cover for this species. Additionally, the study area is isolated from higher quality habitat. This species is conspicuous and was not encountered during any of the field surveys.
Heteromyidae	**Kangaroo Rats, Pocket Mice and Kangaroo Mice**				

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	NONE	SSC	Coastal scrub, sagebrush, chaparral, grasslands, pinyon-juniper, and desert wash and scrub. Found in sandy, herbaceous areas with nearby shrubs for cover. Burrows are typically dug within gravelly or sandy soil.	**NONE** Although the understory of the eucalyptus grove in the center of the study area and crops planted on the agriculture field may provide some marginal herbaceous cover, there is a high level of disturbance from farming activity. Therefore, this species is not expected to occur on the site. The majority of occurrence records within the vicinity of the study area are from the Lake Mathews area. The nearest CNDDB occurrence record is from 2001 approximately 9.5 miles to the south of the site in Corona near the Cleveland National Forest boundary.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE	NONE	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains.	**NONE** The study area does not support suitable alluvial scrub habitat.
Dipodomys stephensi	Stephens' kangaroo rat	FE	ST	Prefers annual and perennial grasslands, but can occasionally be found in sparse coastal scrub or sagebrush. Sandy to sandy loam soils with low clay to gravel content.	**NONE** The study area does not support suitable annual/perennial grasslands or coastal scrub habitats.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	NONE	SSC	Lower elevation grasslands and coastal sage associations. Inhabits open ground with soils composed of fine sands. May not dig burrows but hide under weeds and dead leaves instead.	**NONE** The study area does not support suitable grassland or coastal sage habitats.
Muridae	**Mice, Rats, and Voles**				
Neotoma lepida intermedia	San Diego desert woodrat	NONE	SSC	Coastal scrub and chaparral. Prefer areas with moderate to dense vegetation cover and are commonly found in rock outcrops and cliffs.	**NONE** The study area does not support suitable coastal scrub or chaparral habitat.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Molossidae	**Free-Tailed Bats**				
Eumops perotis californicus	western mastiff bat	NONE	SSC	Frequently encountered in broad open areas. Roosts in crevices in cliff faces and occasionally small crevices in large boulders and building. Foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, and grassland. Preys on insects.	**NONE [R]; POTENTIAL [F, LOW]** The study area does not support suitable roosting habitat (cliff faces, large boulders/buildings). However, bats in this family are known to be strong fliers and can fly long distances to forage. There is a probability that individuals may travel from roosts to forage on insects on the site, but this potential is considered low based on the high level of human disturbance on the study area and surrounding development. The nearest CNDDB occurrence record is from1993 approximately 3.6 miles to the southeast of the site in Norco.
Nyctinomops femorosaccus	pocketed free-tailed bat	NONE	SSC	Joshua tree woodland; pinyon and juniper woodland; desert scrub, palm oasis, desert wash, and desert riparian; Sonoran desert scrub. Typically roost in caves and rocky outcrops; prefers cliffs in order to obtain flight speed. Feeds on insects flying, over bodies of water or arid desert habitats to capture prey.	**NONE [R]; NONE [F]** The study area does not support suitable roosting or foraging habitat for this species.
Nyctinomops macrotis	big free-tailed bat	NONE	SSC	Low-lying arid areas in southern California within habitats such as desert shrub, woodlands, and evergreen forests. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	**NONE [R]; POTENTIAL [F, LOW]** The study area does not support suitable roosting habitat (high cliffs/rocky outcrops). However, bats in this family are known to be strong fliers and can fly long distances to forage. There is a probability that individuals may travel from roosts to forage on insects on the site, but this potential is considered low based on the high level of human disturbance on the study area and surrounding development. The nearest CNDDB occurrence record is from 1987, approximately 10.8 miles to the northwest of the site in City of Pomona.

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence
Vespertilionidae	**Evening Bats**				
Antrozous pallidus	pallid bat	NONE	SSC	Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, and valley and foothill grassland. Prefers rocky outcrops, cliffs, crevices, trees (e.g., deciduous trees in riparian areas) with access to open habitats for foraging. Very sensitive to disturbance of roosting sites.	**NONE [R]; POTENTIAL [F, LOW]** The study area does not support suitable roosting habitat (rocky areas/riparian woodland), although the study area supports a few black willows in the southwestern corner. Since the study area is within a few miles of the Santa Ana River, which would support suitable roosting habitat within the riparian woodland, there is a low potential the open areas on the study area may provide suitable foraging habitat for this species. The nearest CNDDB occurrence record is from 1951, approximately 6.0 miles northwest of the site in a now developed area of Ontario.
Lasiurus xanthinus	western yellow bat	NONE	SSC	Found in valley foothills, riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms, and forages over water and among trees.	**NONE [R]; NONE [F]** The study area does not support suitable palm habitat for roosting or open water for foraging.

NONE = Species not expected to occur due to the lack of suitable habitat, or the site's location is outside of the species' range.

NONE [N]/[R] = Species not expected to nest or roost due to the lack of suitable habitat, or the site's location is outside of the species' range.

NONE (F) = Species not expected to forage due to lack of food sources, or the site's location is outside of the species' range.

NOT EXPECTED = Preferred habitat was considered potentially present based on the literature review and anticipated habitat in the study area, however no individuals were observed and/or suitable habitat was absent based on the general field survey or focused surveys.

POTENTIAL = Preferred habitat was considered potentially present based on the literature review and observed habitat in the project site.

POTENTIAL [N]/[R] = Preferred nesting or roosting habitat was considered potentially present based on the literature review and observed habitat in the project site.

POTENTIAL [F] = Preferred foraging habitat was considered potentially present based on the literature review and observed habitat in the project site.

OBSERVED = Species was observed during surveys conducted on the project site.

Key to Species Listing Status Codes

FE	*Federally Endangered*	SE	*State Listed as Endangered*
FT	*Federally Threatened*	ST	*State Listed as Threatened*
FC	*Federal Candidate*	SCE	*State Candidate for Endangered*
FPE	*Federally Proposed as Endangered*	SCT	*State Candidate for Threatened*
FPT	*Federally Proposed as Threatened*	SFP	*State Fully Protected*
FPD	*Federally Proposed for Delisting*	SSC	*California Species of Special Concern*

Scientific Name	Common Name	Federal	State	Preferred Habitat	Potential For Occurrence

SOURCE: ESA, 2017

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August 23, 2017

Mr. Patrick Daniels
Caprock Partners
2050 Main Street, Suite 240
Irvine, CA 92614

Subject: Results of the 2017 Special Status Plant Surveys for the Caprock-Colony Commerce Center East Specific Plan Project, City of Ontario, San Bernardino County, California

Dear Mr. Daniels:

This letter report summarizes the methodology and findings of special-status plant surveys conducted by **ESA** biologists Daryl Koutnik and Amy Lee for the approximately 104-acre Colony Commerce Center East Specific Plan located south of Merrill Avenue, north of County Line Channel, west of South Archibald Avenue, and east of Cucamonga Creek Channel, in the City of Ontario, San Bernardino County, California (project site). Specifically, the surveys were conducted to determine the presence or absence of the six special-status species listed below. As stated in Section 4.7.5 of the 2017 Biological Resources Assessment,[1] the two special-status species mesa horkelia (*Horkelia cuneata* var. *puberula*) and smooth tarplant (*Centromadia pungens* ssp. *laevis*) were identified as having potential to occur within the study area and required further surveys. In addition, four other special-status species recorded in the California Natural Diversity Database (CNDDB), a CDFW species account database, as occurring in the vicinity of the project site were included in the survey although they had not been observed in the December 14, 2016 and January 25, 2017 surveys.

- Lucky morning-glory (*Calystegia felix*),
- Smooth tarplant (*Centromadia pungens ssp. laevis*),
- Paniculate tarplant (*Deinandra paniculata*),
- Mesa horkelia (*Horkelia cuneata* var. *puberula*),
- Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*),
- California muhly (*Muhlenbergia californica*).

1 Environmental Science Associates (ESA). March 2017. *Colony Commerce Center East Specific Plan Biological Resources Assessment*. City of Orange, Orange County, California. Prepared for Caprock Partners.

Study Area

The approximately 104-acre project site (study area) is generally located approximately 2.5 miles to the west of Interstate (I) 15 and 3.3 miles to the south of State Route (SR) 60 (**Figure 1**, *Regional Map*). Specifically, the project site is located south of Merrill Avenue, north of County Line Channel, west of South Archibald Avenue, and east of Cucamonga Creek Channel. The study area can be found on the U.S. Geological Survey (USGS) 7.5-minute Corona North topographic quadrangle map[2] within Section 22, Township 2 South, Range 7 West, as shown in **Figure 2**, *Vicinity Map* (USGS 1967, Earth Survey 2017). The study area is also depicted on an aerial image as **Figure 3**, *Study Area Map*, and includes the proposed project area and the associated infrastructure improvements described in section 2.0 of the 2017 Biological Resources Assessment[1].

Plant Communities

The study area is located in the City of Ontario in San Bernardino County and is comprised of the following plant communities: eucalyptus grove, agriculture, non-native herbaceous and developed. The northern portion of the study area is currently occupied by an active dairy farm. The soils on the dairy operation area are heavily disturbed by cattle and support scattered non-native herbaceous vegetation, such as prickly Russian thistle (*Salsola tragus*) and cheeseweed (*Malva parviflora*). There is a eucalyptus grove in the center of study area that extends from South Archibald Avenue west to Cucamonga Creek Channel. The understory of the eucalyptus grove supports a small linear patch of cattails (*Typha* spp.) and other hydrophytic vegetation associated with runoff from the irrigation mainline that provides water to the crops grown in the southern portion of the study area. Due to the type of crops planted within this portion of the study area, the fields are heavily irrigated and harvested multiple times a year. In addition to the agricultural areas and eucalyptus grove described above, the study area supports some patches of non-native herbaceous vegetation and developed areas comprised of three existing residential homes along South Archibald Avenue and paved and compact dirt roadways along the periphery of the site. Descriptions of each of the plant communities found within the study area, as well as the Manual of California Vegetation (MCV) codes, are provided below. Locations of each of the plant communities are shown in **Figure 4**, *Plant Communities*. **Table 1**, *Plant Communities* lists each of the communities observed as well as the acreage within the study area.

Eucalyptus Grove (79.100.00)

Eucalyptus grove is dominated by gum eucalyptus species and occasionally has a shrub or herbaceous layer. Eucalyptus trees are typically planted as windrows or groves, but can also occur naturally in upland areas or along streams. On the study area, a eucalyptus grove dominated by red gum eucalyptus (*Eucalyptus camaldulensis*) was observed in the center of the study area, which extended from South Archibald Avenue west to the Cucamonga Creek Channel. The understory of the eucalyptus grove was primarily comprised of non-native species, such as

[2] *U.S. Geological Survey (USGS). 1967 (Photorevised in 1981). Corona North, California. 7.5-minute topographic quadrangle map.*

Australian saltbush (*Atriplex semibaccata*), Bermuda grass (*Cynodon dactylon*), nettle-leaved goosefoot (*Chenopodium murale*), prickly Russian thistle, tamarisk (*Tamarix* sp.), and tuna cactus (*Opuntia ficus-indica*).

Although the understory was dominated by non-native species, there was a small linear patch of cattails that was also observed within the understory, which occupied approximately 0.16 acre. The patch was co-dominated by narrow-leaved cattail (*Typha angustifolia*) and broad-leaved cattail (*Typha latifolia*). Other herbaceous species observed within the cattail stand included annual beardgrass (*Polypogon monspeliensis*), barnyard grass (*Echinochloa crus-galli*), curly dock (*Rumex crispus*), nettle-leaved goosefoot, and tall cyperus (*Cyperus eragrostis*). The cattail stand is associated with irrigation activities; however, no drainages or wetlands were observed within the cattail stand. There is an irrigation mainline that runs just south and parallel to this community, which conveys water to the crop field via lateral irrigation lines. The irrigation mainline was originally located further north within the cattails, which likely created favorable conditions for the cattails and other hydrophytic vegetation. However, at the time of the site visit, the irrigation mainline was shifted south of the cattails, which the cattails seem to be declining due to removal of the irrigation water. The eucalyptus grove occupied approximately 3.4 acres of the study area.

Agriculture

Agricultural areas consist of land that is actively being used for agricultural operations and do not support natural plant communities. Active agricultural areas occupied the majority of the project site and include a dairy farm in the northern portion and crop fields in the southern portion. The dairy farm is primarily unvegetated due to the disturbance from the cows, although some scattered non-native herbaceous vegetation, such as prickly Russian thistle (*Salsola tragus*) and cheeseweed (*Malva parviflora*), occurs. The field is planted with a variety of crops; in addition, some scattered non-native herbaceous species, such as barnyard grass (*Echinochloa crus-galli*), cheeseweed, curly dock (*Rumex crispus*), London rocket (*Sisymbrium irio*), nettle-leaved goosefoot (*Chenopodium murale)*, perennial pepperweed (*Lepidium latifolium*), dwarf nettle (*Urtica urens*), and water speedwell (*Veronica anagallis-aquatica*) also occur within the agricultural crop area. Agricultural areas occupied approximately 88.1 acres of the study area.

Non-native herbaceous

Non-native herbaceous vegetation is found in areas heavily disturbed by human activities, such as roadsides, graded fields, and manufactured slopes and frequently weedy, non-native plants are introduced as a consequence. Non-native species observed within this community on the project site include Australian saltbush, cheeseweed, and golden crownbeard (*Verbesina encelioides*). Native species observed include Jimson weed (*Datura wrightii*) and a few mule fat (*Baccharis salicifolia*) sprouts. Non-native herbaceous areas were primarily found along the western boundary of the study area, adjacent to Cucamonga Creek Channel. Ruderal areas occupied approximately 2.8 acres of the study area.

Developed

Developed areas consist of man-made structures, such as roadways and buildings. On the study area, developed areas included three residential homes located along the eastern study area boundary on South Archibald Avenue, the paved and compact dirt roadways along the periphery of the site, and small portions of Cucamonga Creek Channel and County Line Channel. Developed areas occupied approximately 9.5 acres of the study area.

TABLE 1
PLANT COMMUNITIES

Plant Communities	Acres
Eucalyptus Grove	3.4
Agriculture	88.1
Ruderal	2.8
Developed	9.5
Total	**103.8**

SOURCE: ESA, 2017

Methodology

ESA reviewed all available relevant data on sensitive habitats and special-status species distribution to determine which special-status plants have the potential for occurrence on-site. Items reviewed included: the CNDDB[3] and the California Native Plant Society (CNPS)[4] for endangered, threatened, or sensitive species potentially occurring within the project site.

Special-status plants surveyed for included those listed, or candidates for listing by the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), and the CNPS. A list of special-status plant species known to occur or potentially occurring in the vicinity of the project site was prepared as part of the 2017 Biological Resources Assessment[1], along with their sensitivity statuses and natural communities in which they are known to occur.

Surveys for special-status plants were conducted on June 12, 2017 by ESA biologists Daryl Koutnik and Amy Lee, and encompassed the flowering period of all special-status plant species with potential to occur on-site.

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3 *California Natural Diversity Database (CNDDB). 2012. California Department of Fish and Game Inventory for USGS 7.5-minute quadrangles, Corona North, Corona South, Riverside West, Black Star Canyon, Lake Matthews, Prado Dam, Fontana, Guasti and Ontario. Accessed March 2, 2017.*

4 *California Native Plant Society CNPS. 2012. On-line Inventory of Rare and Endangered Plants (v7-12apr 02-27-2012. for USGS 7.5-minute quadrangles Corona North, Corona South, Riverside West, Black Star Canyon, Lake Matthews, Prado Dam, Fontana, Guasti and Ontario. Accessed March 2, 2017.*

Plant surveys were conducted in accordance with survey guidelines published in the *Inventory of Rare and Endangered Vascular Plants of California*[5] and consisted of meandering transects walked across all accessible portions of the project site. Special-status plants (if observed) were mapped on a 1" = 250' scale aerial photograph and recorded using Geographic Information Systems (GIS) technology. All plant species observed on-site were recorded. A list of all plant species observed is included in **Appendix A**, *Floral Compendium*, attached. Plant species nomenclature follows that of Baldwin et al.[6]

Results

Results of the focused survey did not identify any special-status plant species within the study area. All plant species observed during the field surveys were identified and recorded using scientific and common names, as listed in **Appendix A**, *Floral Compendium*, attached. As such, we conclude that there are no special-status plant species that occur within the study area.

Should you have any questions regarding the methodology or findings in this report, please do not hesitate to contact Daryl Koutnik (dkoutnik@esassoc.com) at (949) 753-7001.

SINCERELY,

Daryl Koutnik
Principal, Biological and Environmental Compliance

Attachments:

Figure 1 – Regional Map
Figure 2 – Vicinity Map
Figure 3 – Study Area
Figure 4 – Plant Communities

Appendix A: Floral Compendium

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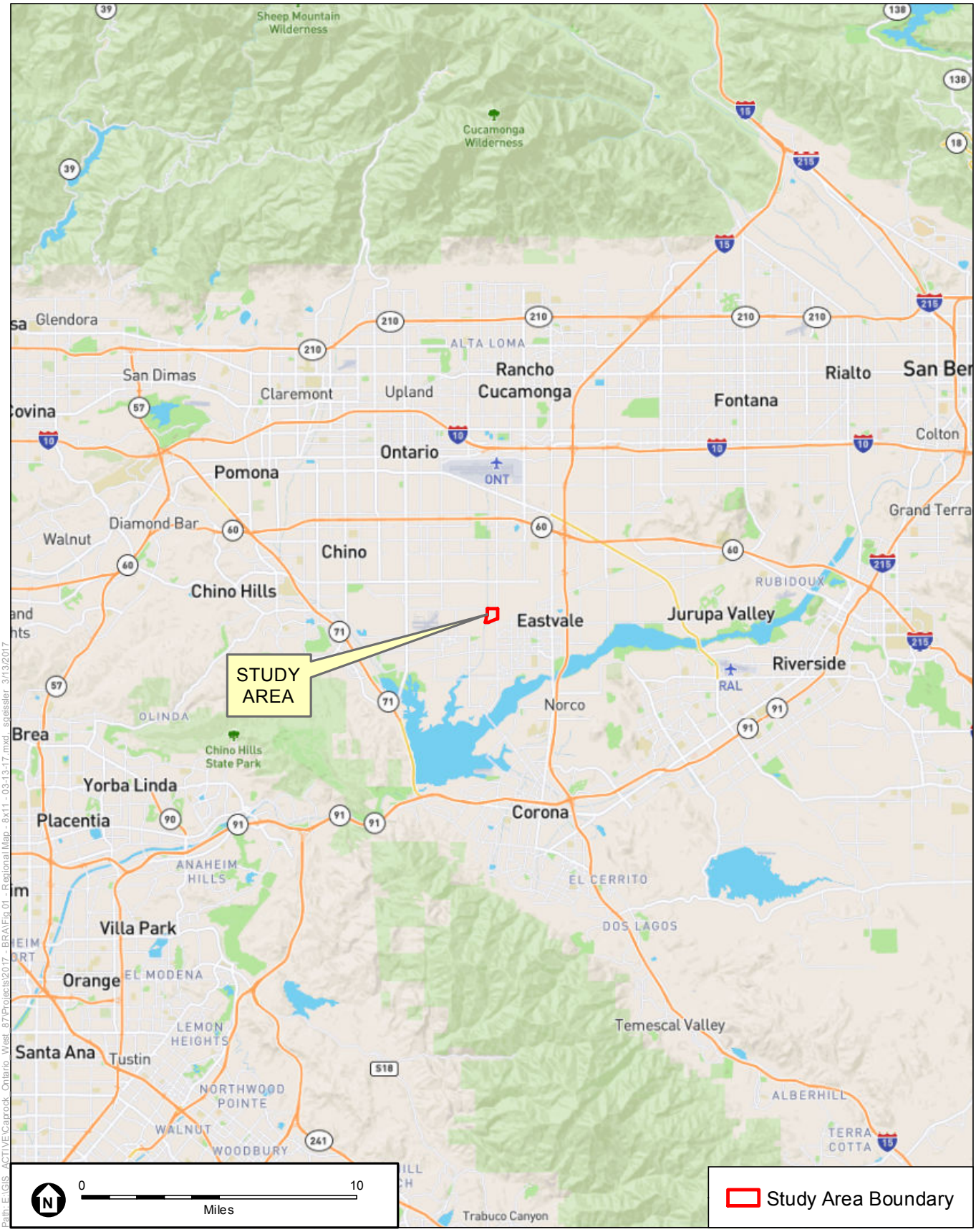
5 *California Native Plant Society (CNPS). 2001. Inventory of Rare and Endangered Plants of California Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, California. x+388 pages.*

6 *Baldwin, B.G., et al. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley*

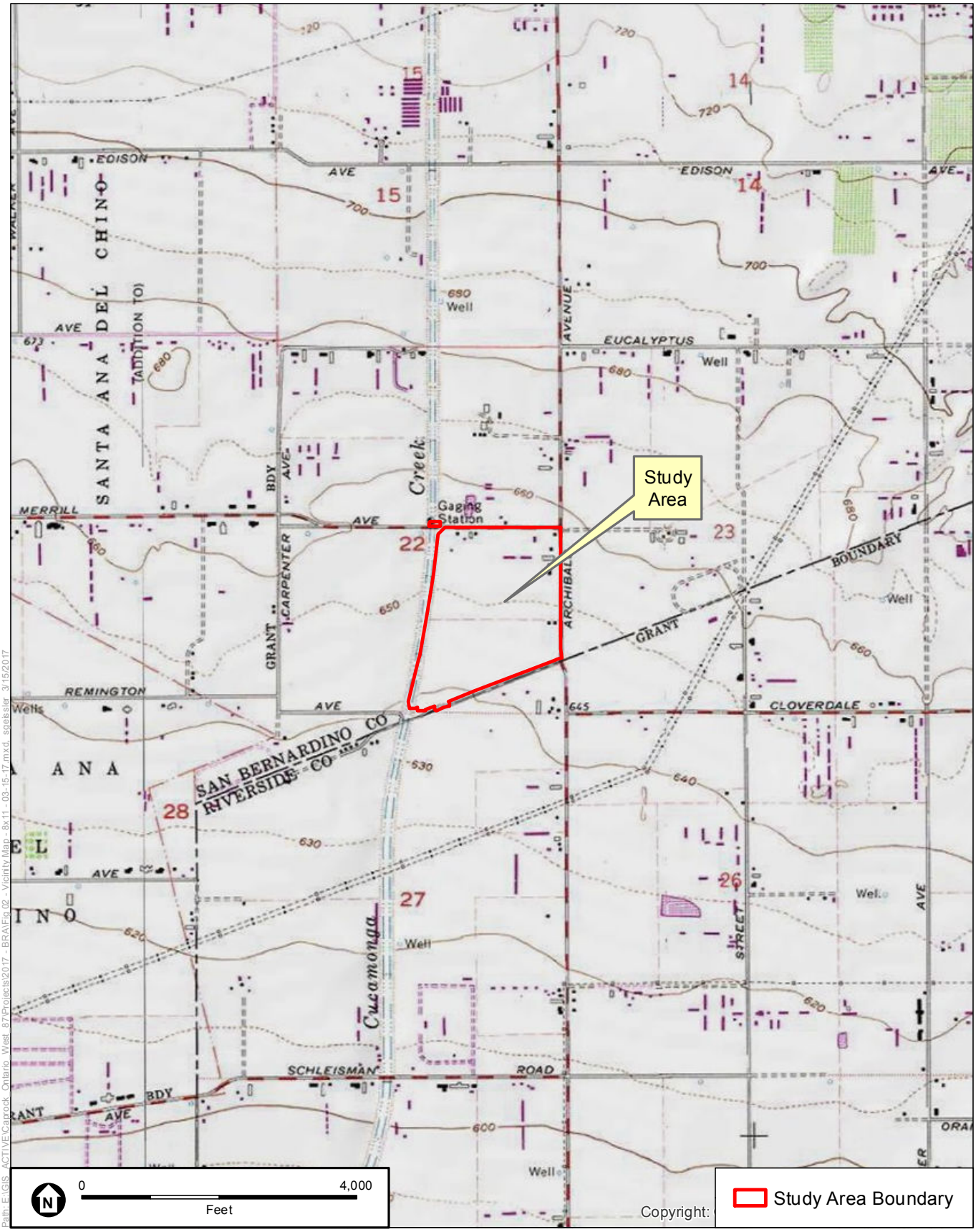


SOURCE: Open Street Map, 2017.

Colony Commerce Center East Specific Plan

Figure 1
Regional Map

ESA



SOURCE: USGS Topographic Series (Corona North, CA).

Colony Commerce Center East Specific Plan

Figure 2
Vicinity Map

ESA

SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 3
Study Area Map

ESA

SOURCE: NAIP, 2014 (Aerial).

Colony Commerce Center East Specific Plan

Figure 4
Plant Communities

ESA

Appendix A – Floral Compendium

Scientific Name	Common Name
Dicotyledons	
Amaranthaceae	**Amaranth Family**
* *Amaranthus albus*	tumbling pigweed
* *Amaranthus retroflexus*	redroot amaranth
Asteraceae	**Aster Family**
Erigeron canadensis	Canadian horseweed
Gamochaeta pensylvanica	Pennsylvania everlasting
* *Galinsoga parviflora*	gallant soldier
Helianthus annuus	common sunflower
Heterotheca grandiflora	telegraphweed
* *Senecio vulgaris*	common groundsel
* *Sonchus oleraceus*	common sowthistle
* *Verbesina encelioides*	golden crownbeard
Boraginaceae	**Borage Family**
Amsinckia menziesii	Menzies' fiddleneck
Brassicaceae	**Mustard Family**
* *Capsella bursa-pastoris*	shepherd's purse
* *Sisymbrium altissimum*	tall tumblemustard
Cactaceae	**Cactus Family**
* *Opuntia ficus-indica*	tuna cactus
Chenopodiaceae	**Goosefoot Family**
* *Atriplex semibaccata*	Australian saltbush
* *Bassia hyssopifolia*	fivehorn smotherweed
* *Chenopodium album*	lamb's quarters
* *Chenopodium murale*	nettle-leaved goosefoot
* *Salsola tragus*	prickly Russian thistle
Euphorbiaceae	**Spurge Family**
* *Ricinus communis*	castor bean
Geraniaceae	**Geranium Family**
* *Erodium cicutarium*	redstem filaree
Malvaceae	**Mallow Family**
* *Malva parviflora*	cheeseweed
Myrtaceae	**Myrtle Family**
* *Eucalyptus camaldulensis*	red gum
Plantaginaceae	**Plantain Family**
* *Veronica anagallis-aquatica*	water speedwell

Scientific Name	Common Name
Dicotyledons	
Polygonaceae	**Buckwheat Family**
* *Polygonum aviculare*	prostrate knotweed
* *Rumex crispus*	curly dock
Rumex salicifolius	willow dock
Portulacaceae	**Purslane Family**
* *Portulaca oleracea*	common purslane
Solanaceae	**Nightshade Family**
Datura wrightii	tree tobacco
* *Nicotiana glauca*	tree tobacco
* *Physalis philadelphica*	Mexican groundcherry
* *Solanum nigrum*	black nightshade
Tamariaceae	**Tamarisk Family**
* *Tamarix* sp.	tamarisk
Urticaceae	**Nettle Family**
Hesperocnide tenella	western nettle
Monocotyledons	
Scientific Name	**Common Name**
Araceae	**Arum Family**
Lemna minor	smaller duckweed
Cyperaceae	**Sedge Family**
Cyperus eragrostis	tall cyperus
Poaceae	**Grass Family**
* *Cynodon dactylon*	Bermuda grass
* *Echinochloa crus-galli*	barnyard grass
* *Polypogon monspeliensis*	annual beard grass
* *Sorghum halepense*	Johnsongrass
Typhaceae	**Cattail Family**
Typha angustifolia	narrow leaf cattail

*non-native species