Limonite Gap Closure Project

Jurisdictional Delineation Report

prepared for

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Executive Summary

On behalf of the City of Eastvale, Rincon Consultants, Inc. (Rincon) prepared this Jurisdictional Delineation Report for the Limonite Gap Closure Project (project), located in Eastvale, Riverside County (County), west of Interstate 15 (I-15), north of Pine Avenue, south of Merrill Avenue and crossing the Cucamonga Creek Channel (CCC).

The delineation was conducted to confirm the location and extent of resources potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) and California Department of Fish and Wildlife (CDFW). Proposed impacts to potential jurisdictional features may be subject to USACE/RWQCB/CDFW notification and permit requirements, pursuant to Section 404 of the Clean Water Act and Sections 1600 *et seq*. of the California Fish and Game Code (CFGC). This report was prepared to support USACE, RWQCB, and CDFW permitting processes, as well as environmental review under the California Environmental Quality Act (CEQA).

One potentially jurisdictional drainage and three potentially jurisdictional isolated waters were identified and delineated within the project site. Total potential USACE jurisdiction is 2.57 acres, total potential RWQCB jurisdiction is 4.67 acres, and total potential CDFW jurisdiction is 7.42 acres.

1 Introduction

Rincon Consultants, Inc. (Rincon) conducted a jurisdictional delineation for the proposed Limonite Gap (project). The delineation was conducted to confirm the location and extent of jurisdictional waters, including wetlands, on the project site that may potentially be subject to the jurisdiction of the California Department of Fish and Game (CDFW) pursuant to Sections 1600 *et seq*. of the California Fish and Game Code (CFGC) and United States Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act.

Any proposed development in areas identified as jurisdictional waters, including wetlands, may be subject to the permit requirements of the under Porter-Cologne Water Quality Act and a Streambed Alteration Agreement from the CDFW pursuant to Section 1600 *et seq.* of the CFGC. Actual jurisdictional limits are determined by the agencies at the time that permits are requested.

1.1 Project Location

The project site is located in northwestern Eastvale, Riverside County, California approximately 3 miles west of Interstate 15 (I-15) and 3 miles east of Schleisman Road (Limonite Avenue is an east-west Urban Arterial that currently ends at Archibald Avenue. In order to improve the service and vehicular capacity of Limonite Avenue and connections between the neighboring City of Chino to the west and Interstate 15 (I-15) to the east, the project would involve an approximately 6,180 feet (1.17 mile) long new segment of Limonite Avenue between Kimball Avenue and the existing Limonite Avenue east of Archibald Avenue across the CCC.

Improvements on Limonite Avenue are divided into three segments, described from west to east:

1. ***Limonite Avenue from Hellman Avenue to the CCC:*** Approximately 2,450 feet of the existing segment of Limonite Avenue west of the CCC would be improved. From 900 feet east of the intersection with Taylor Way to the existing terminus of Limonite Avenue, improvements include the addition of a Class II bike lane with a transition to a multi-use trail on both sides, including signage and pavement delineation. New road would be constructed from the existing terminus to the CCC, including curb/gutter, raised median, sidewalk improvements, landscaped parkway, and a multi-use trail on both sides, including signage and pavement delineation.
2. ***Cucamonga Creek Channel (CCC) Bridge:*** This entirely new bridge across the CCC would span approximately 330 feet long by 82 to 88 feet wide, constructed across the CCC to allow continuation of Limonite Avenue. The CCC Bridge would be a 3-span precast concrete girder bridge supported by pier walls at the intermediate supports and located within the CCC. The CCC Bridge would include two lanes in each direction and a Class I Bike Lane/Multi-Use Trail with raised median buffer.
3. ***Limonite Avenue east of the CCC Bridge to Archibald Avenue:*** This segment would be constructed in conjunction with the proposed Homestead industrial development, including a multi-lane roundabout, curb and gutter, two thru lanes in each direction, a raised median, multi-use trails and/or Class II bike lanes on both sides. Improvement widths throughout this section would vary between 108 and 124 feet. Roadway improvements at the

intersection would include the construction of new curb ramps, installation and/or modification of the traffic signal, signing, pavement delineation, and street lights. A roundabout or alternative intersection control along Limonite Avenue is being considered for a primary access to the proposed Homestead development (approximately 1,500 feet east of the CCC) (Eastvale 2020). Limonite Avenue would be widened just west of the intersection to conform to lane configuration. The west leg of Limonite Avenue would introduce single left and right turn lanes for east-bound traffic. Roadway improvements at the intersection would include the construction of new curb ramps, installation and/or modification of the traffic signal, signing, pavement delineation, street lights, and relocation of conflicting overhead electrical, telecommunications, and cable television utilities. Improvement widths at the intersection would vary between 102 and 310 feet.

Construction in this area would also include the demolition/removals of multiple steel overhang feeding structures and a single-family residential building located on the existing dairy property just west of Archibald Avenue that is in conflict with the proposed roadway alignment. All removals would include the abatement of hazardous materials such as lead and asbestos containing materials per State and Federal rules and regulations. Additionally, multiple utility facilities may require relocation, including, but not limited to, a high-pressure gas facility located at the dairy and overhead electrical distribution/transmission facilities located act the proposed Limonite Avenue / Archibald Avenue intersection. The City would coordinate directly with the owners of the utility facilities in conflict for them to relocate their facilities prior to construction of the proposed roadway improvements.

Additional improvements include:

- A new 180-foot long bicycle/pedestrian bridge would be constructed across the CCC approximately 1,000 feet south of the proposed CCC Bridge. This bridge would close the gap of an existing multi-use trail located within the Southern California Edison (SCE) easement/ transmission line area north of the Symphony at the Trails residential development. The proposed steel prefabricated bridge would vary between 12 to 16 feet wide to accommodate two-way multi-use travel.
- New catch basins and inlet structures would be constructed as necessary within the roadway limits with storm drain laterals to convey upstream and project-generated drainage.
- Domestic/reclaimed water and sewer mainline facilities would be installed connecting existing Jurupa Community Services District facilities located along the existing section of Limonite Avenue west of the CCC to facilities located at the Archibald Avenue/Limonite Avenue intersection.
- Landscape planting and hardscapes improvements would be installed in parkway areas adjacent to existing and proposed meandering sidewalk/Class II bike facilities/multi-use trails and in the raised medians.
- Street lighting would be installed along the corridor on both sides of Limonite Avenue.

Project construction would occur over approximately 12 months, with construction anticipated to begin in January 2022 and be completed in January 2023. Construction would involve grading and excavation for roadway improvements, bridge construction, paving activities, and architectural coating and pavement striping. It is anticipated that export/hauling operations may exceed 50,000 cubic yards of excess soils. Additionally, it is anticipated the project would require import materials that may exceed 50,000 cubic yards depending on final grading elevations.

Figure 1). The site is located within Section 27 of Township 2 south, Range 7 west (San Bernardino baseline and meridian), and depicted on *Corona North,* California United States Geological Survey 7.5-minute quadrangle map (Figure 2). The project would construct a new segment of the Limonite Avenue corridor connecting existing Kimball Avenue west of the Hellman Avenue intersection to the existing Limonite Avenue east of Archibald Avenue, adjacent to the Cucamonga Creek Channel (CCC) (Figure 3).

1.2 Project Description

Limonite Avenue is an east-west Urban Arterial that currently ends at Archibald Avenue. In order to improve the service and vehicular capacity of Limonite Avenue and connections between the neighboring City of Chino to the west and Interstate 15 (I-15) to the east, the project would involve an approximately 6,180 feet (1.17 mile) long new segment of Limonite Avenue between Kimball Avenue and the existing Limonite Avenue east of Archibald Avenue across the CCC.

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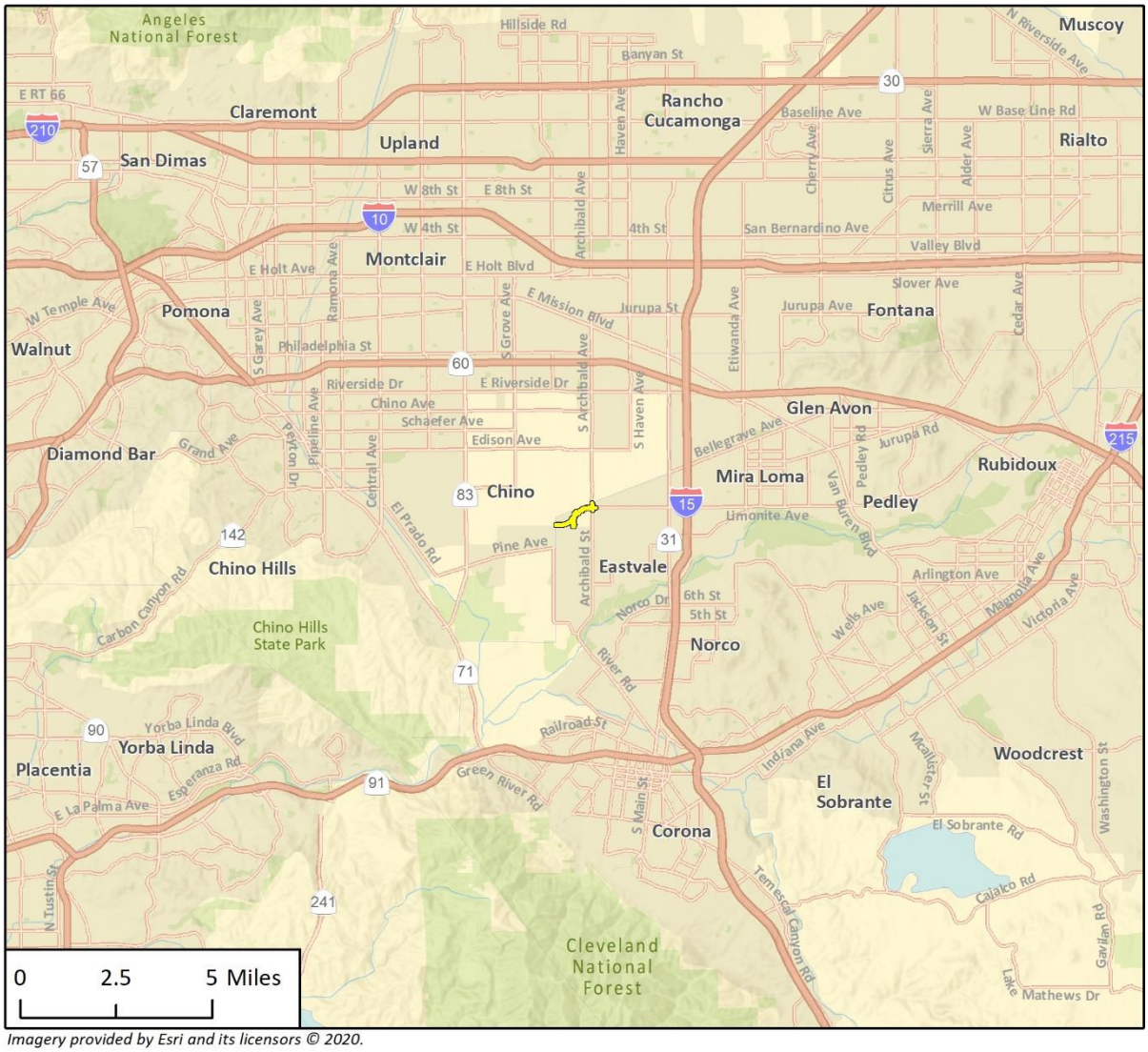
Figure 1 Project Vicinity and Regional Location



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Project Location

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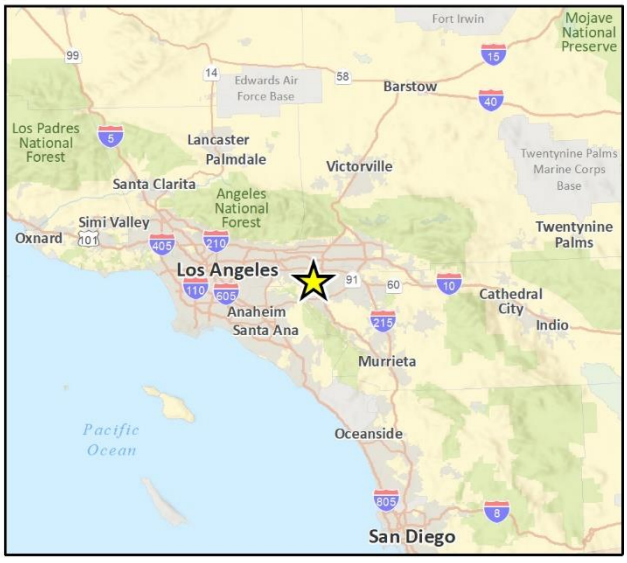

Figure 2 Project Location on a USGS Topographic Map

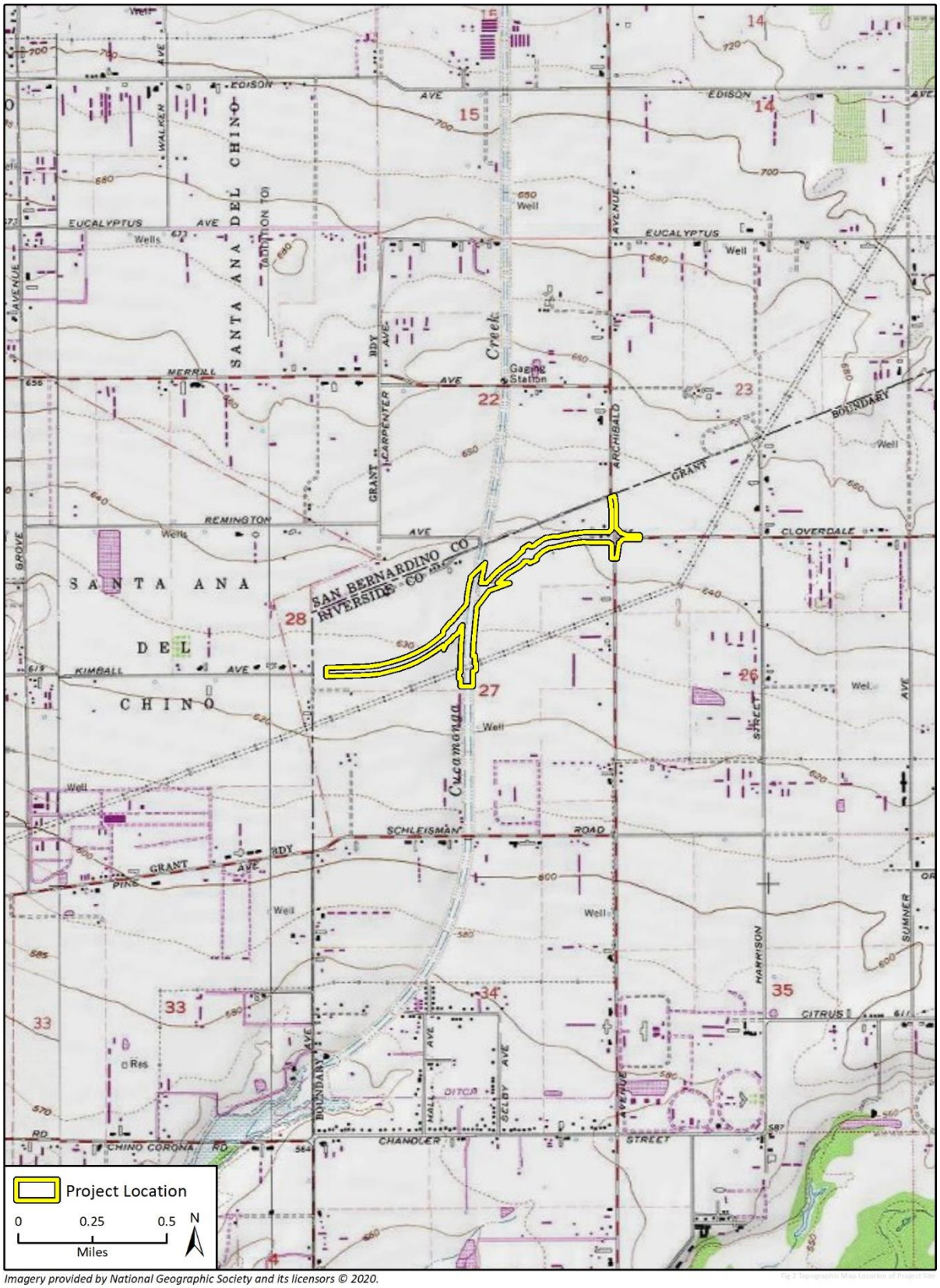

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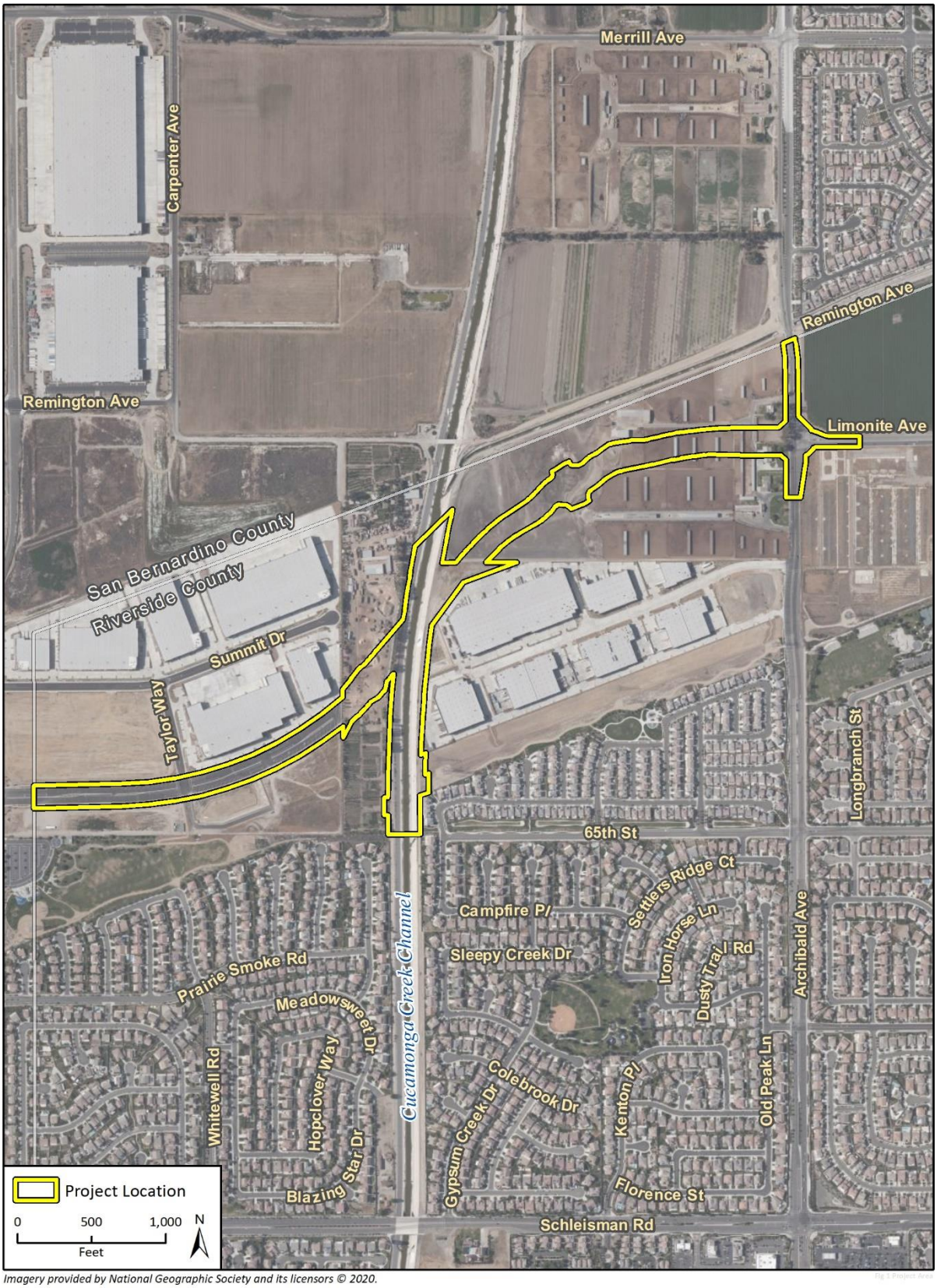
Figure 3 Project Footprint



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2 Methodology

Rincon prepared this jurisdictional delineation of Waters of the United States, Waters of the State, and CDFW-jurisdictional streambeds based on a review of available literature and imagery supplemented with a field reconnaissance survey. The delineation assessed drainages within the Limonite Gap Project Site with boundaries of all features mapped in the field using GPS technology.

This jurisdictional delineation was conducted in accordance with currently accepted regulatory guidelines. The delineation analysis began with a literature review of existing studies, maps, and other publications. After completion of the literature review, a field delineation was completed to identify, describe, and map all potential jurisdictional waters within the project site.

The Study Area for this Jurisdictional Delineation Report was limited to aquatic resources and potential jurisdictional waters within the boundary of the Limonite Gap Project Site as defined in the Section 1.1 of this Report and displayed on Figure 3.

2.1 Literature Review

Prior to the field survey, Rincon reviewed aerial photographs of the site (Google Earth 2020) and regional and site-specific topographic maps (USGS 2015) in order to assess potentially jurisdictional areas. The *National Wetlands Inventory* (NWI) (USFWS 2020) and the *National Hydrography Dataset* (USGS 2020) were reviewed to determine if any wetlands or other waters had been previously documented and mapped within the Study Area. The *National Hydric Soils List by State: California* (USDA NRCS 2020b) was also reviewed to determine if any soil map units mapped in the site were classified as hydric.

Historic and recent high-resolution aerial photographs were examined prior to conducting field surveys to detect signatures that may indicate fluvial activity. Using GIS, areas were selected where watercourses and related geomorphic forms or units (e.g., floodplain, terrace, interfluves, islands) appeared to be present. Based on aerial signatures, such as changes in landscape color, vegetation density, and drainage patterns, various areas across the project site were identified where field investigations would be focused. Rincon imported the locations of potential jurisdictional features into an Android tablet equipped with ESRI ArcCollector. The tablet was paired with a Trimble R1 Global Positioning System (GPS) with sub-meter accuracy for use in the field as described in Section 2.2. The data was overlaid on recent high-resolution aerial imagery for navigation and data collection.

2.2 Field Surveys

The biologists surveyed the entire study area on foot to identify potentially jurisdictional aquatic resources, including any potential wetlands and non-wetland waters that exhibit an Ordinary High Water Mark (OHWM) and that may constitute waters of the U.S., waters of the state, and/or streambeds. During the survey, the biologists noted general site characteristics, documented vegetation, and took representative photographs. Current federal and state methods and guidelines were used to identify and delineate potential jurisdictional areas, as described below.

Jurisdictional Delineation

Waters of the United States (U.S.) regulated by the USACE were delineated to the OHWM. Areas qualifying as wetlands under USACE regulations, if present, were delineated based on the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. Areas regulated by the RWQCB were delineated coterminous with those of the USACE and isolated waters were also included within RWQCB jurisdiction. CDFW jurisdiction was defined to the top of bank or limits of the outer dripline of riparian vegetation, whichever is greater.

Wetlands

The biologists searched for indicators of potential wetland features by looking for the presence of hydrophytic vegetation, hydric soils, and wetland hydrology, according to routine delineation procedure outlined in the *Wetlands Delineation Manual* (USACE 1987) and the guidance in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). The USACE *Arid West 2016 Regional Wetland Plant List* was used to determine the wetland status of the examined vegetation by the following indicator status categories: Upland (UPL), Facultative Upland (FACU), Facultative (FAC), Facultative Wetland (FACW), and Obligate Wetland (OBL) (Lichvar et al. 2016). During the survey, areas with a dominance or prevalence of hydrophytic vegetation were noted.

Non-Wetland Waters of the United States

The lateral limits of potential USACE jurisdiction (i.e., width) for non-wetland waters or "other waters" was determined by the presence of physical characteristics indicative of the OHWM. The OHWM was identified in accordance with the applicable Code of Federal Regulations sections (33 CFR 328.3 and 33 CFR 328.4) and Regulatory Guidance Letter 05-05 (USACE 2005), as well as in reference to various relevant technical publications including but not limited to *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010).

Waters of the State

The Porter-Cologne Water Quality Control Act of 1969 (California Water Code §§ 13000-13999.10) mandates that waters of the state be protected and provides a state-level program for regulating the discharges of waste into waters of the state which is implemented in concert with CWA requirements. "Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state. The State Water Resources Control Board and RWQCBs do not have a defined methodology for delineating the limits of their jurisdiction. Therefore, for the purpose of this report this limit was delineated coterminous with the boundary of waters of the U.S. (i.e., extending laterally to the OHWM, plus adjacent wetlands). The limit typically extends to isolated waters and wetlands that are not regulated under the CWA, if present.

CDFW Jurisdictional Streambeds

Section 1602 of the California Fish and Game Code requires an entity to notify the CDFW before conducting any activity that would divert, obstruct, or substantially alter a streambed. Once notified, the CDFW may require that a Streambed Alteration Agreement (SAA) be executed before the activity may proceed. The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated

regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. Considering this, four sources of information were reviewed and considered in determining the appropriate limits of CDFW jurisdiction within the site, as discussed below. The principles presented in these materials were used to guide the delineation of the on-site stream, with consideration given to the relevance (i.e., jurisdiction, applicability) of each source to the project and resources at hand.

- **The plain language of Section 1602 of the California Fish and Game Code** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation
- **Guidance documents**, including *A Field Guide to Lake and Streambed Alteration Agreements (*CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators

- A stream may have one or more channels (single-thread vs. compound form)
- Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
- Biologic components of a stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
- The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk.
- The tenets listed above, among others, were applied within the study area to determine the limits of CDFW jurisdiction.

2.3 Data Collection and Processing

When field data collection was complete, jurisdictional boundaries were downloaded from the Trimble GPS unit and converted into a GIS shape file using ArcGIS software. Representative photographs of potential jurisdictional waters and surrounding site conditions were taken and are presented in Appendix A.

3 Results

Results of the jurisdictional delineation are presented below. An overview of the site's topography, climate, vegetation, hydrology, and soils is also presented for context.

3.1 Environmental Setting

This section provides an overview of the existing vegetation, soils, and hydrology within the Limonite Gap site, to provide a context within which to understand the delineation and assessment results.

Topography and Climate

The Limonite Gap Project site is located within the San Jacinto Valley, which is surrounded by the San Jacinto Mountains to the east and Santa Rosa Hills to the south, with the San Gorgonio Pass to the north. The climate in Eastvale is classified as hot semi-arid or steppe. The area is generally hot and dry throughout most of the year, ranging from 56 to 92°F during the summer with the hottest month being August. Temperatures range from 41 to 69°F during the winter, with January being the coolest month. Annual precipitation averages approximately 10.9 inches, the majority of which falls between the months of January and March (WRCC 2020).

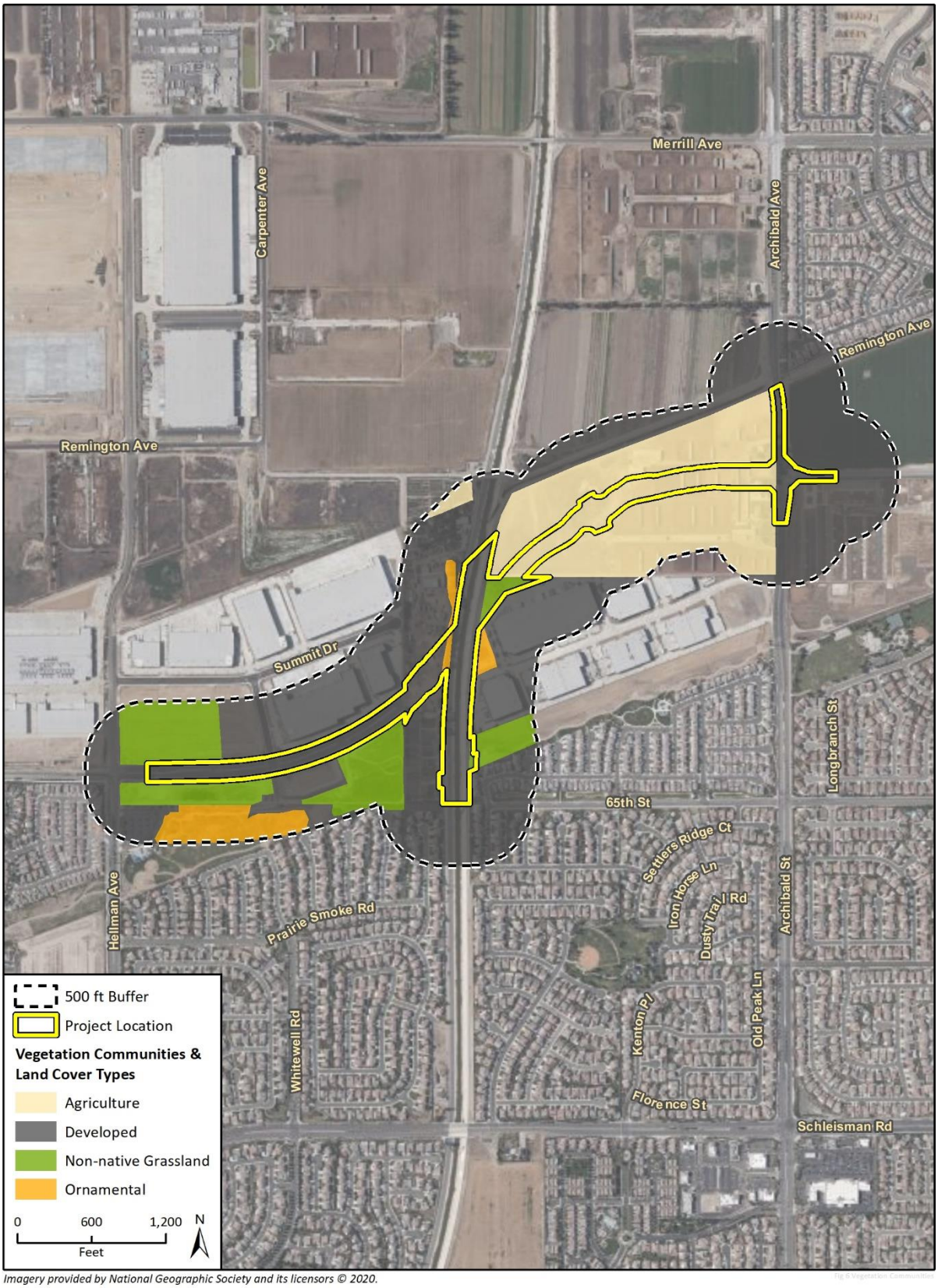
Vegetation

The Limonite Gap Project site is situated within and is dominated by urban and agricultural landscape. The west side of the Study Area is developed and contains industrial buildings and a plant nursery with a scrap wood stockpile. The east side of the Study Area contains a large dairy operation, patches of non-native grasslands, and industrial development. The dairy operation was largely unvegetated at the time of the field survey due to the number of cattle present and landowner maintenance activities. Vegetation types found within the Study Area include ornamental vegetation, anthropogenic agricultural vegetation, annual grasslands, and disturbed and developed lands. The majority of the Study Area is made up of disturbed/developed lands. A vegetation map of the Limonite Gap Project site based on the literature review is presented in Figure 4.

Hydrology

General hydrology of the Project site was evaluated through review of topographic maps, aerial photos, and the National Hydrography Dataset (USFWS 2020). The Limonite Project Site is within the Santa Ana River hydrologic unit of the South Coast hydrologic region. The Santa Ana River Watershed drains a 2,650 square-mile area and includes the major population centers of parts of Orange, Riverside, and San Bernardino Counties, as well as a sliver of Los Angeles County. The Limonite Gap Project is within the Middle Santa Ana River hydrologic area (CalWater 2019). The Santa Ana River Region is a group of connected inland basins and open coastal basins drained by surface streams flowing generally southwestward to the Pacific Ocean and is, therefore, subject to USACE permitting authority.

Figure 4 Vegetation Communities



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Soils

The Soil Survey Geographic Database for Eastvale, CA (USDA NRCS 2020a) indicates that 7 soil types occur within the Project vicinity. The following soil types were mapped within the Project site boundary: Chino silt loam, Delhi loamy fine sand, Grangeville loamy fine sand, Grangeville fine sandy loam, Hilmar loamy very fine sand, Hilmar loamy fine sand, and Riverwash. A map of soil types within the Study Area is presented on Figure 5.

None of the mapped soils within the Project site are considered hydric (USACE 2020b).

Chino Series

The Chino soil series is found at depths between 4 and 12 inches. These soils are moist all the time from November through May and dry the rest of the year. The Chino soils are in basins and flood plains formed in alluvium and derived from granite rocks, and commonly used for grazing. Drained areas are used for growing irrigated truck and row crops. This series is poorly to somewhat poorly drained and exhibits slow to very slow runoff with moderate permeability.

Delhi Series

The Delhi soil series is found at depths between 12 and 35 inches. These soils are on floodplains, alluvial fans, and terraces with slopes of 0 o 15 percent. The Delhi soils are somewhat excessively drained and commonly used for growing grapes, peaches, truck crops, alfalfa and for homesites. This series exhibits negligible to slow runoff with rapid permeability.

Grangeville Series

The Grangeville soil series is very deep, found at depths between 8 and 24 inches. These soils are typically saturated from January through April and occur within alluvial fans and floodplains with 0 to 2 percent slopes. The Grangeville soils are somewhat poorly drained and exhibits negligible to very low runoff with moderately rapid permeability.

Hilmar Series

The Hilmar soil series loamy soil of contrasting texture is found at depths between 16 and 30 inches. Except where drained and reclaimed, these soils are saturated from a depth of 10 to 40 inches from February to May or for a longer period and are saline. Hilmar soils are strongly to very strongly alkaline in some parts of the profile. This series is nearly level and found in basins. The soils are poorly to somewhat poorly drained with a fluctuating water table and exhibits slow to rapid permeability with slow runoff.

Riverwash (Riverby) Series

The Riverwash (or Riveryby) soil series consists of deep, excessively drained soils on flood plains. Riverwash soils exhibit slow runoff and rapid permeability. These soils are subject to frequent flooding for very brief to brief periods. An apparent water table is between 4- and 5-feet during winter and spring with depth to bedrock typically greater than five feet.

Delineation Results

One potentially jurisdictional drainage, the Cucamonga Creek Channel, and three (3) potentially jurisdictional isolated waters were identified on site (Figure 6).

Figure 5 Soils

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Additional data provided by USDA, 2017.

Fig 3 USDA Soils Map_50ftbuff

Figure 6a Jurisdictional Delineation Results

Figure 6b Jurisdictional Delineation Results

3.2 Cucamonga Creek Channel

The concrete-lined Cucamonga Creek Chanel (CCC) flows south from the Cucamonga Canyon dam in the City of Upland to Hellman Avenue where the channel turns into a soft-bottom tributary to the Santa Ana River. The portion of the CCC which intersects the project site is a concrete-lined flood control channel owned and operated by The Riverside County Flood Control and Water Conservation District and the San Bernardino County Flood Control District. Cucamonga Creek Watershed is located within the western portion of San Bernardino County and includes portions of San Bernardino and Riverside counties and portions of the cities of Chino, Upland, Ontario, and Rancho Cucamonga.

3.3 Isolated Waters

Three isolated waters exist within the Study Area. These are small basins that are isolated surface waters and are not hydrologically connected to the CCC or any other potentially jurisdictional waters. Two basins are present on a dairy farm on the east side of the CCC and are actively used as a water source for cattle. According to aerial imagery, these basins have been present in their current form since the early 2000s (Google Earth 2020) but were briefly graded during late 2017/early 2018. These are routinely drained and filled by the landowner and the vegetation is routinely removed by cattle and/or the landowner. The two isolated waters located on the dairy farm do not contain riparian vegetation or wildlife habitat. A third isolated water is present within an area of industrial development on the west side of the CCC. This basin was created during the construction of the adjacent industrial buildings in 2018 and functions as an infiltration basin that contains runoff from the nearby development (Google Earth 2020). This basin contained only sparse non-native grasses at the time of the survey and is routinely cleared of vegetation. This basin does not contain riparian vegetation or wildlife habitat.

3.4 Assessment of Jurisdictional Waters

Table 1 summarizes the acreages of potential RWQCB, USACE and CDFW jurisdictional waters delineated at the project site.

Table 1 Potential USACE, RWQCB and CDFW Jurisdictional Waters within the Study Area

	Waters of the U.S. (acres)	Waters of the State (acres)	CDFW Jurisdictional Waters (acres)
Cucamonga Creek Channel	2.57	2.57	7.42
Isolated waters	–	4.67	–
Total	**2.57**	**7.24**	**7.42**

Potential USACE Jurisdiction

Approximately 2.57 acres of potential USACE jurisdictional non-wetland waters of the U.S. were delineated in the Study Area.

The Cucamonga Creek Channel within the Study Area is a relatively permanent tributary to the Santa Ana River. Since the Santa Ana River is a relatively permanent water and a tributary to the Pacific Ocean, the CCC would be USACE-jurisdictional.

Potential RWQCB Jurisdiction

Approximately 7.24 acres of potential RWQCB jurisdictional non-wetland waters of the State were delineated in the Study Area. This includes the CCC and the three isolated waters within the Study Area.

Potential CDFW Jurisdiction

Approximately 7.42 acres of potential CDFW-jurisdictional streambeds were delineated within the Study Area, comprised of the Cucamonga Creek Channel.

4 Conclusions and Recommendations

A total of 2.57 acres of waters of the U.S. under the jurisdiction of the USACE are present within the Study Area. A total of 7.24 acres of waters of the State under the jurisdiction of the RWQCB are present. Additionally, a total of 7.42 acres of CDFW-jurisdictional streambed and basins are present.

USACE Nationwide Permit 14 (NWP 14) covers linear transportation projects in waters of the U.S. with permanent impacts of less than 0.5 acre. Additionally, a 401 Water Quality Certification from the RWQCB will be required for impacts to waters of the U.S./State. A CDFW notification of Lake or Streambed Alteration is anticipated to be required for work within the streambed and streambank habitats.

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Appendix A

Site Photographs

Photograph 1. View of Cucamonga Creek Channel along path west of Symphony Court facing north.

Photograph 2. View of Cucamonga Creek Channel along path west of Parker House warehouse store facing south.

Photograph 3. View across CCC, facing west.

Photograph 4. View of isolated water on the east side of the CCC.

Photograph 5. View of culvert leading into isolated water on the east side of the CCC, facing north.

Photograph 6. View of non-native grassland area adjacnt to the isolated waters on the east side of the CCC, facing southeast.

Photograph 7. View of isolated basin created within the industrial area on the west side of the CCC.

Photograph 8. View of vegetation west of Cucamonga Creek Chanel near Kimball Avenue facing north.

Appendix B

Regulatory Overview and Definitions

CDFW Jurisdiction

Section 1602 of CFGC requires an entity to notify the CDFW before conducting any activity that would divert obstruct, or substantially alter a streambed. Once notified, the CDFW may require that a Streambed Alteration Agreement be executed before the activity may proceed. The CDFW has not defined the term "stream" for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. Considering this, four sources of information were reviewed and considered in determining the appropriate limits of CDFW jurisdiction within the site, as discussed below. The principles presented in these materials were used to guide the delineation of on-site streams, with consideration given to the relevance (i.e., jurisdiction, applicability) of each source to the project and resources at hand.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References "river," "stream," and "lake"
  - References "natural flow"
  - References "bed," "bank," and "channel"
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602's use of "stream" to be as defined in common law. The Court indicated that a "stream" is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

- **Guidance documents**, including *A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single-thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
  - Biologic components of a stream may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
  - The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, were applied within the project site in an attempt to determine the limits of on-site streams. The project site is in a desert, and the on-site resources are episodic streams on arid landscapes.

Federal Clean Water Act Jurisdiction

Pursuant to Section 404 of the Clean Water Act (CWA), the USACE regulates the discharge of dredge and/or fill material into waters of the United States. Section 404 requires that any person proposing an activity that would discharge these materials must first obtain a permit from the USACE. For regulated activities in the project region, Section 404 Permits are issued by the USACE Los Angeles District. The CWA stipulates that the USACE may not issue a Section 404 Permit if the proposed activity would be contrary to the public interest or would cause substantial degradation of the nation's waters, or if a less environmentally damaging practicable alternative exists, among other restrictions.

Waters of the U.S. generally include navigable waterways and wetlands adjacent to navigable waterways, non-navigable tributaries to navigable waterways, and wetlands adjacent to nonnavigable waters that are contiguous with navigable waterways.

Under Section 401 of the CWA, every applicant for a federal permit or license for an activity which may result in a discharge of dredge or fill material to a water body must obtain a state-issued Water Quality Certification that the proposed activity will comply with state water quality standards (i.e., beneficial uses, water quality objectives, and anti-degradation policy). In California, the State Water Resources Control Board (SWRCB) has delegated the responsibility for issuing Section 401 Certifications to the nine Regional Water Quality Control Boards (RWQCB) throughout the state. The Los Angeles RWQCB issues Section 401 Certifications for projects in the portion of Los Angeles County where the Entrada site is located. A CWA Section 404 Permit is a federal permit subject to the terms of Section 401 as described above, and the USACE therefore cannot issue a Section 404 permit in the project region until the permit applicant also receives a Section 401 Certification from the Los Angeles RWQCB. Because Section 401 of the CWA is restricted to activities requiring a federal license or permit, this section does not apply to activities affecting waters outside federal jurisdiction, such as isolated, intrastate waters or those excluded from federal jurisdiction based on significant nexus standards.

RWQCB Jurisdiction

The State Water Resources Control Board (SWRCB) and local RWQCB have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The SWRCB has issued general Waste Discharge Requirements regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction). The local RWQCB enforces actions under this general order, and is also responsible for Clean Water Act Section 401 certification determinations over USACE defined jurisdictional waters.

The Porter-Cologne Act provides the State with very broad authority to regulate "waters of the State," which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post-SWANCC and Rapanos era with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a "Report of Waste Discharge" when there is no federal nexus, such as under Section 401of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. If isolated waters conditions are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methodology pursuant to the 1987 Wetlands Manual.