

Attachment D – Biological Resources Letter Report

This page left intentionally blank.

May 1, 2023

Lev Gershman, Managing Partner
Tideline Partners
2148 Jimmy Durante Boulevard, Suite B
Del Mar, California 92014

Subject: Biological Resources Letter Report for the Tideline Kensho Residential Project

Dear Mr. Gershman:

This letter report documents the results of the habitat assessment, biological resources survey, and aquatic resources delineation for the proposed Tideline Kensho Residential Project (Project) in the City of Vista in the County of San Diego, California (Attachment 1, Figures; Figure 1, Regional Location, and Figure 2, Project Site). Harris conducted a biological resources field reconnaissance survey of the approximately five-acre Project site and a 100-foot buffer (approximately 15.35 acres in total) herein referred to as the “survey area.” The purpose of this document is to identify the presence of existing vegetation and wildlife species to assist in early planning and to identify potential biological constraints for developing the Project, including any potential aquatic resources impacts. In addition to results from field analyses conducted, a review of biological databases is provided in this analysis to aid in the constraints evaluation of the Project to its current immediate and surrounding environment.

Project Description and Location

The Project proposes a new residential development that would result in the construction of 183 dwelling units, including three three-story buildings and one four-story building with covered parking included in three of the four buildings. The Project also proposes off-site sidewalk improvements along the northern side of Lado De Loma Drive and Guajome Street from Eddie Drive to the northern and western sides of the Project site (i.e., the off-site improvements area). The majority of the Project site is undeveloped and has a single-family residence in the northern portion of the Project site and a second single-family residence and a recreational vehicle (RV) trailer on the southern portion of the Project site. Currently, the Project site is designated as Medium Density Residential (MD) with a maximum of ten dwelling units per acre. The site would be rezoned out of the Pheasant Hill Specific Plan and into the Downtown Vista Specific Plan (DVSP) and would also include a General Plan amendment, a zoning change, a Site Development Plan, and a Tentative Parcel Map.

The Project site is along the eastern side of Lado De Loma Drive, (Assessor’s Parcel Numbers 179-093-05, -09, -18, -23, -30, -32, and -34) in the City of Vista, California (Figures 1 and 2). The Project site is in a portion of the City containing both residential and commercial development. A single-family residential neighborhood borders the Project site from the northwest to the southeast, while the SPINTER light-rail line borders the remaining sides of the site. On the other side of the SPINTER tracks is commercial and multi-family residential development (Figure 2).

Environmental Setting

Land Use

The survey area is within a highly developed residential area in the City that also contains some commercial development. The Project site is primarily undeveloped open space, with a dirt road (Rhoda Lane) running along the eastern side of the Project site parallel to the SPINTER tracks (Figure 2). The off-site improvements area occurs in the Guajome Street and Lado De Loma Drive roadways from just west of Mercantile Street on Guajome Street heading west, where it then turns into Lado De Loma Drive, ending at Eddie Drive (Figure 2). Rhoda Lane provides access to the single-family residences and RV trailer in the northern and southeastern portions of the



Project site. Guajome Street and Lado De Loma Drive provide connectivity between from major roadways in Vista (e.g., Vista Village Drive and South Santa Fe Avenue) and access to side streets in residential areas. Vegetation communities and land cover types on the Project site and in the off-site improvements area include non-native grassland, coast live oak woodland, disturbed habitat, and urban/developed land, with two non-vegetated channels that extend west to east through the center of the site.

The majority of the Project site is undeveloped, and the entire property has historically been disturbed with mowing and other mechanical disturbances, including repeated motor vehicle use through the center of the Project site, which has created a two-track trail with well-formed tire ruts. Rhoda Lane, the dirt access road on the eastern side of the Project site, is also frequently used by local residents. One single-family residence exists in the northern portion of the Project site, and a second single-family residence and an RV trailer exist on the southern portion of the Project site. The two single-family residences and RV trailer constitute the urban/developed land on the Project site.

The off-site improvements area along Guajome Street/Lado De Loma Drive is within a paved roadway bordered by commercial and residential development on both sides and follows a general west to east path. Many ornamental trees, shrubs, and succulents, as well as remnant native trees, line the roadway. Crossing perpendicular to Guajome Street near Mercantile Street to the east are the SPRINTER tracks, and Eddie Drive heading north provides the terminus of the off-site improvements area to the west along Lado De Loma Drive. Guajome Street and Lado De Loma Drive are frequently used streets with moderately heavy vehicle traffic.

Topography and Soils

The survey area is characterized by the gently sloping hill on the Project site and the relatively flat areas along the off-site improvements area. The slope on the Project site is situated with the western half of the Project site higher in elevation and decreasing in elevation moving east across the Project site. Elevation ranges from approximately 108 feet to 129 feet above mean sea level. The topographic lines on Figure 3, USGS Topographic Map, represent the Project elevations. The off-site improvements area to the east along Guajome Drive sits lower in elevation and raises as it heads west along Lado De Loma Drive to Eddie Drive, with a slight decrease in elevation after Rancho Vista Road.

The survey area is underlain by Fallbrook sandy loam, Fallbrook-Vista sandy loam, and Salinas clay loam. The soil units on the Project site are presented on Figure 4, Soils. Fallbrook sandy loam (nine to 15 percent slopes) occurs across the majority of the Project site and in the off-site improvements area. Fallbrook-Vista sandy loam (nine to 15 percent slopes) occurs on the western edge of the Project site and in the central portion of the off-site improvements area. Salinas clay loam (zero to two percent slopes) occurs in small areas along the northeastern and southeastern edges of the Project site and the eastern end of the off-site improvements area. None of the soils on the Project site are defined as hydric (wetland) soils (USDA 2019).

Hydrology

The survey area is in the Carlsbad Watershed (Hydrologic Unit 904) (Project Clean Water 2023). The Carlsbad Watershed encompasses a land area of 211 square miles. It lies in the northern portion of San Diego County and neighbors the San Luis Rey Watershed to the north and the San Dieguito Watershed to the south.

The National Wetlands Inventory (NWI) and U.S. Geological Survey (USGS) National Hydrography Data (NHD) mapping results did not identify aquatic features in the survey area or off-site improvements area (Figure 5, National Wetlands Inventory Results). The non-vegetated, earthen-bottom Channels 1 and 2 observed in the center of the Project site and concrete-lined Channel 3 observed along the eastern edge of the survey area during the aquatic resources delineation survey were not identified on the NWI or NHD mapping results for the Project site and off-site improvements area (USFWS 2023a; USGS 2023). Channels 1 through 3 are discussed in detail in the Jurisdictional Aquatic Resources section in the Results section and Attachment 2, Aquatic Resources Delineation Report. No other aquatic resources were identified in the NWI and NHD mapping results or observed on the Project site or in the off-site improvements area.



Buena Vista Creek, a traditional navigable water (TNW) as defined by the U.S. Army Corps of Engineers (USACE), is approximately 0.5 mile north of Channels 1 through 3. Based on a review of the NWI and NHD results, Channels 1 through 3 are not documented as aquatic resources and do not connect to Buena Vista Creek or any other documented aquatic resources via surface water flow (USGS 2023; USACE 2023). However, Channel 3 may have a downstream connection to Buena Vista Creek through the municipal stormwater system. Channels 1 through 3 are discussed in detail in the Jurisdictional Aquatic Resources section in the Results section and Attachment 2.

Drainage patterns on the Project site show evidence of alteration, with on-site mechanical disturbances associated with the residential developments in the southern portion of the Project site and bordering the Project site to the north, west, and south. Channels 1 and 2 appear to have formed as a result of erosion from stormwater flows directed onto the Project site through a corrugated metal stormwater pipe on the western edge of the Project site. In addition to historical and recent disturbance of Channels 1 and 2 and across the Project site, the drainage patterns in and connected to the channels in the central portion of the Project site do not appear to be natural and are likely a result of urban stormwater management. Similarly, Channel 3 is an artificial, concrete-lined channel that was constructed to capture and direct stormwater flows away from the SPRINTER transit right-of-way.

Climate

Meteorological data for the survey area is gathered at the Vista National Oceanic and Atmospheric Administration weather station (EW3055) approximately 1.5 miles north of the survey area. Between 2002 and 2022, the average maximum temperature was 74 degrees Fahrenheit (°F), and the minimum temperature was 52°F (NRCS 2023).

The average annual precipitation over the last 20 years was approximately 12.94 inches. In 2022, the total rainfall was 8.07 inches, approximately 4.47 inches less than the previous year (NRCS 2023). Due to the temperate climate, the growing season is typically year-round.

Regulatory Setting

Federal

Clean Water Act

Section 401 (40 CFR 121). Section 401 of the Clean Water Act (CWA) gives the state authority to grant, deny, or waive certification of proposed federally licensed or permitted activities resulting in discharge to waters of the United States. The State Water Resources Control Board directly regulates multi-regional projects and supports the Section 401 certification and wetlands program statewide. The Regional Water Quality Control Board (RWQCB) regulates activities pursuant to Section 401(a)(1) of the federal CWA, which specifies that certification from the state is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the state or appropriate interstate water pollution control agency in/where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

Section 404 (33 CFR 328.3[a]). These provisions regulate the discharge of dredged or fill material in waters of the United States, including wetlands. Activities that discharge dredge or fill material into waters of the United States can be authorized by the USACE.

The USACE and the U.S. Environmental Protection Agency (USEPA) have issued a set of guidance documents detailing the process for determining CWA jurisdiction over waters of the United States following the 2008 Rapanos decision. The USEPA and USACE issued a summary memorandum of the guidance for implementing the Supreme Court's decision in Rapanos that addresses the jurisdiction over waters of the United States under the CWA. The complete set of guidance documents, summarized as key points below, were used to collect relevant data for evaluation by the USEPA and USACE to determine CWA jurisdiction over the Project and to complete the "significant nexus test" as detailed in the guidelines.

The significant nexus test includes consideration of hydrologic and ecologic factors. For circumstances such as those described in Key Point B below, the significant nexus test would take into account physical indicators of flow (evidence of an ordinary high water mark [OHWM]) if a hydrologic connection to a TNW exists and if the aquatic functions of the water body have a significant effect (more than speculative or insubstantial) on the chemical, physical, and biological integrity of a TNW. The USACE and USEPA will apply the significant nexus standard to assess the flow characteristics and functions of the tributary drainage to determine if it significantly affects the chemical, physical, and biological integrity of the downstream TNW.

Wetlands (including swamps, bogs, seasonal wetlands, seeps, marshes, and similar areas) are also considered waters of the United States and are defined by USACE as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3[b]; 40 CFR 230.3[t]). Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by field investigation, must be present for a site to be classified as a wetland by the USACE (USACE 1987).

Rapanos Guidance Key Points Summary

- A. The USACE and USEPA will assert jurisdiction over the following waters:
 - TNWs
 - Wetlands adjacent to TNWs
 - Non-navigable tributaries of TNWs that are relatively permanent (flows three months or longer)
 - Wetlands that abut such tributaries
- B. The USACE and USEPA will decide jurisdiction over the following waters based on whether they have a significant nexus with a TNW:
 - Non-navigable tributaries that are not relatively permanent
 - Wetlands adjacent to non-navigable tributaries that are not relatively permanent
 - Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary
- C. The USACE and USEPA will not assert jurisdiction over the following waters:
 - Swales or erosional features (gullies, small washes characterized by low volume, infrequent, or short-duration flow)
 - Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The Navigable Waters Protection Rule, published by the USACE and USEPA on April 21, 2020, was vacated during a federal court ruling in Arizona (Pascua Yaqui Tribe v. USEPA) on August 30, 2021. With this ruling, the regulatory agencies have halted implementation of the Navigable Waters Protection Rule and are interpreting “waters of the United States” consistent with the pre-2015 regulatory regime (Rapanos guidance).

Endangered Species Act (U.S. Code, Title 16, Sections 1531 through 1543)

The federal Endangered Species Act and subsequent amendments prohibit the “take” (i.e., harm, harass, or kill individuals or destroy associated habitat) of species federally listed as threatened or endangered. Take incidental to otherwise lawful activities can be authorized by the U.S. Fish and Wildlife Service (USFWS) through a permit under Sections 4(d), 7, or 10(a).

Migratory Bird Treaty Act (U.S. Code, Title 16, Sections 703 through 711)

The Migratory Bird Treaty Act (MBTA) is the domestic law that affirms or implements a commitment by the United States to four international conventions (Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. The MBTA makes it unlawful at any time, by any means, or in any manner to pursue, hunt, take, capture, or kill migratory birds. The law also applies to the removal of nests occupied by migratory



birds during the breeding season. The MBTA makes it unlawful to take, pursue, molest, or disturb these species, their nests, or their eggs anywhere in the United States.

State

Birds of Prey Protection Provision (California Fish and Game Code, Section 3503.5)

This provision prohibits the taking of birds of prey (Order Falconiformes and Strigiformes), including their nests and eggs.

California Endangered Species Act (California Fish and Game Code, Section 2050 et seq.)

The California Endangered Species Act prohibits any activities that would jeopardize or take a species designated as threatened or endangered by the state.

California Environmental Quality Act, as Amended (California Public Resources Code, Section 21000 et seq.)

The goal of the California Environmental Quality Act (CEQA) is to assist California public agencies in identifying potentially significant negative environmental impacts caused by their actions and avoiding or mitigating those impacts when feasible.

California Fish and Game Code, Section 3503

California Fish and Game Code (CFGF), Section 3503, prohibits the take, possession, or needless destruction of the nests or eggs of any birds except as otherwise provided by the CFGF or any regulation made pursuant thereto.

California Fully Protected Wildlife Species Provision (California Fish and Game Code, Sections 3511, 4700, 5050, and 5515)

These provisions prohibit the take of fully protected birds, mammals, amphibians, and fish.

California Native Plant Protection Act of 1977 (California Fish and Game Code, Sections 1900–1913)

These provisions preserve, protect, and enhance endangered or rare native plants of the state.

Lake and Streambed Alteration Agreement (California Fish and Game Code, Section 1600)

CFGF Section 1602 regulates water resources in California. Activities that divert or obstruct the natural flow of or change or use material from the bed, channel, or bank of any river, stream, or lake may be authorized by the California Department of Fish and Wildlife (CDFW). CDFW jurisdiction includes intermittent and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated or to the limit of the adjacent riparian vegetation located contiguous to the watercourse if the stream or lake is vegetated.

Natural Community Conservation Planning Act, as Amended (California Fish and Game Code, Sections 2800–2835)

The primary objective of the Natural Community Conservation Planning program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listing by focusing on the long-term suitability of wildlife and plant communities and including key interests in the process.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is regulated by the RWQCB for impacts on waters of the state. The RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of this agency includes all waters of the state and all waters of the United States as mandated by the CWA Section 401 and the Porter-Cologne Act. Although water quality issues related to impacts on waterways are normally addressed in Section 401 Water Quality Certification, should a water of the state be determined by the USACE not to have CWA jurisdiction, the Porter-Cologne Act would be addressed under a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements depending on the level of impact and the properties of the waterway.



Regional Water Quality Control Board

The RWQCB regulates impacts on water quality under Section 401 of the CWA. A project must comply with Section 401 of the CWA before the USACE can issue a Section 404 Permit. The RWQCB will issue a Section 401 Water Quality Certification or Waiver of Certification depending on the extent of impacts on waters of the United States. The RWQCB also regulates impact on waters of the state (usually limited to “isolated” waters or swales that may not fall under USACE jurisdiction) under the Porter-Cologne Act.

Local

Downtown Vista Specific Plan

The DVSP was centered on the downtown core and extended outward along two major transportation corridors: Vista Village Drive and South Santa Fe Avenue. The DVSP covered a total area of approximately 352 gross acres. The primary goal of the DVSP was to stimulate reinvestment in older and underutilized properties to provide housing and commercial uses that would result in the re-creation of a dynamic downtown area. The DVSP established a vision for the downtown area as a place where residents and visitors could live, work, shop, and play. The DVSP served as a guide and directed new redevelopment, economic development, streetscape and traffic improvements, parking, pedestrian amenities, and mixed land uses in the Specific Plan Area over a 20-year planning period. A total of 1, 270 new dwelling units and 1, 866,737 additional square feet of development were proposed for the Specific Plan Area.

The DVSP was adopted and the DVSP Program Environmental Impact Report (DVSP PEIR) was certified on April 13, 2010, by the Vista City Council (City of Vista 2010). A Mitigation Monitoring and Reporting Program, Findings of Fact, and Statement of Overriding Considerations regarding the DVSP PEIR were also adopted in 2010. The DVSP was adopted in 2010 prior to the Vista General Plan 2030, which was adopted on February 28, 2012, and did not incorporate the goals and policies of the Vista General Plan 2030. The first addendum to the DVSP was approved in 2015 and modified the DVSP to incorporate the goals and policies of the Vista General Plan 2030 (City of Vista 2015). The amended DVSP provides a concise outline of regulations, policies, and guidelines modified to shape the redevelopment of the downtown area of the City through design regulations and guidelines, land use policies, parks and open space goals, mobility improvements, development incentives, and public health assessments.

The Project is designed to adhere to the DVSP and tiers off the DVSP PEIR (City of Vista 2015). The DVSP PEIR mitigation measures applicable to biological resources potentially impacted by implementation of the Project are incorporated into Project mitigation as detailed in the Proposed Mitigation section of this letter report.

North County Multiple Habitat Conservation Program

The North County Multiple Habitat Conservation Program (MHCP) is a comprehensive conservation planning process that addresses the needs of multiple plant and wildlife species in northwestern San Diego County (SANDAG 2003). The North County MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Its goal is to conserve approximately 19,000 acres of habitat, roughly 8,800 acres (46 percent) of which are already in public ownership and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species. MHCP Subarea Plans for the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, and Vista are being prepared and must be adopted by each city council, and implementing agreements with the CDFW and USFWS must be signed before Incidental Take Permits can be issued. When completed, the habitat preservation areas will serve as a key component of the region’s smart growth efforts by preserving habitat and open space and directing forecasted growth into appropriate areas.

The survey area is within the North County MHCP but not within the Focused Planning Area. However, an MHCP Subarea Plan for the City of Vista has not been approved and, therefore, is subject to the North County MHCP requirements but not the Vista MHCP Subarea Plan.

Vista General Plan 2030

The Vista General Plan 2030 was reviewed for relevant goals and policies related to biological resources and provides the following goals and policies that apply to sensitive species and vegetation (City of Vista 2012):

- **RCS Goal 5:** Preserve and protect, to the extent practicable, the range of natural biological communities and species native to the City and region; and conserve viable populations of endangered, threatened, and key sensitive species and their habitats.
 - **RCS Policy 5.5:** Consider adoption of a tree preservation ordinance to address tree preservation on private property.
- **RCS Goal 6:** Implement the provisions of the regional Multiple Habitat Conservation Program (MHCP).
 - **RCS Policy 6.5:** Use the mitigation ratios established in the MHCP for impacts to sensitive biological habitats.

Methods

This biological resources analysis includes the results of a database review, biological resources surveys, and an aquatic resources delineation that serve to document the existing biological conditions of the survey area. The results of this review provide information on the potential constraints (or lack thereof) to Project development due to the presence (or absence) of sensitive biological resources.

Database Review

Review of online databases including the CDFW California Natural Diversity Database (CDFW 2023), USFWS NWI Wetlands Mapper (USFWS 2023a), USGS NHD (USGS 2023), USFWS Information for Planning and Consultation (USFWS 2023b), Consortium of California Herbaria database (CCH 2023), Calflora database (Calflora 2023), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2023) was conducted for the Project and within a one-mile radius of the survey area.

Field Reconnaissance Survey

On July 20, 2021; January 27, 2022; and January 19, 2023, Harris & Associates (Harris) conducted biological resources field reconnaissance surveys. The surveys were conducted by walking meandering transects throughout the survey area and mapping vegetation communities, documenting plant and wildlife species, noting suitable habitat, and evaluating the potential for occurrence of sensitive, rare, threatened, and endangered plant and wildlife species (Attachment 3, Species Observed). Vegetation mapping was recorded in the field using the ArcGIS Collector application with an aerial image of the survey area. Binoculars were used to visually identify wildlife species and listened for vocalizations. The results of the vegetation mapping are presented in Table 1, Vegetation Communities and Land Cover Types, in the Results section. The potential for sensitive plant and wildlife species to occur in the survey area is presented in Table 2, Sensitive Plant and Wildlife Species Potential to Occur on the Project Site, in the Results section. Representative photographs of the Project site are provided in Attachment 4, Photographic Log.

Aquatic Resources Delineation

Before conducting the delineation of jurisdictional waters field survey, existing background information was reviewed pertaining to potential aquatic resources from the following sources:

- Aerial photographs of the Project site and vicinity
- Historical and current aerial imagery (Google Earth 2023)
- USFWS NWI to identify areas mapped as aquatic resources features (USFWS 2023a)
- USDA Natural Resources Conservation Service Web Soil Survey (USDA 2019)

Aquatic resources delineation fieldwork was conducted by a Harris aquatic resources specialist on July 20, 2021, with a follow-up survey conducted on January 19, 2023. The aquatic resources delineation was conducted using the routine on-site determination method described in the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region

(USACE 2008). The Harris aquatic resources specialist completed Arid West region OHWM datasheets for each unique aquatic resource feature on the Project site. The Project site was surveyed on foot to obtain total coverage.

As detailed in the 1987 USACE Wetlands Delineation Manual, 2008 Arid West Regional Supplement, and 2008 OHWM Guide, Harris collected and recorded data on vegetation, soil, and hydrological characteristics. The OHWM was determined based on the presence of the following characteristics in each unique aquatic resource feature: presence of litter or debris from high flows, change in character of the soil, and destruction of terrestrial vegetation (USACE 2014). The aquatic resources data was collected using an iSxBlue II GPS receiver. The results of the aquatic resources delineation are presented in the Results section and Attachment 2.

Survey Limitations

Plants and wildlife were identified by direct observation, vocalizations, or other observance, including tracks, scat, and other signs. Therefore, lists of observed species are not necessarily comprehensive because the survey could be outside species blooming periods and/or they could be in senescence, nocturnal, or secretive or within the region (Project area) seasonally or during migration only and, therefore, may not have been observed.

Some areas were not directly surveyed due to a lack of habitat (i.e., developed areas), and other areas were not accessible on foot (i.e., private property). These areas were either not directly reviewed because of lack of habitat or were only able to be visually scanned rather than walked. Most of the off-site improvements area along Lado De Loma Drive, portions of Guajome Street, and areas immediately surrounding the Project site were not able to be surveyed on foot due to private property.

Results

The results presented below provide data from the biological resources and aquatic resources delineation surveys conducted on the Project site.

Vegetation Communities and Land Cover Types

Five vegetation communities and land use types were observed in the survey area. These include non-vegetated channel, non-native grassland, coast live oak woodland, disturbed habitat, and urban/developed land (Holland 1986; Oberbauer et al. 2008). It is important to note that aquatic resources were only mapped and delineated within a 20-foot boundary of the Project site and off-site improvements area in the survey area; however, a 100-foot buffer outside the Project site and off-site improvements area was surveyed, and vegetation communities and land cover types were mapped. Based on desktop reviews and in-field surveys, potential aquatic resources within the remaining 80 feet outside the 20 feet potentially include concrete-lined drainages that are mapped as “urban/developed” for the purposes of this document.

Table 1, Vegetation Communities and Land Cover Types, presents the acreages of the vegetation communities and land cover types that occur in the survey area. Figure 6, Vegetation Communities and Land Cover Types, presents the vegetation community and land cover type boundaries.

Table 1. Vegetation Communities and Land Cover Types

Vegetation Community and Land Cover Type	Project Site (acres) ¹	Off-Site Improvements Area (acres) ¹	Survey Area (acres) ¹
Riparian			
Non-vegetated channel (64200) ²	0.02	0	0.02
<i>Subtotal</i>	<i>0.02</i>	<i>0</i>	<i>0.02</i>
Upland			
Non-native grassland (42200)	0.19	0	0.27
<i>Subtotal</i>	<i>0.19</i>	<i>0</i>	<i>0.27</i>

Table 1. Vegetation Communities and Land Cover Types

Vegetation Community and Land Cover Type	Project Site (acres) ¹	Off-Site Improvements Area (acres) ¹	Survey Area (acres) ¹
Woodland			
Coast live oak woodland (71160)	0.26	0.05	0.31
<i>Subtotal</i>	<i>0.26</i>	<i>0.05</i>	<i>0.31</i>
Disturbed/Developed			
Disturbed habitat (11300)	3.73	0.04	4.09
Urban/developed (12000)	0.38	0.69	11.26
<i>Subtotal</i>	<i>4.11</i>	<i>0.73</i>	<i>15.35</i>
Total	4.58	0.78	15.95

Sources: Holland 1986; Oberbauer et al. 2008.

Notes:

¹ Total acreage rounded up to one-hundredth.

² Within a 20-foot buffer of Project site and off-site improvements area only.

The vegetation communities and land cover types observed on the survey area and in the off-site improvements area are described in the following subsections.

Non-Vegetated Channel (64200)

Non-vegetated channel consists of predominantly sandy, gravelly, or rocky channels lacking or with reduced vegetation. Variable water lines inhibit the growth of vegetation, although some weedy species of grasses may grow along the outer edges of the channel. Vegetation may exist here but is usually less than ten percent of the total cover (Oberbauer et al. 2008).

Approximately 0.04 acre of non-vegetated channel (Channels 1 through 3) occurs through the central portion of the Project site and along the eastern edge of the survey area (Figure 6). Channels 1 and 2 are earthen-bottom channels, and Channel 3 is a concrete-lined channel.

Channel 1 is approximately 0.016 acre and begins on the western edge of the Project site at the discharge point of an approximately two-foot-diameter corrugated metal stormwater culvert. From this point, Channel 1 runs for approximately 309 linear feet where it becomes undefined in a dirt road (Rhoda Lane) that runs along the eastern side of the Project site. The stormwater culvert from which Channel 1 forms occurs in the off-site improvements area along the western side of the Project site.

Channel 2 is approximately 0.003 acre and begins in the disturbed uplands in the central portion of the Project site and extends east approximately 43 linear feet where the channel becomes undefined. Channel 2 might have been a historical stormwater flow path connected to Channel 1 but has been disturbed by mechanical earthmoving or vehicles and no longer appears to receive stormwater.

Channel 3 is approximately 0.02 acre and occurs along the eastern edge of the survey area, outside the Project site, within the SPRINTER transit right-of-way (Figure 6). Channel 3 enters the southeastern corner of the survey area and extends northwest approximately 893 linear feet where it ends in a disturbed upland area south of Guajome Street. Channel 3 is connected to a larger concrete channel to the east that is directed through a stormwater culvert under Guajome Street. Channel 3 occurs within disturbed habitat, urban/developed land, and non-native grassland.

Channels 1 through 3 are discussed in detail in the Jurisdictional Aquatic Resources section and Attachment 2.

Non-Native Grassland (42200)

Non-native grassland consists of a dense to sparse cover of flowering annual grasses measuring approximately three feet high. It may occur where disturbance by maintenance (e.g., mowing, scraping, disking, spraying),

grazing, repetitive fire, agriculture, or other mechanical disruption has altered soils and removed native seed sources from areas formerly supporting native vegetation. Non-native grassland typically occurs adjacent to roads or other developed areas where some historical disturbance has occurred. Native wildflowers are often associated with this community, especially in years of favorable rainfall. Common plant species observed in non-native grasslands in the County include wild barley (*Hordeum murinum*), ripgut grass (*Bromus diandrus*), slender wild oat (*Avena barbata*), and foxtail (*Bromus madritensis*) (Oberbauer et al. 2008).

Approximately 0.27 acre of non-native grassland occurs in the survey area, 0.19 of which occurs in the southeastern corner of the Project site (Figure 6). Non-native grassland on the Project site is dominated by slender wild oat, barley (*Hordeum* sp.), and smilo grass (*Stipa miliacea*).

Coast Live Oak Woodland (71160)

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*) with a poorly developed shrub layer that can include toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes* spp.), and laurel sumac (*Malosma laurina*) or is dominated by black elderberry (*Sambucus nigra*) (Oberbauer et al. 2008). The herb layer of coast live oak woodland is continuous and dominated by ripgut brome and several other introduced grasses.

Approximately 0.26 acre of coast live oak woodland occurs in the central and western portions of the Project site, and 0.05 acre occurs in the off-site improvements area for a total of 0.31 acre in the survey area (Figure 6). The coast live oak woodland on the Project site is dominated by interior coast live oak (*Quercus agrifolia* var. *oxyadenia*) with disturbed open areas, non-native grasses, and weeds for the understory.

Disturbed Habitat (11300)

Disturbed (ruderal) habitat is a land cover type that shows evidence of great mechanical alteration by human activities and is no longer recognizable as a native or naturalized vegetated habitat but still retains soil substrate that is either devoid of vegetation (i.e., disced, plowed areas or dirt trails) or has vegetative cover that is dominated by non-native species. These non-native species are typically ruderal exotic species that take advantage of disturbance, such as short-pod mustard (*Hirschfeldia incana*), black mustard (*Brassica nigra*), filaree (*Erodium* spp.), and other weedy grass species, or they may be escaped ornamentals from adjacent properties. These species are opportunistic and typically found in recently and/or repeatedly disturbed habitats, particularly in areas that have been graded, have been cleared for fuel management or agricultural purposes, and/or have experienced ongoing mechanical disturbance that prevents natural habitat from revegetating.

Approximately 4.09 acres of disturbed habitat occurs throughout the survey area, 3.73 acres of which covers the Project site, and 0.04 acre of which is found in the off-site improvements area (Figure 6). Disturbed habitat on the Project site and in the off-site improvements area is dominated by bare ground and mustard species with other scattered non-native grass and weed species. The disturbed habitat on the Project site appears to be disturbed by motor vehicle use and is mowed periodically.

Urban/Developed (12000)

Urban/developed land includes areas that have been constructed on or otherwise physically altered to an extent that native vegetation is no longer supported. Urban/developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation.

Approximately 11.26 acres of urban/developed land occurs in the survey area, 0.38 acre of which occurs in the northern and southern portions of the Project site (including two single-family residences and one RV trailer) and 0.69 acre of which occurs in the off-site improvements area (Figure 6).

Jurisdictional Aquatic Resources

Three non-wetland water channels were observed on the Project site (Figure 7, Aquatic Resources). One approximately 0.016-acre (309-linear-foot) earthen-bottomed non-wetland water, Channel 1, was observed starting on the western edge of the Project site at the outfall of an approximately two-foot-diameter corrugated metal pipe and extending west to east through the central portion of the Project site where it becomes undefined

as it disappears into a dirt road (Rhoda Lane) that runs along the eastern side of the Project site (Figure 7). One approximately 0.003-acre (43-linear-foot) earthen-bottomed non-wetland water, Channel 2, was observed starting in the disturbed uplands in the central portion of the Project site and extending east where it becomes undefined as it meets with the Rhoda Lane dirt road that runs along the eastern side of the Project site (Figure 7). One approximately 0.02-acre (893-linear-foot) concrete-lined non-wetland water, Channel 3, was observed entering the southeastern corner of the survey area and ending in a disturbed upland area south of Guajome Street (Figure 7). Channel 3 is connected to a larger concrete channel to the east that is directed through a stormwater culvert under Guajome Street.

Based on database and on-site delineation results, Channels 1 and 2 were determined to be isolated, ephemeral non-wetland waters that do not have a surface connection to a TNW or other off-site aquatic resources and are preliminarily not under the jurisdiction of the USACE, RWQCB, or CDFW pursuant to CWA Sections 401 and 404 and CFGC Section 1602. Channel 3 may have a downstream connection to Buena Vista Creek through the municipal stormwater system and is preliminarily under the jurisdiction of the USACE, RWQCB, or CDFW pursuant to CWA Sections 401 and 404 and CFGC Section 1602. Only the agencies can make a final determination of jurisdictional boundaries.

The non-vegetated earthen-bottom Channels 1 and 2 observed in the center of the survey area and concrete-lined Channel 3 observed along the eastern edge of the survey area during the aquatic resources delineation fieldwork were not identified on the NWI or NHD mapping results (USFWS 2023a; USGS 2023). The two non-vegetated channels appear to have formed as a result of erosion from stormwater flows directed onto the Project site through a corrugated metal stormwater pipe on the western edge of the Project site. Channel 3 is an artificial, concrete-lined channel that was constructed to capture and direct stormwater flows away from the SPRINTER transit right-of-way. No other aquatic resources were identified in the NWI or NHD mapping results or observed in the survey area or off-site improvements area during the survey.

A detailed discussion of the aquatic resources delineation and results is included in Attachment 2.

Plant Species

Attachment 3 lists the vascular plant species observed in the survey area during the 2021 and 2022 biological resources surveys. A total of 65 plants were observed in the survey area, 20 (31 percent) of which were native and 45 (69 percent) of which were non-native. None of the 65 plant species observed on the Project site are considered sensitive.

Wildlife Species

Attachment 3 lists the wildlife species observed in the survey area during the 2021 and 2022 biological resources surveys. A total of 30 wildlife species were observed, 27 (90 percent) of which were native and three (10 percent) of which were non-native. In total, one reptile, four invertebrates, 20 birds, and five mammals were observed in the survey area. Of the 30 wildlife species observed, four are considered sensitive: monarch butterfly (*Danaus plexippus*), great blue heron (*Ardea herodias*), red-shouldered hawk (*Buteo lineatus*), and southern mule deer (*Odocoileus hemionus fuliginata*). These four sensitive wildlife species observed in the survey area are described in the Sensitive Species section and are shown on Figure 8, Sensitive Wildlife Species Observations.

Common bird species in the survey area included Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), California towhee (*Melospiza crissalis*), house finch (*Haemorrhous mexicanus*), Cassin's kingbird (*Tyrannus vociferans*), and mourning dove (*Zenaidura macroura*).

Sensitive Species

Sensitive species are those recognized by federal, state, or local agencies as being potentially vulnerable to impacts because of rarity, local or regional reductions in population numbers, isolation/restricted genetic flow, or other factors. Special-status plants include those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and CDFW; those considered sensitive by the CDFW and County of San Diego; and those species included in the California Rare Plant Rank (CRPR) inventory maintained by the CNPS. Sensitive

wildlife species include those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS and CDFW or those considered sensitive by the CDFW and County of San Diego.

As described in the Methods section, distributions of historical sensitive species observations within the Project vicinity were reviewed in preparation of this letter report. For the purposes of this biological resources assessment, those species that either are known to occur or have some potential to occur within a one-mile radius of the Project site and that have potential to occur based on available habitat are addressed in this section. The list of potentially occurring sensitive plant and wildlife species is provided in Table 2, Sensitive Plant and Wildlife Species Potential to Occur on the Project Site, along with an assessment of their potential for occurrence in the survey area. Figure 9, Plant and Wildlife Species with Potential to Occur, shows the sensitive species documented within a one-mile radius of the Project site if found through a database.

Table 2. Sensitive Plant and Wildlife Species Potential to Occur on the Project Site

Scientific Name	Common Name	Status Federal/State/ CRPR/Regional	Habitat	Potential to Occur
Plants				
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	None/None/ 1B.1/County List A	Occurs in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools at elevations between 80 to 3,675 feet amsl. Blooms March through June.	<i>Not Expected.</i> No suitable chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, or vernal pool habitat occurs. The Project site is mostly disturbed and dominated by non-native grass and weed species. No habitat available in the off-site improvements area or larger survey area. Critical habitat occurs northwest of the Project site (Figure 10, Critical Habitat). Historical locations exist approximately one mile southwest of the survey area but not within (Figure 9) (CDFW 2023; CNPS 2023).
<i>Ceanothus verrucosus</i>	Wart-stemmed ceanothus	None/None/ 2B.2/County List B	Occurs in chaparral at elevations between five to 1,245 feet amsl. Blooms December through May.	<i>Not Expected.</i> No suitable chaparral habitat occurs. Project site is mostly disturbed and dominated by non-native grass and weed species. Off-site improvements area mainly developed. Historical locations exist approximately 0.5 mile northeast of the survey area but not within (Figure 9) (CDFW 2023; CNPS 2023).
Wildlife				
Invertebrates				
<i>Danaus plexippus</i> (California overwintering population)	Monarch butterfly ¹	None/ST/-/ County Group 2	Occurs in a variety of habitats where patches of milkweed (<i>Asclepias</i> sp.), the monarch caterpillar host plant, are present. Overwinters in groves of eucalyptus, cypress, and pine along the California coast and high-elevation forests in Mexico.	<i>Present.</i> Observed flying through the Project site during the 2021 surveys. Limited suitable nectar sources for foraging are present. No milkweed patches suitable as host plants for caterpillars to occupy occur on the Project site. A small number of pine trees suitable for overwintering are available on the site (Figure 8).

Table 2. Sensitive Plant and Wildlife Species Potential to Occur on the Project Site

Scientific Name	Common Name	Status Federal/State/ CRPR/Regional	Habitat	Potential to Occur
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE/None/-/ County Group 1	Occurs in chaparral and coastal sage shrublands. Requires dot-seed plantain (<i>Plantago erecta</i>) or owl's clover (<i>Castilleja exserta</i>) as a host plant.	<i>Not Expected.</i> No suitable nectar sources for foraging occur in the survey area. No suitable host plants were observed in the survey area. Historical locations exist approximately 0.75 mile north of the survey area but not within (Figure 9) (CDFW 2023).
Reptiles				
<i>Diadophis punctatus similis</i>	San Diego ringneck snake	None/SSC/-/ County Group 2	Occurs in moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, and woodlands.	<i>Not Expected.</i> No suitable moist meadows, gardens, grassland, chaparral, forest, or rocky hillsides occur in the survey area. Historical locations exist approximately 0.75 mile north of the survey area but not within (Figure 9) (CDFW 2023).
<i>Phrynosoma blainvillei</i>	Blainville's horned lizard	None/SSC/-/ County Group 2	Occurs in coastal sage scrub, chaparral, and grasslands in primarily loose soils. Forages primarily on harvester ants.	<i>Not Expected.</i> No suitable scrub or chaparral habitat occurs on the Project site. The survey area is mostly disturbed and dominated by non-native grass and weed species or is developed. Historical locations exist approximately 0.5 mile north and west of the survey area but not within (Figure 9) (CDFW 2023).
<i>Thamnophis hammondi</i>	Two-striped garter snake	None/SSC/-/ County Group 1	Occurs near water sources, including pools and creeks, often in rocky areas. Common in oak woodland, willow forest, coastal sage scrub, scrub oak, sparse pine, chaparral, and brushlands.	<i>Not Expected.</i> No suitable willow forest, coastal sage scrub, scrub oak, sparse pine, chaparral, and brushlands or oak woodland near water sources occur in the survey area. Historical locations exist approximately 0.75 mile north of the survey area but not within (Figure 9) (CDFW 2023).
Birds				
<i>Ardea herodias</i> (rookery)	Great blue heron	None/None/-/ County Group 2	Year-round resident in the County. Occurs in wetlands but uses dry land to forage for small mammals (i.e., pocket gophers). Colonial nester found in tall trees, such as eucalyptus trees in groves.	<i>Present.</i> Great blue heron individual observed foraging in the middle of the Project site (Figure 8).
<i>Buteo lineatus</i>	Red-shouldered hawk	None/None/-/ County Group 1	Occurs year-round in low elevation riparian and oak woodlands. Nests in dense riparian and oak habitats but is known	<i>Present.</i> Red-shouldered hawks were observed flying over the survey area during the 2021 biological survey. Suitable nesting and foraging habitats occur throughout the survey area in



Table 2. Sensitive Plant and Wildlife Species Potential to Occur on the Project Site

Scientific Name	Common Name	Status Federal/State/ CRPR/Regional	Habitat	Potential to Occur
			to nest in eucalyptus trees as well. Forages in open spaces and on the edges of mesic habitats.	mature oak trees and other tall trees and open areas, respectively (Figure 8).
<i>Laterallus jamaicensis</i>	Black rail	None/SSC/-/ County Group 2	Occurs in coastal wetlands and tidal marshes, often associated with marshes of pickleweed for nesting. Extirpated from San Diego County (Unitt 2004).	<i>Not Expected Nesting. Not Expected Foraging.</i> No wetlands suitable for nesting or foraging occur in the survey area. Extirpated from San Diego County (Unitt 2004). Historical location exists approximately 0.25 mile north of the survey area but not within (Figure 9) (CDFW 2023).
Mammals				
<i>Chaetodipus fallax fallax</i>	Northwestern San Diego pocket mouse	None/SSC/-/ County Group 2	Found in Southern California to central Baja California within rocky, sandy, herbaceous habitats with shrubs for foraging and cover. Prefers coastal sage scrub habitats.	<i>Low.</i> Suitable sandy, herbaceous areas occur in the non-native grassland and disturbed habitat openings on the Project site, but no shrub cover for foraging or cover is present. No suitable habitat elsewhere in survey area. Historical location exists approximately 0.25 mile north of the survey area but not within (Figure 9) (CDFW 2023).
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None/SSC/ None/County Group 2	Migratory, requires columnar cactus, night-blooming agave, and other ornamentally planted species for foraging. Roosts in deep rock crevices, caves, and other deep, dimly lit spaces. In San Diego County, known to roost under porches, decks, patios, buildings, warehouses, and other such areas.	<i>Moderate Roosting. High Foraging.</i> Not known to occur within region; however, buildings and structures with deep recesses are available in the survey area, as are ornamentally planted species that could be used for foraging.
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE/SE/-/County Group 1	Occurs in 16 known localities from Riverside south to Vista, east to Warner Springs, and in the Ramona grasslands. Only occupies open (non-dense) grasslands dominated by annual forbs or very sparse scrub bushes (less than 30 percent) that contain extensive bare ground that lacks clay or rocky	<i>Not Expected.</i> No preferred habitat exists in survey area, and the survey area is not within current known occupied areas. Historical location exists approximately 0.75 mile west of the survey area but not within (Figure 9) (CDFW 2023).



Table 2. Sensitive Plant and Wildlife Species Potential to Occur on the Project Site

Scientific Name	Common Name	Status Federal/State/ CRPR/Regional	Habitat	Potential to Occur
			soils. Most abundant on gentle slopes or flat slopes; not found on steep slopes. Known to occur and move into areas that have burned or fallowed fields.	
<i>Lasiurus xanthinus</i>	Western yellow bat	None/SSC/--/ None/WBWG: H	Usually found in urban or suburban environments where non-native trees and artificial water sources are found. Roosts primarily in the dead fronds ("skirts") of native and non-native fan palms. Also roosts in cottonwood trees and yuccas. Strongly associated with native groves of California fan palm (where there is open surface, spring-fed water sources). Also occurs in desert riparian areas.	<i>High Roosting. Moderate Foraging.</i> A number of palms with untrimmed dead fronds (or "skirts") are available in the survey area, but no nearby permanent open water areas for foraging occur. Historical location exists approximately 0.5 mile northwest and one mile south of the survey area but not within (Figure 9) (CDFW 2023).
<i>Myotis yumanensis</i>	Yuma myotis	None/SSC/--/ County Group 2/ WBWG: L	Inhabits open woodlands adjacent to water for foraging. Occurs throughout California but is uncommon in the deserts and elevations above 8,000 feet amsl. Nocturnal insectivore that roosts in crevices, caves, and mines and underneath bridges.	<i>Low Roosting. Low Foraging.</i> No caves, mines, or bridges suitable for roosting habitat occur in survey area. No open water areas adjacent to the coast live oak woodland suitable for foraging occur. Historical location exists approximately one mile south of the survey area but not within (Figure 9) (CDFW 2023).
<i>Odocoileus hemionus fuliginata</i>	Southern mule deer	None/None/--/ County Group 2	Occurs in grasslands, woodlands, and sparse shrub communities.	<i>Present.</i> Tracks observed on the Rhoda Lane dirt road on the eastern-central side of the Project site. Limited suitable habitat occurs in the woodland, grassland, and disturbed open areas on the Project site (Figure 8).

Notes: amsl = above mean sea level; CRPR = California Rare Plant Rank; None = no status indicated for species; WBWG = Western Bat Working Group

Bold = present on site

Federal Status: FC = federal candidate; FE = federally endangered

State Status: SE = state-listed as endangered; SSC = state species of special concern; ST = state threatened

CRPR: 1B = species rare, threatened, or endangered in California and elsewhere; 2B = species rare, threatened, or endangered in California but more common elsewhere; 0.2 = species fairly threatened in California

County of San Diego

County of San Diego Sensitive Animals List: Group 1 = very high level of sensitivity, either because the species is listed as threatened or endangered or because it has very specific natural history requirements that must be met; Group 2 = less common but not yet so rare that extirpation or extinction is imminent without immediate action

County of San Diego Sensitive Plants List: A = rare, threatened, or endangered in California and elsewhere; B = rare, threatened, or endangered in California but more common elsewhere

Western Bat Working Group: H = high; M = medium; L = low

Plant Species

No sensitive plant species were observed or determined to have a potential to occur in the survey area (Table 2).

Wildlife Species

Sensitive wildlife species observed in the survey area and others not observed but that have high potential to occur are described in detail in the following subsection. Sensitive wildlife species observation locations are provided on Figure 8.

Sensitive Wildlife Species Observed

Four sensitive wildlife species, monarch butterfly, great blue heron, red-shouldered hawk, and southern mule deer, were observed in the survey area and are described in the following subsections.

Monarch Butterfly

Monarch butterfly is under review for protection under the federal Endangered Species Act as of March 2020 (USFWS 2023c), and a County Group 2 species. Monarch butterfly occurs in patches of milkweed (*Asclepias* sp.), the monarch caterpillar host plant. Monarch butterflies are found across North America wherever suitable feeding, breeding, and overwintering habitat exists. Monarchs overwinter in groves of eucalyptus, cypress, and pine along the California coast and high-elevation forests in Mexico (Xerces Society 2017). Threats to this species include habitat loss, climate change, and agriculture.

Adult monarch butterflies were observed flying through the Project site during the 2021 survey. No milkweed patches occur on the Project site or in the overall survey area that would be suitable for monarch butterfly caterpillars to occupy (Figure 8). A small number of pine trees suitable for overwintering occur on the Project site and throughout the survey area.

Great Blue Heron

Great blue heron is a County Group 2 species. The great blue heron is very large, gray-blue wading bird with a long neck and orangish-yellow bill. Adults have a white head and face with a long black stripe from above their eye toward the back of their head on either side and distinct black head plumes. Typically, they are found in areas with aquatic resources, wading through the water or standing still to strike prey. Prey items include frogs, toads, fish, snakes, salamanders, and other species near aquatic resources. This species is also known to forage in dry areas looking for toads, snakes, lizards, and other small mammals (i.e., pocket gophers) to feed on. Typically, most great blue herons build stick nests in trees, adding to them year after year. The majority of the nesting pairs in the County are concentrated at six large colonies. However, the occasional few pairs will nest individually if not in smaller groups. This species is non-migratory in Southern California and can be found in the County year-round.

A great blue heron was observed foraging on the Project site during the 2023 survey (Figure 8). While the Project site provides little to no nesting opportunities, the survey area may provide an opportunity in the tall eucalyptus trees for a small group. However, no great blue heron stick nests were observed during the 2021, 2022, and 2023 surveys. It is likely that this individual may nest elsewhere outside the survey area.

Red-Shouldered Hawk

Red-shouldered hawk is a County of San Diego Group 1 species. Red-shouldered hawk is a medium-sized hawk with rounded wings and medium-length fan-shaped tails. Adults have a reddish barring on their breasts with white and dark checkered wings and a thickly barred tail. Red-shouldered hawk is widespread over San Diego County's coastal slope and absent only from areas that are devoid of tall trees, such as Otay Mountain. The inland valleys

of northern San Diego County have the most concentrated population, with suitable riparian woodland, scattered rural residences, orchards, and eucalyptus grove habitats (Unitt 2004). It hunts by gliding below the canopy and feeds on a variety of prey, including small mammals, reptiles, amphibians, young or small birds, and large insects. Adults construct large stick nests about halfway up a large tree, next to main tree trunk or on top of old squirrel, hawk, or raven nests.

Red-shouldered hawks were observed flying over the Project site and off-site improvements area, primarily over the southern portion of the Project site, during the 2021 biological survey (Figure 8). Suitable nesting and foraging habitat occur throughout the survey area.

Southern Mule Deer

Southern mule deer is a County of San Diego Group 2 species. This species inhabits a variety of habitats in San Diego County, including coastal sage scrub to chaparral, oak and riparian woodlands, conifer-hardwood forests in the mountains, and riparian woodland and desert scrub on the eastern slopes of the mountains. Southern mule deer generally prefers vegetation that provides woody cover, meadow and shrubby openings for foraging, and water. Southern mule deer uses south-facing slopes more frequently during the winter and north-facing slopes more during the summer (Tremor et al. 2017).

Southern mule deer tracks were observed on the Rhoda Lane dirt road on the eastern-central side of the Project site during the 2022 survey (Figure 8). Limited suitable habitat for refugia or foraging occurs in the woodland and grassland areas on the Project site. The site is most likely used as a movement corridor, connecting to other areas of more suitable undisturbed habitat, which dominates the survey area, away from development.

Sensitive Wildlife Species Not Observed but with High Potential to Occur

Two sensitive wildlife species, Mexican long-tongued bat (*Choeronycteris mexicana*) and western yellow bat (*Lasiurus xanthinus*), were not observed in the survey area but have high potential to occur and are described in detail in the following subsection. Although neither of these bat species was observed in the survey area, it is important to note that no nocturnal or acoustic surveys were conducted in the survey area.

Mexican Long-Tongued Bat

Mexican long-tongued bat is a California species of special concern and a County of San Diego Group 2 species. It is a relatively large bat that has a long snout with a leaf-like projection at the tip of its nose. It is sooty gray to brown above and pale below. Mexican long-tongued bats feed on pollen, nectar, fruit of agaves (century plants), columnar cacti, and other nectar-producing plants (typically ornamentals) and may supplement their diet with insects. They prefer to roost in crevices including deep rock crevices, caves, and other deep, dimly lit spaces. Uniquely in San Diego County, they have been known to roost exclusively in human-made structures under porches, decks, patios, buildings, warehouses, and other such areas. They roost in small numbers rather than large colonies with hundreds to thousands of individuals (Tremor et al. 2017).

The survey area contains abundant ornamental plantings including century plants, birds-of-paradise, and other species that may attract Mexican long-tongued bats. While this species has moderate potential to be found roosting in the survey area, it has high potential to be found foraging in the survey area.

While there is potential for Mexican long-tongued bat to be found temporarily roosting or foraging in the survey area, it is important to note that it is a migratory species and is only expected to be found in the County between September and March.

Western Yellow Bat

Western yellow bat is a California species of special concern. It is a medium to large species with dull yellowish fur and contrasting black wings. Unlike others in the *Lasiurus* genus, its tail is only partially, rather than completely, furred. It has small ears and a “pug-like” face with small black eyes. Western yellow bats are known to eat beetles, flies, moths, grasshoppers, crickets, and other insects. It can be found foraging over swimming pools and open water sources. This species roosts exclusively in foliage, particularly in the “skirts” of dead fronds around trunks

of untrimmed both native and non-native palms but is found in ornamentally planted trees, including orchards and urban fruit trees. It has also been known to roost in cottonwood trees and yuccas (Tremor et al. 2017).

Western yellow bats have high potential to be found roosting in the survey area. Numerous palms with heavy dead frond “skirts” and trees are suitable for roosting. There is moderate potential for this species to be found foraging since open water and swimming pools are limited, but other insects, including moths, are likely to be plentiful and can be found in the survey area for this species to consume.

Roosting Bats

While no bats were observed using the survey area for roosting or foraging during the survey, no nighttime focused acoustic surveys were conducted. As previously discussed, database search results identified known historical locations for western yellow bat and Mexican long-tongued bat, both California species of special concern, within one mile of the survey area. Both have potential to be found roosting and foraging in the survey area.

Although bats that avoid areas heavily used by humans may not be observed, the availability of suitable roosting habitat (i.e., buildings, trees) and suitable foraging habitat (i.e., open grassy areas, ornamental plantings) indicates that bats more common to urban and suburban environments or habitat “generalist” species have potential to be found in the survey area. Common species including Mexican free-tailed bats (*Tadarida brasiliensis*), California myotis (*Myotis californicus*), big brown bat (*Eptesicus fuscus*), and hoary bat (*Lasiurus cinereus*), which can be found roosting in buildings, crevices, and trees and forage over agricultural and open space areas, are likely to be found in the survey area.

Nesting Birds

While no active nests were observed in the survey area, the Project site and off-site improvements area potentially provide nesting habitat for several bird species, including raptors, which are protected under the CFGC and MBTA. A nesting bird survey was not conducted as part of the biological reconnaissance surveys.

As previously discussed, adult red-shouldered hawks were observed flying over the Project site and off-site improvements area. While not observed actively nesting on site, the oak and eucalyptus trees provide suitable nesting habitat, and the open areas of the site provide foraging opportunities. The red-shouldered hawks might use trees near to the Project site and off-site improvements area for nesting.

The interior coast live oaks, pines, and non-native trees, as well as ornamental and native shrubs and other vegetation, throughout the Project site and off-site improvements area provide suitable nesting habitat. An abundance of birds were observed foraging and calling throughout the areas surrounding the Project site and directly in and immediately surrounding the off-site improvements area. The grassland habitat on the Project site is small and fragmented from other larger grassland habitats. No grassland nesting birds were observed during the survey, and there is low to moderate potential for grassland nesting birds to be found on the Project site.

Critical Habitat

The potential presence of critical habitat in the survey area was also analyzed. No critical habitat for sensitive plant or wildlife species occurs in the survey area. Critical habitat for sensitive plant species thread-leaved brodiaea (*Brodiaea filifolia*) occurs approximately two miles northwest of the survey area. Critical habitat for the sensitive wildlife species coastal California gnatcatcher (*Polioptila californica californica*) occurs between approximately 1.5 and 2.5 miles west, south, and southwest of the survey area. Critical habitat for these species is shown on Figure 10, Critical Habitat.

Wildlife Corridors and Linkages

Wildlife corridors provide routes for local movement and regional linkages and corridors, often following linear topographic, vegetation, or water features. These corridors can be continuous habitats, features, or “stepping stone” areas, providing critical rest and foraging areas for, for example, birds traveling along migratory routes. Local routes of movement provide constant connections to resources that include sources of water, home/cover sites, and foraging areas. Regional linkages and movement corridors provide larger patches of open space to allow

relatively free movement of wildlife species along multiple paths between important resources. These areas allow for not only long-term genetic flow between subpopulations but also critical pathways of seasonal/migratory movements. Larger predatory mammals often use regional corridors for hunting and reproduction needs. Potential wildlife corridors can include streams, riparian areas, and culverts under roadways. Habitat characteristics considered included topography, habitat quality, and adjacent land uses.

The Project site and off-site improvements area are surrounded by urban development, with single-family residential neighborhoods to the north, west, and south; commercial development to the northeast; and the SPRINTER tracks to the east (Figure 2). Therefore, the presence of dense urban and commercial development surrounding the Project site and off-site improvements area limits large-scale east–west and north–south wildlife movement in the surrounding area. While the Project site is relatively open, it is unlikely to serve as a major route for movement or as a significant connection to open space areas, although it may provide some opportunities for local movement and connectivity. This is evidenced by the southern mule deer tracks on Rhoda Lane, showing that this dirt road passing through the Project site is used as a movement route. While disturbed, the Project site is a mostly open area in a dense urban environment, which lends to its potential for use as a movement route to higher-quality habitat and open space areas. Nesting and foraging opportunities on the site are somewhat limited despite the presence of several trees. However, the mature trees on and surrounding the Project site have the potential to provide some habitat for nesting birds for migration connectivity both locally and regionally. Similarly, the off-site improvements area has abundant nesting and foraging opportunities but is not considered open and has no native habitat coverage of significance; therefore, it does not provide major local movement and regional linkage and corridor space.

Significance of Project Impacts and Proposed Mitigation

Significance Criteria

Direct impacts occur when biological resources are altered or destroyed during the course of or as a result of Project implementation. Examples of such impacts include removing or grading vegetation, filling wetland habitats, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may include elevated levels of noise or lighting, changes in surface water hydrology within a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. Permanent impacts may result in irreversible damage to biological resources. Temporary impacts are interim changes in the local environment due to construction and would not extend beyond Project-associated construction, including revegetation of temporarily disturbed areas adjacent to native habitats.

Appendix G of the CEQA Guidelines (CEQA Guidelines 15000 et seq.) defines “significant effect on the environment” as a “substantial, or potentially substantial adverse change in the environment.” Appendix G of the CEQA Guidelines further indicates that there may be a significant effect on biological resources if the Project would:

- a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game¹ or U.S. Fish and Wildlife Service.
- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

¹ As of January 1, 2012, the California Department of Fish and Game became the California Department of Fish and Wildlife.



- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Threshold A

Guidelines for Determination of Significance

A significant impact would result if the Project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or sensitive species in local or regional plans, policies, or regulations or by the CDFW or USFWS.

This significance guideline is taken directly from the CEQA Guidelines, Appendix G, and is based on the CEQA Guidelines definition of mandatory findings of significance (Section 15065) and of endangered, rare, or threatened species (Section 15380).

Analysis

Potential impacts on sensitive plant and wildlife species are discussed in the following subsections.

Sensitive Plant Species

As discussed in the Results section, no sensitive plant species were observed or determined to have a potential to occur on the Project site or in the off-site improvements area. Further, the small areas of non-native grassland and coast live oak woodland and larger areas of disturbed habitat on the Project site have a low potential to support sensitive plant species, and the off-site improvements area is developed and does not provide suitable habitat (Table 2). Therefore, Project implementation would not result in impacts on sensitive plant species. Impacts on sensitive plant species would be less than significant, and no mitigation would be required.

Sensitive Wildlife Species

The Project has the potential to result in direct and indirect impacts on sensitive wildlife species. Four sensitive wildlife species, monarch butterfly, great blue heron, red-shouldered hawk, and southern mule deer, were observed on or over the Project site and in or over the off-site improvements area during the 2021 and 2022 surveys. One sensitive species, western yellow bat, has high potential to be found roosting on the Project site. A second bat species, Mexican long-tongued bat, has high potential to be found foraging but not roosting on the Project site.

No other sensitive wildlife species were observed in the survey area, and no sensitive wildlife species were determined to have a high or moderate potential to occur in the survey area (Table 2). The sensitive wildlife species with a low potential to occur were not observed in the survey area during the 2021, 2022, and 2023 surveys.

Direct Impacts

Three sensitive vegetation communities, non-vegetated channel, non-native grassland, and coast live oak woodland, which could support sensitive wildlife species, were observed on the Project site or in the off-site improvements area (Table 2). The disturbed habitat on the Project site or in the off-site improvements area is not considered a sensitive vegetation community and is unlikely to support sensitive wildlife species, as discussed further in this section.

Table 3, Impacts on Sensitive Vegetation Communities, presents the total sensitive vegetation community acreages on the Project site and the permanent impacts from implementation of the Project.

Table 3. Impacts on Sensitive Vegetation Communities

Vegetation Community and Land Cover Type	Project Site (acres) ¹	Off-Site Improvements Area (acres) ¹	Permanent Impacts (acres) ¹
Riparian			
Non-vegetated channel (42200)	0.02	<0.001	0.02
Upland			
Non-native grassland (42200)	0.19	0	0.19
Woodland			
Coast live oak woodland (71160)	0.26	0.05	0.31
Total	0.47	0.05	0.52

Sources: Holland 1986; Oberbauer et al. 2008.

Notes:

¹ Acreages rounded up to one-hundredth

Permanent impacts on sensitive vegetation communities, including approximately 0.02 acre of non-vegetated channel, 0.19 acre of non-native grassland, and 0.31 acre of coast live oak woodland, would occur from Project implementation (Figure 11, Biological Resources Impacts).

The non-vegetated channel that runs through the central portion of the Project site is highly disturbed and eroded and is unlikely to provide suitable habitat for sensitive plant or wildlife species. Impacts on non-vegetated channel would result in less than significant impacts on sensitive plant and wildlife species, and no mitigation would be required.

The non-native grassland in the southeastern portion of the Project site is small, highly disturbed, and surrounded by disturbed habitat and the Rhoda Lane dirt road to the west, north, and south and the SPRINTER tracks to the east. The non-native grassland on the Project site has a low potential to provide suitable habitat for sensitive plant or wildlife species because the area is small, fragmented, and shows evidence of regular disturbance from mowing and vehicle activity. Impacts on non-native grassland would result in less than significant impacts on sensitive plant and wildlife species, and no mitigation would be required.

The coast live oak woodland on the Project site provides suitable nesting habitat for bird species protected by the MBTA and CFGC, including red-shouldered hawk, which was observed on and surrounding the Project site during the 2021 survey. In addition, it may provide roosting habitat for sensitive bats. Removal of the potential nesting and foraging habitat could result in significant impacts on sensitive birds and raptors, and mitigation would be required.

The disturbed habitat on the Project site is primarily bare ground and mowed non-native grasses and other non-native annuals that provide marginal foraging habitat for sensitive mammals, raptors, and other sensitive bird species. The shrubs and non-native trees in the southern, southeastern, and central portions and around the edges of the Project site provide nesting habitat for sensitive and migratory bird species, including red-shouldered hawk, which were observed on and surrounding the Project site during the 2021 survey. Removal of the potential nesting and foraging habitat could result in significant impacts on sensitive birds and raptors, and mitigation would be required.

Southern mule deer tracks were observed on the Rhoda Lane dirt road on the east-central side of the Project site during the 2022 survey. The small areas of coast live oak woodland and non-native grassland and the disturbed open areas on the Project site provide limited suitable foraging and refugia habitat for southern mule deer. There is limited cover, a large number of residences and human activity on and surrounding the Project site, and little to no sources of water to support southern mule deer as a resident species. Therefore, impacts on southern mule deer would be less than significant, and no mitigation would be required. An adult great blue heron was observed on the Project site during the 2023 survey. No stick nests were observed in the survey area. Therefore, the Project is unlikely to impact nesting great blue herons; impacts would be less than significant, and no mitigation is required. Adult monarch butterflies were observed flying through the Project site during the 2021 survey. However, no milkweed that would support monarch butterfly reproduction occur on the Project site. In addition,



the small number of pines suitable for overwintering habitat are unlikely to support overwintering monarch butterflies. Impacts on monarch butterfly would be less than significant, and no mitigation would be required.

Indirect Impacts

Indirect impacts on sensitive wildlife species that occur on the Project site during Project construction could include noise, dust deposition, increased soil erosion, increased human activity, introduction of non-native species, and increased potential of exotic species invasion due to soil disturbance and construction vehicles and personnel. Implementation of the Project has the potential to drive sensitive wildlife species, primarily red-shouldered hawk and other nesting bird species, from the Project site because of noise, equipment operation, and human activity. Disturbance of potential nesting habitat on the Project site could result in potentially significant impacts on sensitive bird and raptor species, and mitigation would be required.

Indirect impacts from Project operation, including noise, lighting, human activity, and predation by pets, could result in potentially significant permanent impacts on sensitive wildlife species that occur on the Project site, and mitigation would be required.

Nesting Birds

Project implementation has the potential to impact bird and raptor species that are protected under the MBTA and CFGC Section 3503. As discussed in the Results section, adult red-shouldered hawks were observed flying over the Project site during the 2021 survey, potentially nesting in mature trees on or surrounding the Project site and off-site improvements area. The coast live oak, pine, and non-native trees, primarily in the southern, southeastern, and central portions of the Project site, provide nesting habitat for many bird species. If construction is conducted during the general bird breeding season (January 15 through August 31), temporary direct impacts from disturbance and displacement of nesting birds during vegetation removal could result in significant direct impacts on bird species protected under the MBTA and CFGC, and mitigation would be required. Indirect impacts from construction noise and vibration during clearing, grubbing, and trenching activities, if conducted during the bird breeding season, could result in significant indirect impacts on bird species protected under the MBTA and CFGC, and mitigation would be required.

Threshold B

Guidelines for Determination of Significance

A significant impact would result if the Project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS.

Analysis

As previously discussed under Threshold A, three sensitive vegetation communities, non-vegetated channel, non-native grassland, and coast live oak woodland, occur on the Project site (Figure 6).

Permanent impacts would occur on the three sensitive vegetation communities on the Project site, including approximately 0.02 acre of non-vegetated channel, 0.19 acre of non-native grassland, and 0.31 acre of coast live oak woodland (Figure 11; Table 3). Therefore, permanent impacts on sensitive vegetation communities from implementation of the Project would be significant, and mitigation would be required.

Threshold C

Guidelines for Determination of Significance

A significant impact would result if the Project would have a substantial adverse impact on state- and federally protected wetlands and non-wetland waters as defined by CWA Sections 401 and 404 through direct removal, filling, hydrological interruption, or other means. Impacts on state or federally jurisdictional aquatic resources would be considered significant and would require permits from the USACE and RWQCB. Aquatic resources delineations would be required for any impacts on potentially jurisdictional aquatic resources.

Analysis

As discussed in the Results section, three aquatic resources, Channels 1 through 3, were observed in the survey area (Figure 7). Channels 1 and 2 were determined to be isolated, ephemeral non-wetland waters that do not have a surface connection to a TNW or other off-site aquatic resources and do not carry a relatively permanent flow of water. Therefore, Channels 1 and 2 may not be considered jurisdictional by the USACE, RWQCB, and/or CDFW pursuant to CWA Sections 401 and 404 and CFGC Section 1602. Channel 3 could have a downstream connection to Buena Vista Creek through the municipal stormwater system and may be considered jurisdictional by the USACE, RWQCB, and/or CDFW pursuant to CWA Sections 401 and 404 and CFGC Section 1602. However, only the agencies can make a final determination of jurisdictional boundaries.

Direct Impacts

As discussed in the Project Description and Location section, the Project would develop the entire Project site and result in direct permanent impacts on Channels 1 and 2 (Figure 11). Implementation of the Project would not result in direct impacts to Channel 3 (Figure 11). Although Channels 1 and 2 were preliminarily determined to not be under the jurisdiction of federal or state agencies, only the USACE, RWQCB, and CDFW can make a final determination of jurisdictional boundaries. Therefore, permanent direct impacts on potentially federal and state jurisdictional aquatic resources would be significant, and mitigation would be required.

Threshold D

Guidelines for Determination of Significance

The Project would have a significant impact on wildlife movement and nursery sites if its development interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.

Analysis

The Project site is completely surrounded by urban development, with single-family residential neighborhoods to the north, west, and south; commercial development to the northeast; and the SPRINT tracks to the east (Figure 2). Due to the presence of the surrounding urban development, the Project site is unlikely to provide major movement and dispersal areas for wildlife species or connections to open space areas. However, as discussed under Threshold A, the small number of trees on the Project site have the potential to provide habitat for birds for migration connectivity both locally and regionally.

While some areas on the Project site have the potential to provide live-in habitat for both sensitive and common reptile, bird, invertebrate, and mammal species, the Project site does not support regional wildlife corridors or linkages. Therefore, implementation of the Project would not result in significant impacts on wildlife corridors or nursery sites, and no mitigation would be required.

Threshold E

Guidelines for Determination of Significance

A significant impact would result if the Project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Analysis

The Project would comply with the local policies or ordinances protecting biological resources identified in the Vista General Plan 2030 and DVSP. Therefore, no impacts would occur to local policies or ordinances from implementation of the Project, and no mitigation would be required.



Threshold F

Guidelines for Determination of Significance

A significant impact would result if the Project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan.

Analysis

The Project site is within the North County MHCP and complies with the requirements for areas not within the Focused Planning Area. Therefore, no impacts on Local Conservation Plans would occur from the implementation of the Project, and no mitigation would be required.

Proposed Mitigation

Mitigation would be required to compensate for any permanent, temporary, direct, indirect, and cumulative impacts on sensitive biological and aquatic resources that would be considered significant under CEQA and federal and state law. Implementation of the following mitigation would reduce these impacts to a level below significance.

DVSP Mitigation Measure BIO-1: For all future projects in the SPA on a site, which is mapped by the City as supporting a sensitive vegetation type, surveys for sensitive plant and animal species shall be conducted by a qualified biologist during the appropriate season as part of, or prior to, the Project planning or design phase. If sensitive plant or animal species are observed, they shall be avoided if possible. If impacts cannot be avoided, the significance of the impacts to those species must be evaluated in compliance with CEQA and any significant impacts shall be mitigated based on the recommendations of the qualified biologist and the mitigation requirements of the North County MHCP Table 8-8, or the City of Vista Subarea Plan, if adopted prior to approval of a grading permit for the future Project.

Project Implementation of DVSP Mitigation Measure BIO-1: The Project would implement Mitigation Measure BIO-1 from the DVSP to mitigate for sensitive plant and animal species anticipated to occur on the Project site, as follows:

- To prevent potential impacts to sensitive roosting bats, a biological monitor should be present during tree removal. If trees need to be trimmed, lower limbs should be cut or trimmed first before cutting upper limbs. If trees need to be completely removed, trees should be cut down in a staggered fashion to give any potential roosting bats a chance to flee. Avoid removal of ornamental plantings that may be potential nectar sources for Mexican long-tongued bat between September and March when the species is most likely to be observed foraging on the Project site or in the off-site improvements area.
- Impacts on approximately 0.19 acre of non-native grassland shall be mitigated at a 0.5:1 ratio for a total of 0.10 acre of required mitigation for private development that occurs outside the North County Multiple Habitat Conservation Plan Focused Planning Area. Mitigation shall consist of the off-site acquisition of 0.10 acre of non-native grassland mitigation credits. The wildlife agencies (i.e., USFWS and CDFW) and the City of Vista shall approve the location and habitat quality of the off-site mitigation site.
- Impacts on approximately 0.31 acre of coast live oak woodland shall be mitigated at a 2:1 ratio for a total of 0.62 acre of required mitigation for private development that occurs outside the North County Multiple Habitat Conservation Plan Focused Planning Area. Mitigation shall consist of the off-site acquisition of 0.62 acre of coast live oak woodland mitigation credits. The wildlife agencies and the City of Vista shall approve the location and habitat quality of the off-site mitigation site.
- The applicant shall be responsible for replacement of any existing coast live oaks that are impacted by construction activities on the site at a minimum ratio of 2:1. The replacement oaks shall be at minimum 48-inch box specimens of the same species existing on site and shall be planted on site and/or in an off-site location in the City of Vista in an area determined to provide long-term biological value, as determined by the City Planner in consultation with the wildlife agencies. The applicant shall be responsible for preparation of a revegetation plan for the coast live oaks. The revegetation plan shall be prepared by a biologist approved by the City of Vista with expertise in Southern California ecosystems and native plant revegetation techniques. The revegetation plan shall be submitted to the City Planner for approval prior to issuance of any grading

permit. The applicant shall submit proof of a binding agreement ensuring maintenance and monitoring of the replacement coast live oak trees for a five-year period. The agreement shall be subject to approval of the City Planner prior to issuance of any grading permit.

DVSP Mitigation Measure BIO-2: For all future projects in the SPA located on a site adjacent to or traversed by Buena Vista Creek, a qualified biologist, shall determine if the Project would have the potential to impact the adjacent waterway. If the waterway would be potentially impacted by the Project, the qualified biologist shall determine if the waterway meets the criteria for a jurisdictional wetland or water of the U.S. by the USACE or a streambed or bank under the jurisdiction of the CDFW. If it is determined that the waterway is jurisdictional, the applicant shall obtain the following permits, as necessary.

- Authorization for the fill of jurisdictional waters of the U.S. from the USACE through the CWA Section 404 permitting process;
- A water quality certification pursuant to Section 401 of the CWA; and/or
- Authorization for the alteration of streambeds and banks within the state under Section 1602 of the CFGC.

Project Implementation of DVSP Mitigation Measure BIO-2: The Project would implement Mitigation Measure BIO-2 from the DVSP PEIR by consulting with the USACE, RWQCB, and CDFW to determine jurisdictional authority over the on-site aquatic resources. If required, permits shall be issued before impacts on jurisdictional aquatic resources occur by the USACE, RWQCB, and CDFW. Before construction in any areas containing jurisdictional aquatic features, the applicant shall obtain authorizations pursuant to Sections 401 and 404 of the CWA and Section 1602 of the CFGC.

If required by the USACE, RWQCB, and CDFW, compensatory mitigation shall be implemented to mitigate impacts on jurisdictional aquatic resources. This mitigation shall be in the form of credit purchases at an approved wetlands mitigation bank, in-lieu fee mitigation, or other permittee responsible mitigation as approved by the agencies.

Report of waste discharge pursuant to California Water Code, Section 13050, shall be required for waters of the state determined to be non-jurisdictional under Sections 404 and 401 of the CWA. Any measures required as part of the issuance of the Report of Waste Discharge shall be implemented.

Authorization for the alteration of streambeds and banks of the state shall be required under Section 1602 of the CFGC, and a Streambed Alteration Agreement application shall be required prior to work occurring in CDFW jurisdictional areas. Mitigation requirements determined through the process of obtaining the necessary permits shall be implemented before the start of construction.

DVSP Mitigation Measure BIO-3: Prior to initiation of Project construction on a site within the SPA during the raptor nesting season (generally March 1 through August 15), where suitable trees for raptor nesting occur on the Project site or within 500 ft of the site, pre-construction surveys for raptor nests shall be performed by a qualified biologist. If there are no raptors nesting (which includes nest building or other breeding/nesting behavior) within 500 ft of the site, clearing shall be allowed to proceed. Construction activities within 500 ft of active nests shall not be allowed to resume during the breeding season until a qualified biologist determines that the nest is no longer active.

Project Implementation of DVSP Mitigation Measure BIO-3: The proposed Project would implement DVSP Mitigation Measure BIO-3 by preventing the grubbing, trimming or clearing of vegetation from the Project site or off-site improvements area during the general bird breeding season (January 15 through August 31). If grubbing, trimming, or clearing of vegetation cannot feasibly occur outside the general bird breeding season, the qualified biologists, as approved by the City of Vista, shall perform a pre-construction nesting bird survey no more than 72 hours before the start of vegetation grubbing, trimming, or clearing to determine if active bird nests are present in the affected areas. If one or more active nests are found during the pre-construction survey, a buffer of appropriate size based on species (i.e., 200 ft for passerines and 500 ft for raptors) or observed behavior shall be established around the nest, and no disturbance shall be allowed within the buffer until a qualified biologist determines that the nest is no longer active. If no nesting birds (including nest building or other breeding or nesting behavior) are on the Project site, grubbing, trimming, or clearing shall proceed.



When construction occurs during the bird breeding season, a qualified biologist shall conduct a weekly nest survey of the area within 100 ft of construction to survey for nesting migratory birds and raptors.

Level of Significance After Mitigation

As discussed in Threshold A, Project construction and operation would not result in significant impacts on sensitive plant species, and no mitigation would be required.

As discussed in Threshold A, Project construction and operation would result in potentially significant temporary and permanent direct and indirect impacts on sensitive nesting birds and raptors and roosting bats. With implementation of Mitigation Measures BIO-1 through BIO-3, temporary and permanent direct and indirect impacts on sensitive nesting birds and raptors and roosting bats from Project construction would be reduced to a less than significant level.

As discussed in Threshold B, Project construction and operation would result in significant permanent direct impacts on three sensitive vegetation communities, non-vegetated channel, non-native grassland, and coast live oak woodland. With implementation of Mitigation Measures BIO-1 through BIO-3, permanent direct impacts on sensitive vegetation communities from Project construction would be reduced to a less than significant level.

As discussed in Threshold C, Project construction could result in potentially significant permanent direct impacts on potentially federally and state-protected non-wetland water Channels 1 and 2. With implementation of Mitigation Measure BIO-2, permanent direct impacts on potentially federally and state-protected aquatic resources would be reduced to a less than significant level.

As discussed in Thresholds D–F, the Project would not result in significant impacts on wildlife corridors and linkages, conflicts with local policies and ordinances, or regional conservation planning, and no mitigation would be required.

Cumulative Impacts

Implementation of the Project would not contribute to the cumulative loss of biological resources in the City or County. When combined with other projects nearby or in the region, the Project has the potential to contribute to cumulatively significant impacts through the direct and indirect impacts on nesting birds and raptors and roosting bats, direct impacts on sensitive vegetation communities, and direct impacts on potentially federally and state-protected aquatic resources. However, these impacts would be mitigated to a less than significant level with the implementation of Mitigation Measures BIO-1 through BIO-3 that are consistent with the mitigation requirements of the DVSP and North County MHCP, as detailed in the Proposed Mitigation and Level of Significance After Mitigation sections. Therefore, cumulative impacts would be less than significant.

Preparers

Harris & Associates

Emily Mastrelli, Principal Biologist

Katie Laybourn, Biologist

If you have any questions regarding this letter report, please do not hesitate to contact Emily Mastrelli at Emily.Mastrelli@WeAreHarris.com or (619) 510-5372.

Sincerely,

Emily Mastrelli
Principal Biologist
Emily.Mastrelli@WeAreHarris.com
(619) 510-5372

Katie Laybourn
Biologist/Aquatic Resources Specialist

Attachments

- 1, Figures
- 2, Aquatic Resources Delineation Report
- 3, Species Observed
- 4, Photographic Log

References

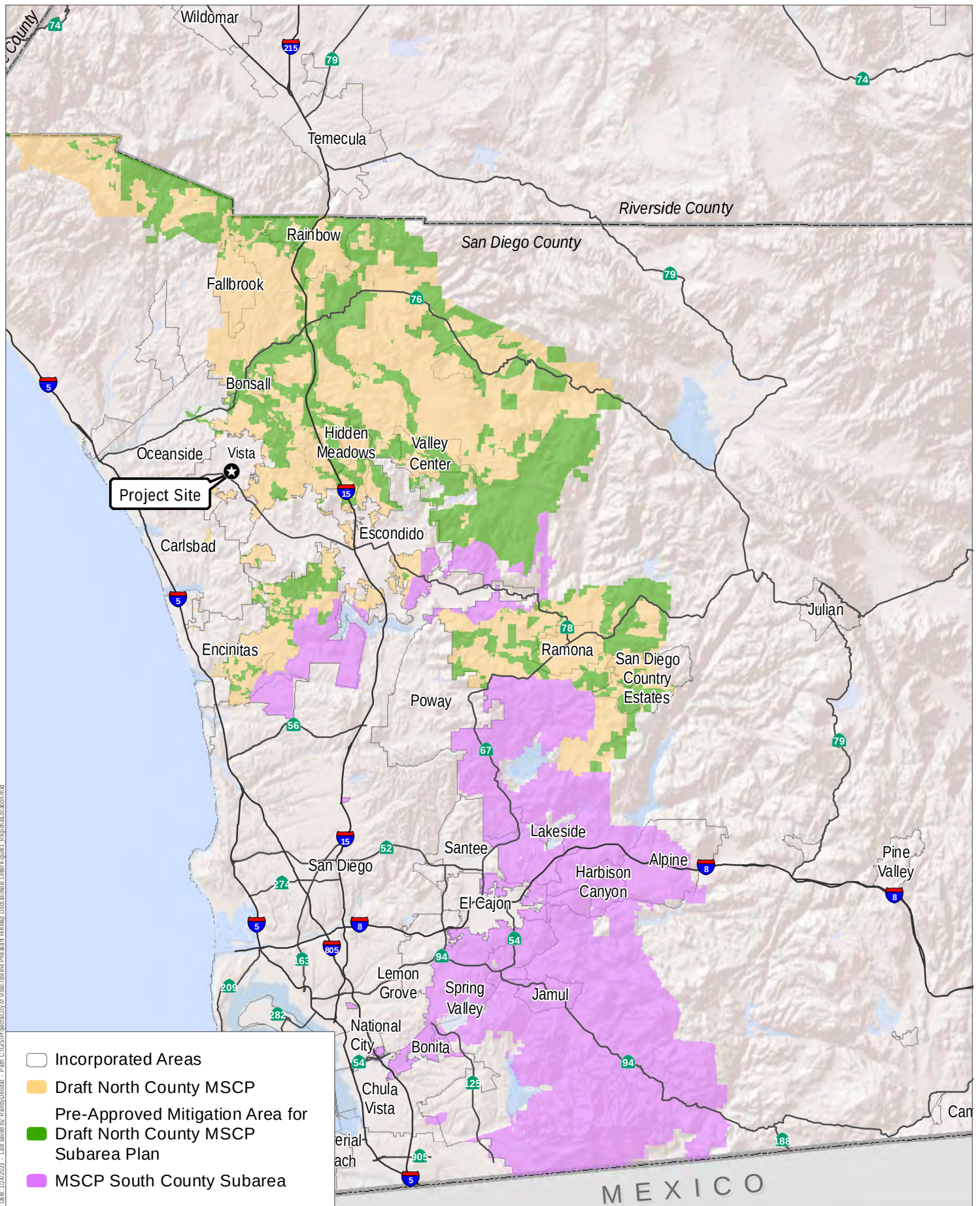
- Calflora. 2023. Calflora Database. Accessed May 2023. <https://www.calflora.org/>.
- CCH (Consortium of California Herbaria). 2023. "Consortium of California Herbaria (CCH)." Accessed May 2023. <https://ucjeps.berkeley.edu/consortium/about.html>.
- CDFW (California Department of Fish and Wildlife). 2023. California Natural Diversity Database (CNDDDB). Accessed May 2023. <https://wildlife.ca.gov/Data/CNDDDB>.
- City of Vista. 2010. Downtown Vista Specific Plan Update Program Environmental Impact Report (SCH No. 2009061018). March 11.
- City of Vista. 2012. Vista General Plan 2030. April 2012. Accessed May 2023. <https://www.cityofvista.com/city-services/city-departments/community-development/building-planning-permits-applications/vista-general-plan-2030>.
- City of Vista. 2015. Addendum No. 1 to the Downtown Specific Plan Update Program Environmental Impact Report. State Clearinghouse No. 2009061018.
- CNPS (California Native Plant Society). 2023. Inventory of Rare and Endangered Plants of California. Online edition, v9-01 1.5. Accessed May 2023. <http://www.rareplants.cnps.org/>.
- Google Earth. 2023. "City of Vista." Accessed May 2023. <https://www.google.com/earth/>.
- Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. October.
- NRCS (National Resources Conservation Service). 2023. National Water and Climate Center: WETS Table. Accessed May 2023. https://www.wcc.nrcs.usda.gov/climate/navigate_wets.html.
- Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on Preliminary Descriptions of the Terrestrial Natural Communities of California prepared by Robert F. Holland, PhD, in October 1986. Codes revised by Thomas Oberbauer in February 1996, revised and expanded by Meghan Kelly in August 2006, and further revised and reorganized by Jeremy Buegge in March 2008. Accessed May 2023. https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch9.0/rtcrefaletters/O14%202014-12-19_OberbauerTM2008.pdf.
- Project Clean Water. 2023. "Carlsbad WMA." Accessed April 2023. <http://www.projectcleanwater.org/carlsbad-wma/>.
- SANDAG (San Diego Association of Governments). 2003. North County MHCP. March. Accessed May 2023. <https://www.sandag.org/index.asp?projectid=97&fuseaction=projects.detail>.
- Tremor, Scott, Drew Stokes, Wayne Spencer, Jay Diffendorfer, Howard Thomas, Susan Chivers, and Philip Unitt, eds. 2017. San Diego County Mammal Atlas. August 1.
- Unitt, Philip. 2004. San Diego County Bird Atlas. October 31.
- USACE (U.S. Army Corps of Engineers). 1987. Corps of Engineers Wetlands Delineation Manual. Final. Wetlands Research Program Technical Report Y 87 1. Online edition. Prepared by Environmental Laboratory, U.S. Army Corps of Engineers, Waterways Experiment Station. Wetlands Research Program. January. Accessed May 2023. <http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>.



- USACE. 2008. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0). Final. ERDC/EL TR-08-28. Prepared by Environmental Laboratory, U.S. Army Engineer Research and Development Center. Wetlands Regulatory Assistance Program. September. Accessed May 2023. <https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7627>.
- USACE. 2014. A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coastal Region of the United States. ERDC/CRREL TR-14-13. Prepared by Matthew K. Mersel and Robert W. Lichvar. Cold Regions Research and Engineering Laboratory, U.S. Army Engineer Research and Development Center. Wetlands Regulatory Assistance Program (WRAP). August. Accessed May 2023. <https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7645>.
- USACE. 2023a. "TNWs & Navigable Waters in Los Angeles District." Accessed May 2023. <https://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Navigable-Waterways/>.
- USDA (U.S. Department of Agriculture). 2019. Web Soil Survey. Natural Resources Conservation Service, Soil Survey Staff. Last modified July 31. Accessed May 2023. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- USFWS (U.S. Fish and Wildlife Service). 2023a. National Wetlands Inventory Wetlands Mapper. Accessed May 2023. <https://www.fws.gov/wetlands/data/Mapper.html>.
- USFWS. 2023b. Information for Planning and Consultation (IPaC). Accessed May 2023. <https://ecos.fws.gov/ipac/>.
- USFWS. 2023c. "Assessing the Status of the Monarch Butterfly." Accessed May 2023. <https://www.fws.gov/savethemonarch/SSA.html>.
- USGS. 2023. National Hydrography Dataset. Accessed May 2023. <https://www.arcgis.com/home/webmap/viewer.html?url=https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer&source=sd>.
- Xerces Society. 2017. New Guidelines for Protecting California's Butterfly Groves. Prepared by Emma Pelton. November 8. Accessed May 2023. <https://xerces.org/blog/new-guidelines-for-protecting-californias-butterfly-groves>.

Attachment 1. Figures

This page intentionally left blank.



Source: ESRI 2021.

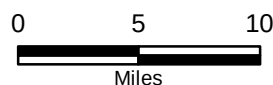
Figure 1

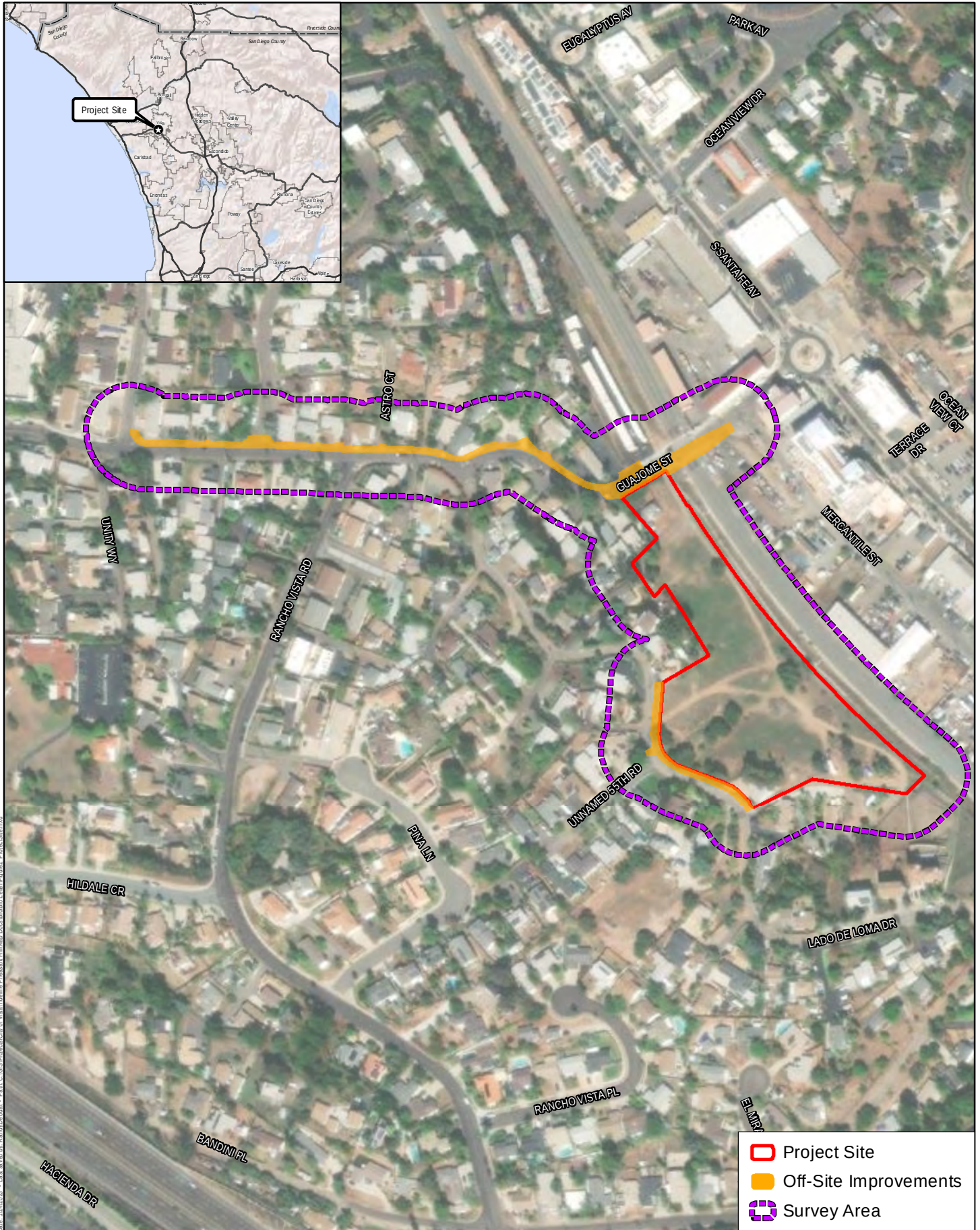
Regional Location

Tideline Kensho Residential Project



Harris & Associates





Source: Maxar Imagery 2021.



Harris & Associates

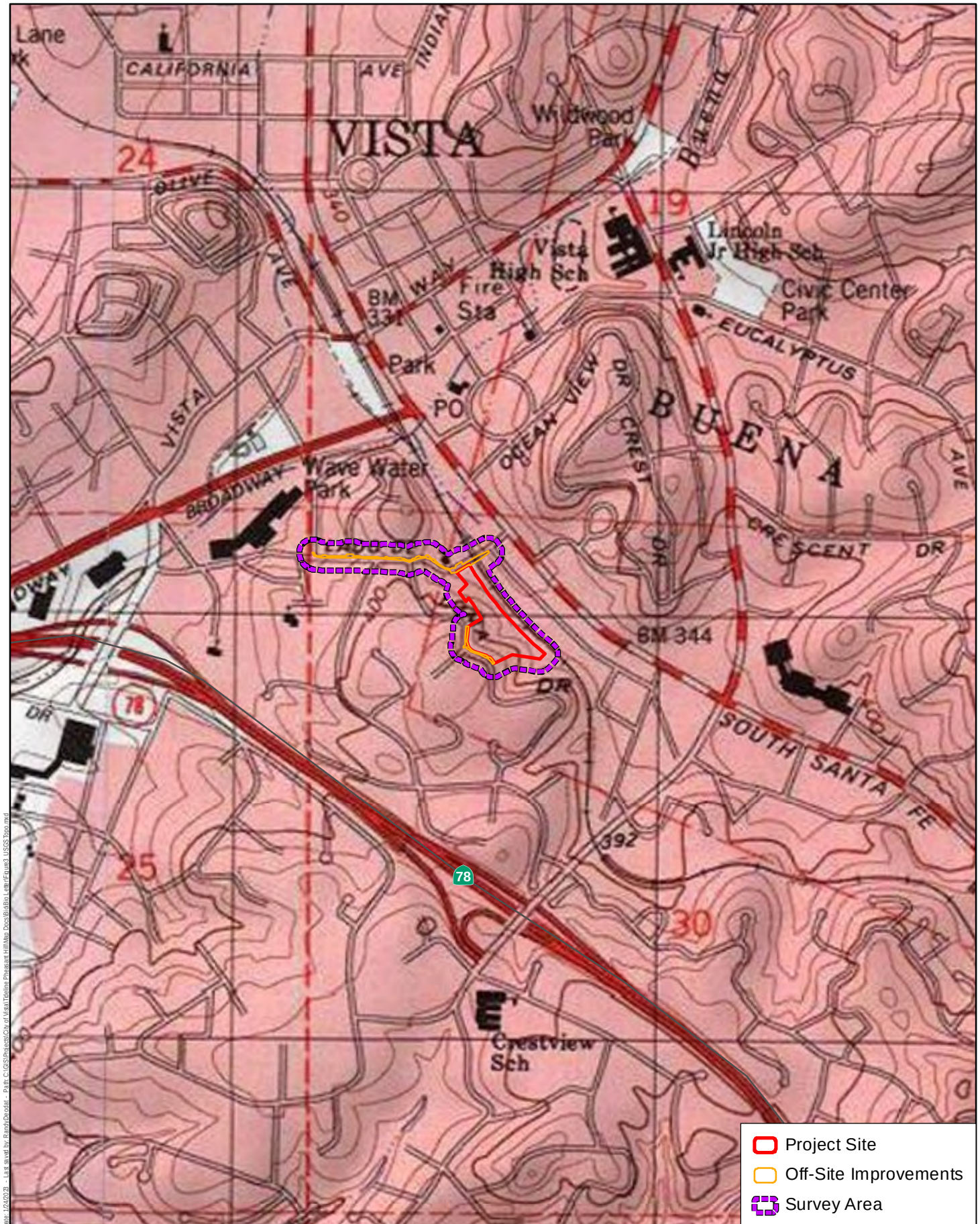


0 150 300
Feet

Figure 2

Project Site

Tideline Kensho Residential Project



Source: USGS Tideline Pheasant Hill Quadrangle 1975.



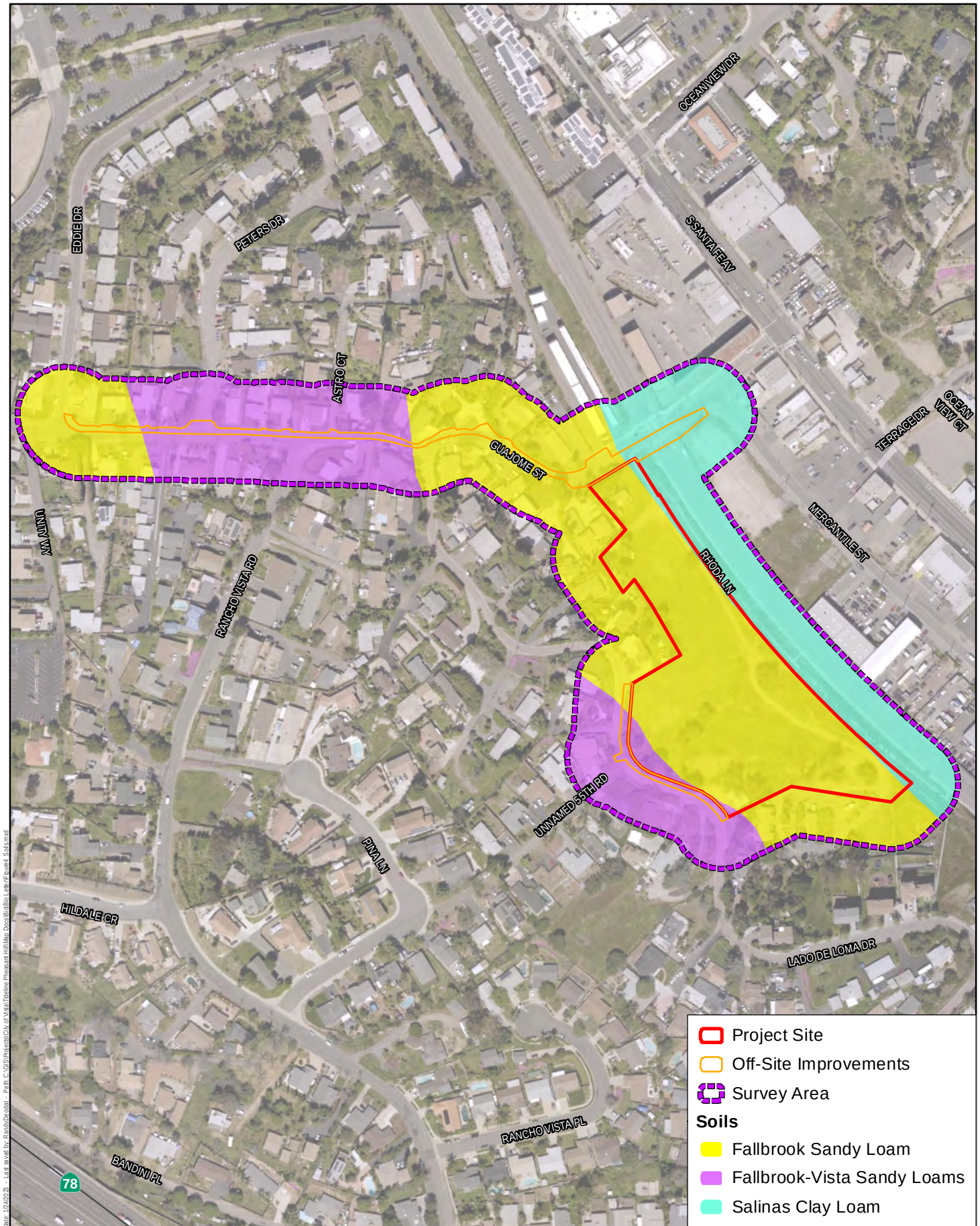
Harris & Associates

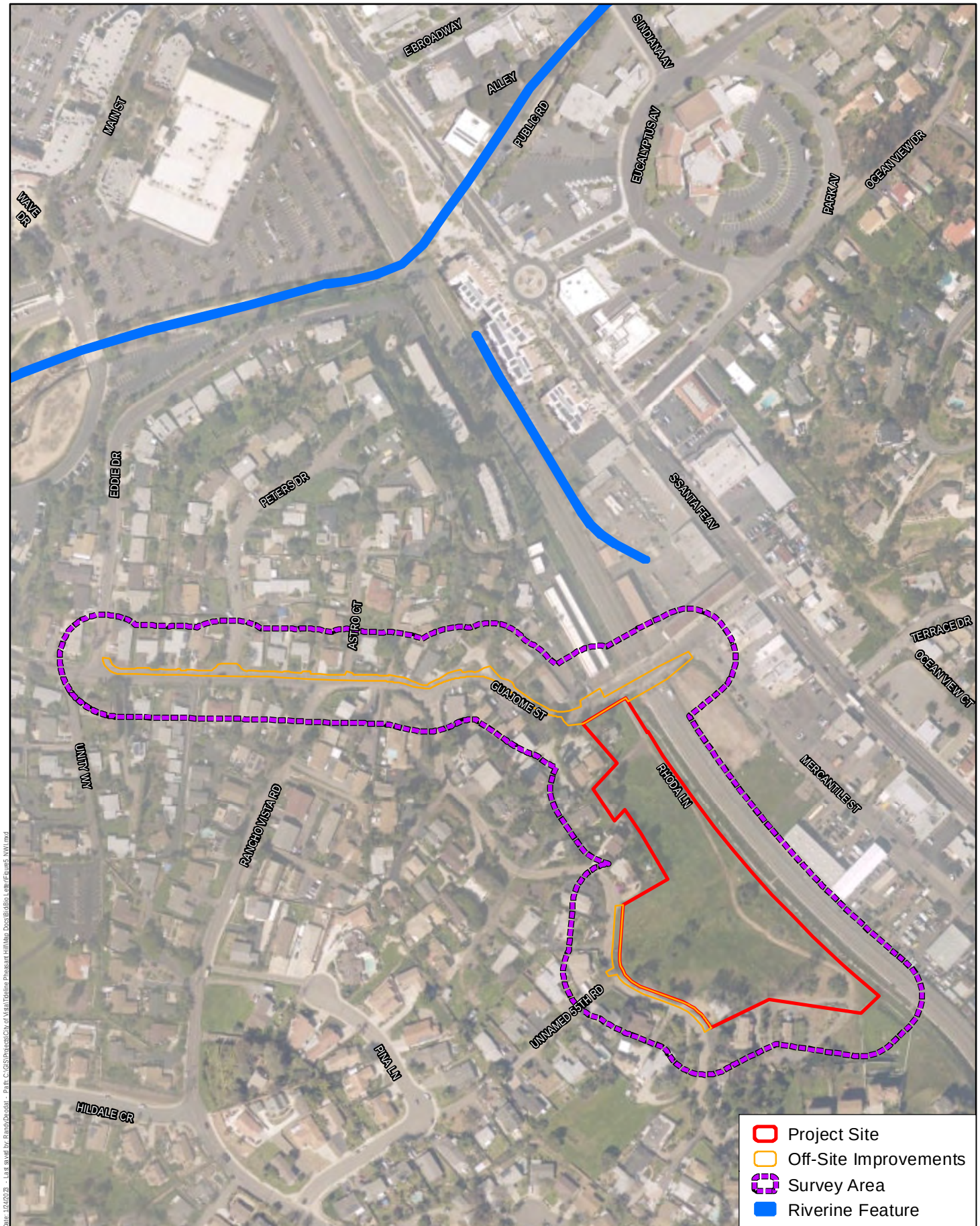


0 500 1,000
Feet

Figure 3

USGS Topographic Map
Tideline Kensho Residential Project





DATE: 12/20/2020 - LRS saved by: Randi Duguid - Path: C:\GIS\Projects\City of Meritt\Tideline\Photos\Harris\Map Documents\Map 1\Map 1.mxd

Source: USFWS 2021; SanGIS Imagery 2017.



Harris & Associates

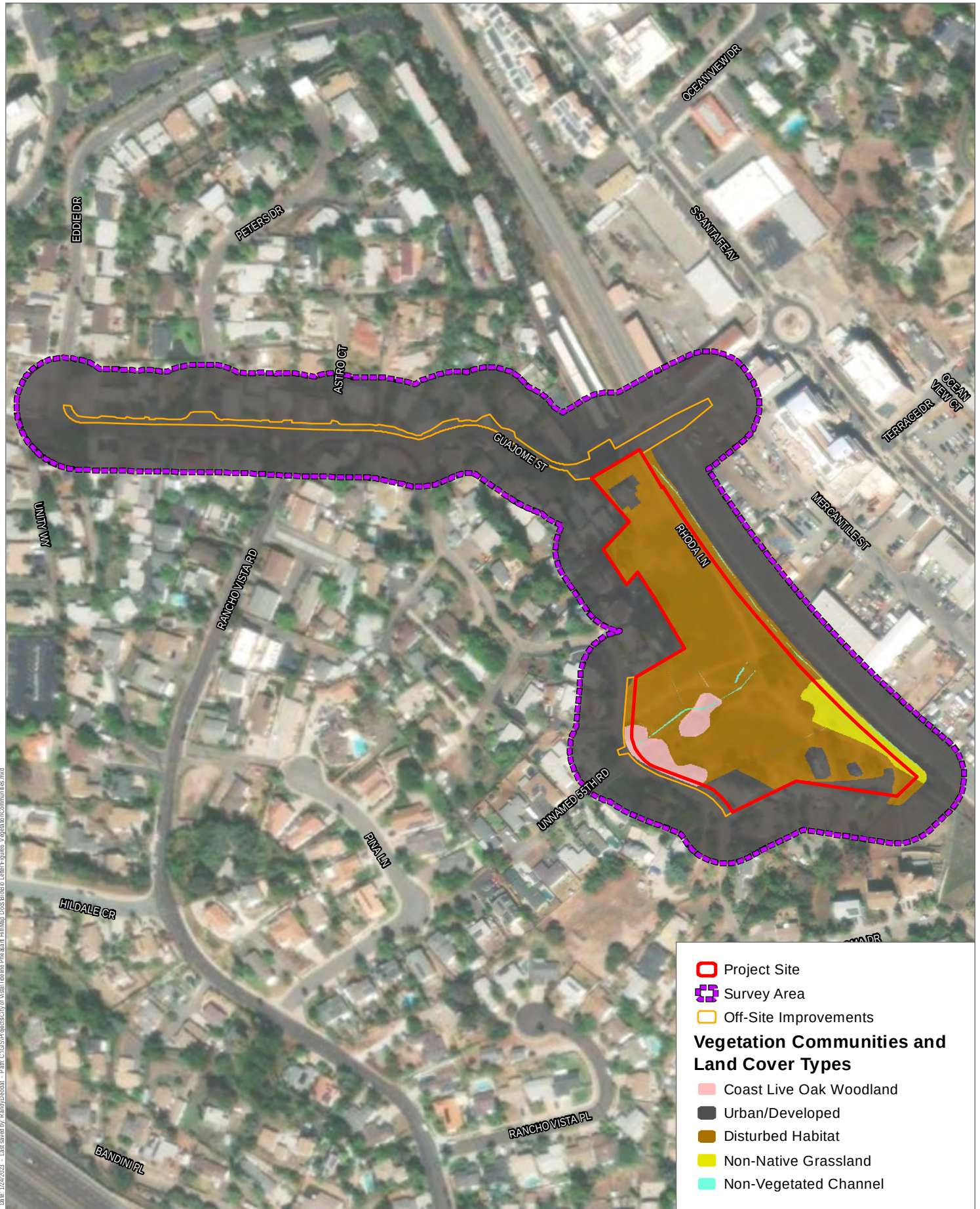


0 150 300
Feet

Figure 5

National Wetlands Inventory Results

Tideline Kensho Residential Project



Source: Maxar Imagery 2021.



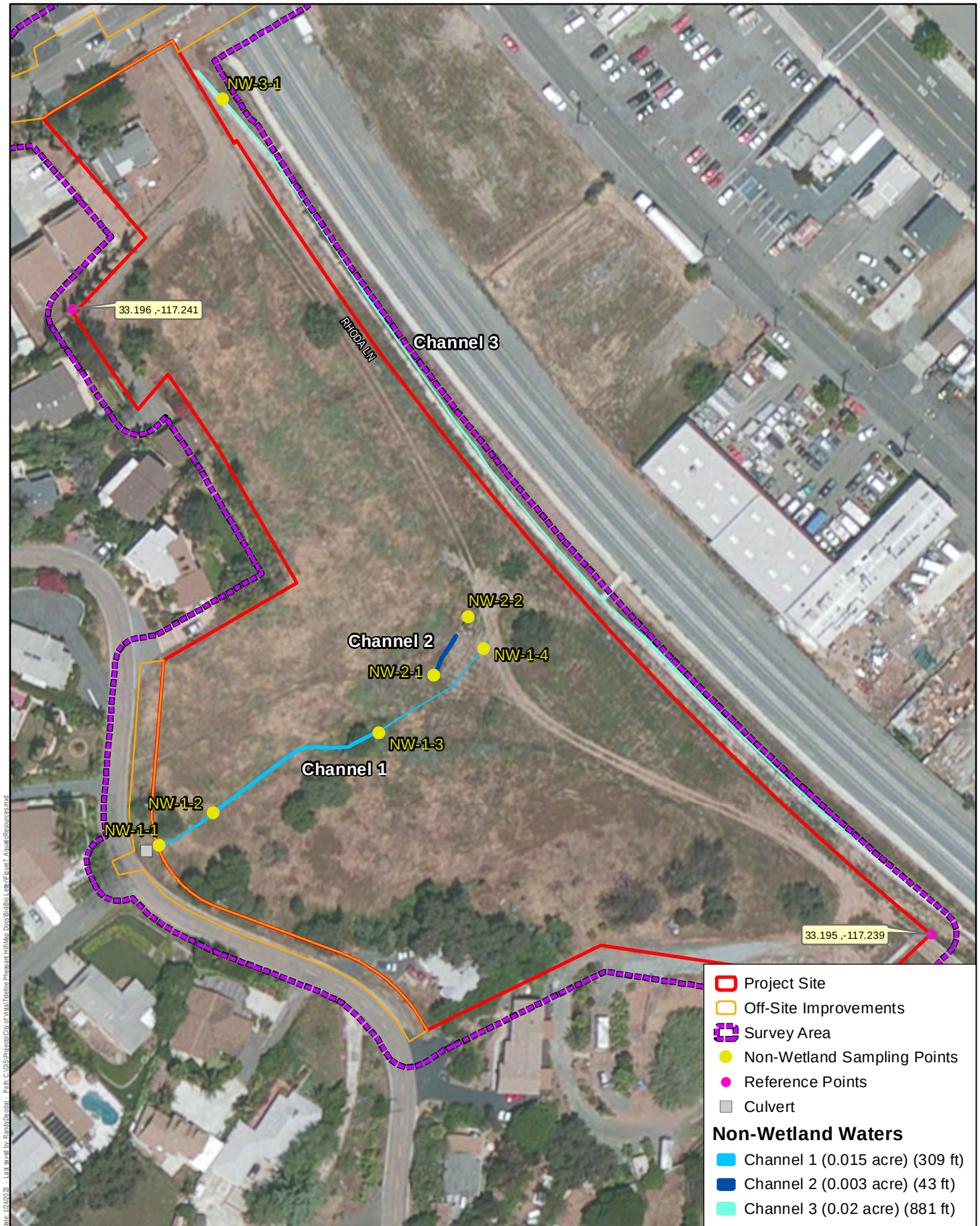
Harris & Associates



0 150 300
Feet

Figure 6
Vegetation Communities and Land Cover Types

Tidelands Kensho Residential Project



Source: Latitude 33 2019; Maxar Imagery 2021.



Harris & Associates

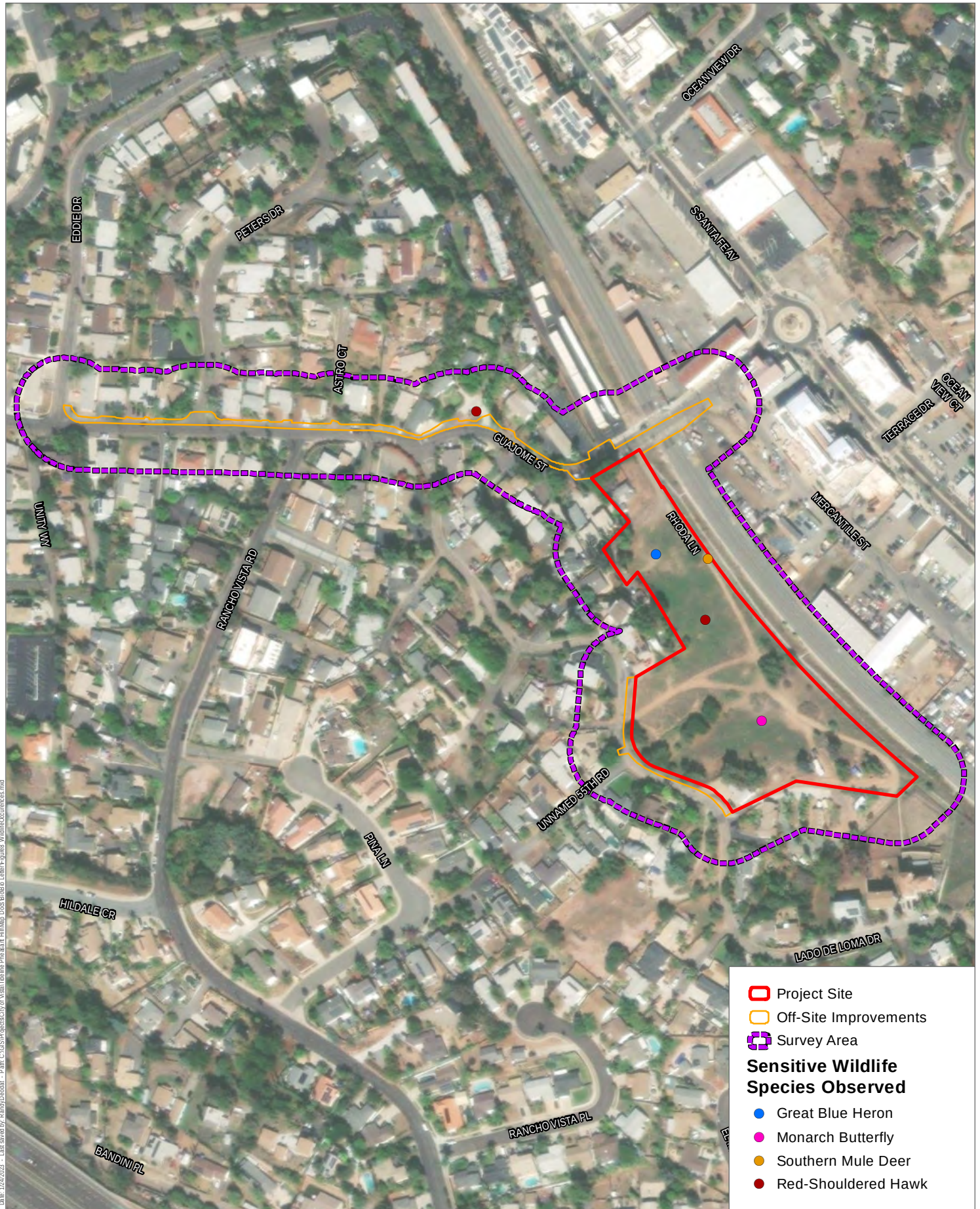


0 50 100
Feet

Figure 7

Aquatic Resources

Tideline Kensho Residential Project



Source: Maxar Imagery 2021.

Figure 8

Sensitive Wildlife Species Observations

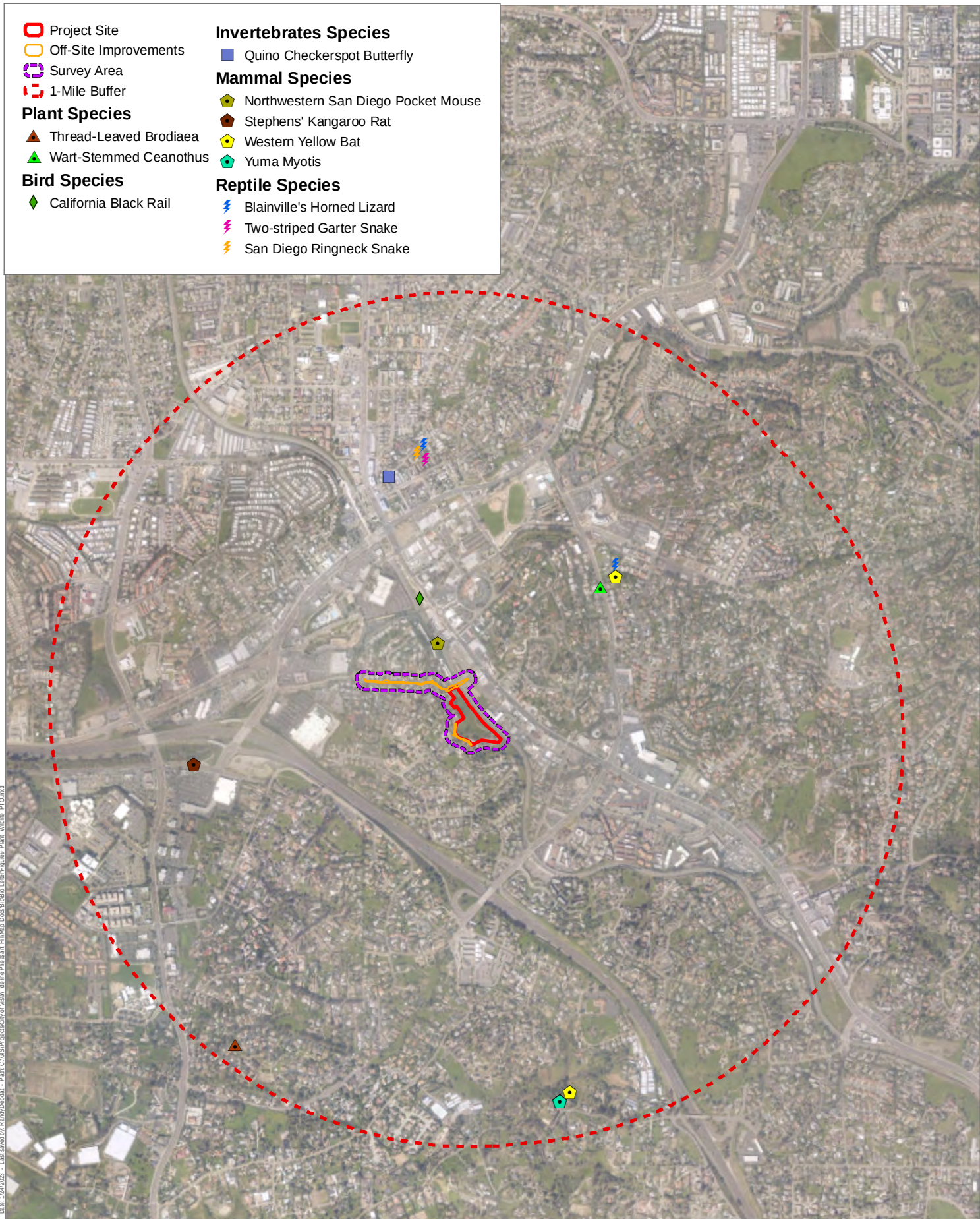
Tidelane Kensho Residential Project



Harris & Associates



0 150 300
Feet



Date: 12/2/2023 - Last saved by: Rando/Dreda - Path: C:\GIS\Project\City of Vista\Tidelane Phase 1\Map Docs\Biodiversity\Legend\Figure 9 Plant Wildlife PTO.mxd

Source: SanGIS Imagery 2017.



Harris & Associates

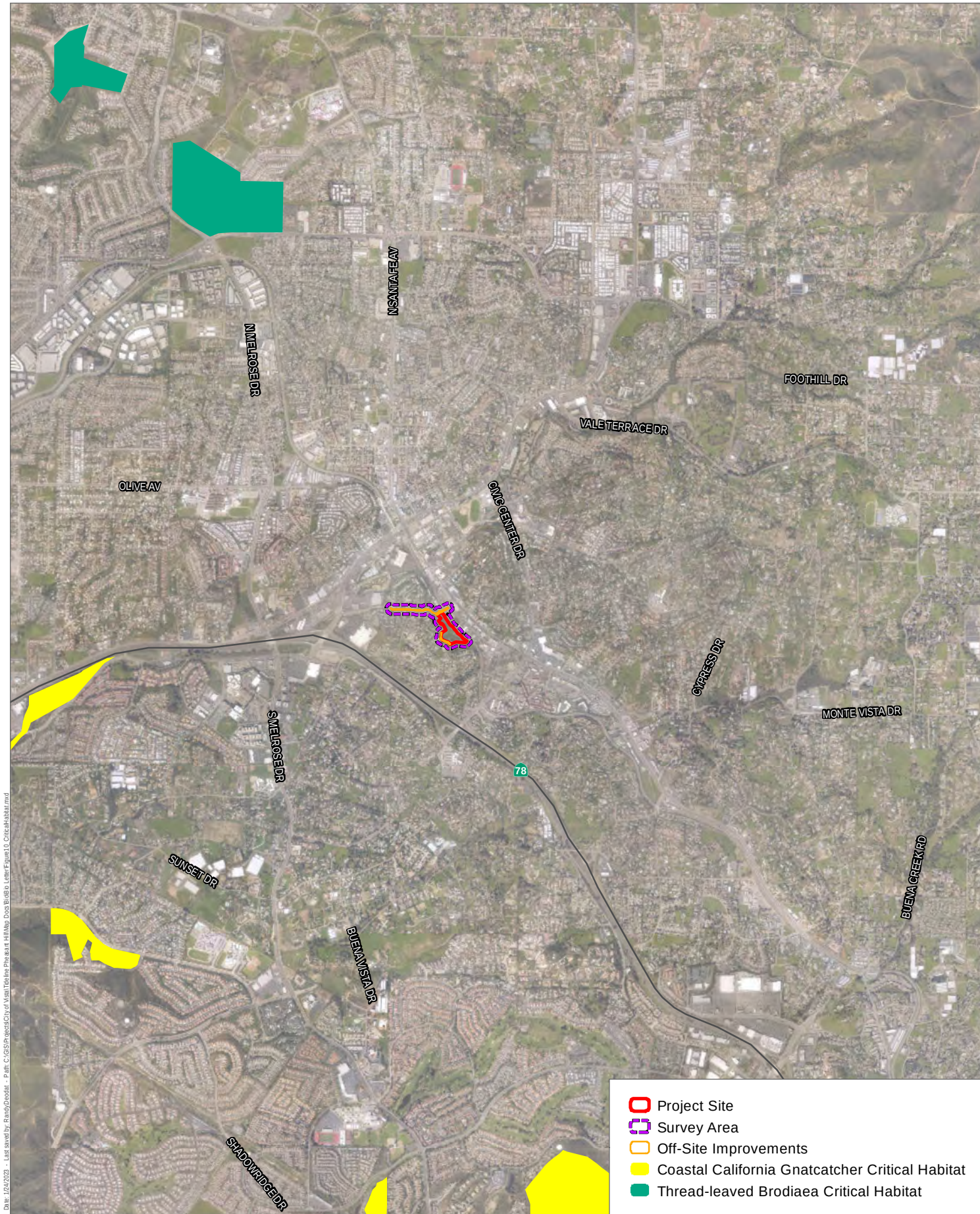


0 1,000 2,000
 Feet

Figure 9

Plant and Wildlife Species with Potential to Occur

Tidelane Kensho Residential Project



Source: USFWS 2007, 2011; SanGIS Imagery 2017.



Harris & Associates

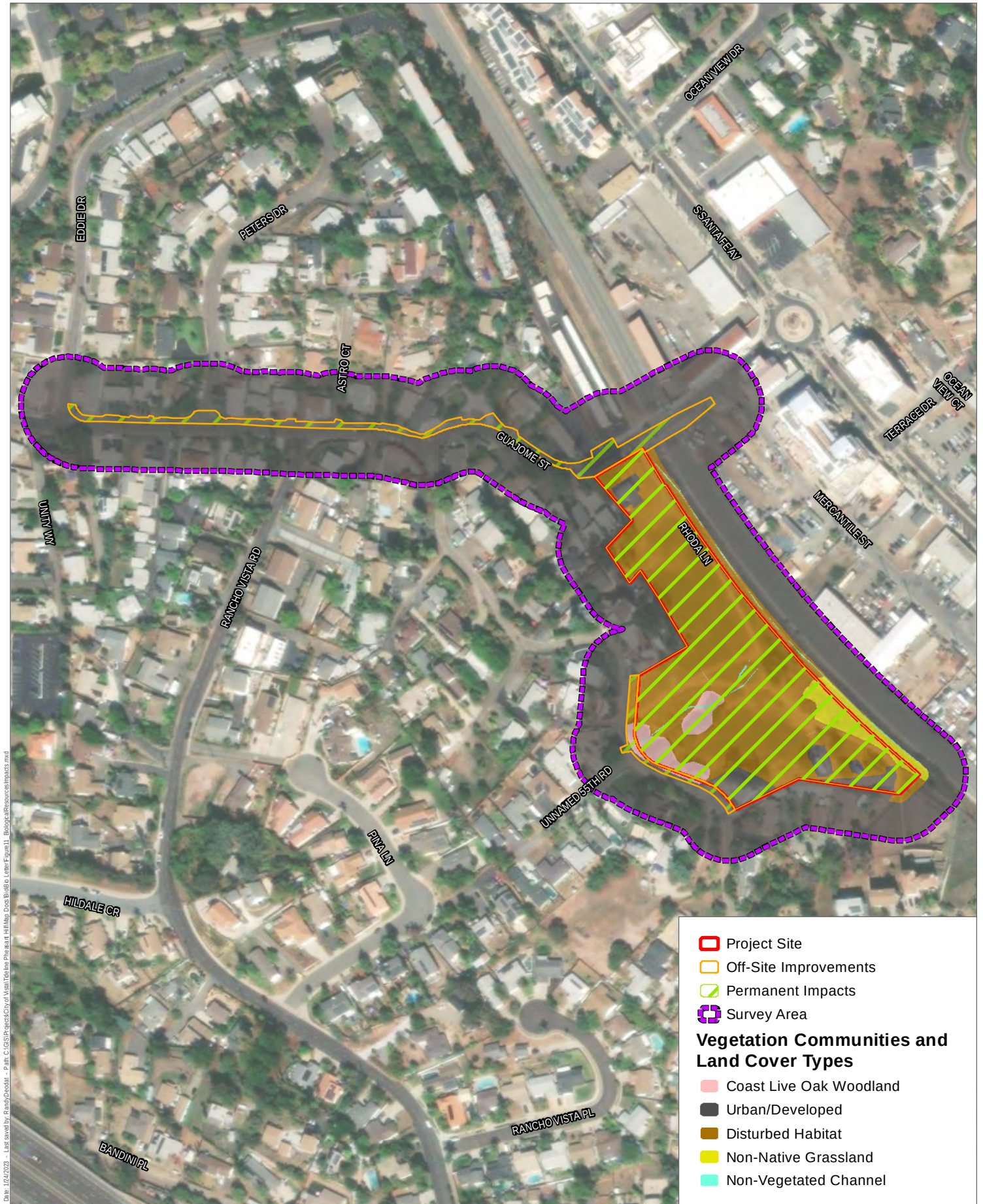


0 1,500 3,000
Feet

Figure 10

Critical Habitat

Tidelands Kensho Residential Project



Source: Maxar Imagery 2021.

Figure 11

Biological Resources Impacts

Tidaline Kensho Residential Project



Harris & Associates



0 150 300
Feet

This page intentionally left blank.

Attachment 2. Aquatic Resources Delineation Report

This page intentionally left blank.

DRAFT

Aquatic Resources Delineation Report

Tideline Kensho Residential Project

April 2023

Prepared for:

**Tideline Partners
2148 Jimmy Durante Boulevard, Suite B
Del Mar, California 92014
Contact: Lev Gershman, Managing Partner**

Prepared by:



**600 B Street, Suite 2000
San Diego, California 92101
(619) 510-5372
Contact: Emily Mastrelli, Principal Biologist**

This page intentionally left blank.

Table of Contents

Acronyms and Abbreviations	iii
Section A Site Description, Landscape Setting	1
A.1 Project Location	1
A.2 Project Description	1
A.2.1 Project Drainage Design	2
A.3 Landscape Setting	2
A.4 Project Site Access	3
Section B Site Alterations, Current, and Past Land Use	5
B.1 Soils	5
B.2 Hydrology	5
B.3 Vegetation	6
B.3.1 Non-Vegetated Channel (64200)	6
B.3.2 Coast Live Oak Woodland (71160)	7
Section C Precipitation Data and Analysis	9
C.1 Climate and Growing Season	9
C.2 Antecedent Precipitation Tool and NRCS WETS Table Results Summary	9
C.3 Wetland Hydrology and Analysis	9
Section D Methods	11
D.1 Pre-Field Review	11
D.2 On-Site Aquatic Resources Delineation	11
D.3 On-Site Ordinary High Water Mark Investigation	13
D.4 Streamflow Duration Assessment	13
Section E Aquatic Resources Descriptions	15
E.1 Non-Wetland Waters	15
E.1.1 Channel 1	15
E.1.2 Channel 2	17
E.1.3 Channel 3	18
Section F Deviation from Local Wetlands Inventory or National Wetlands Inventory	19
Section G Mapping Method	21
Section H Conclusions	23
Section I Preliminary Jurisdictional Determinations	25
Section J Disclaimer Statement	27
Section K References	29

Tables

Table 1. Tideline Kensho Residential Project Features	2
Table 2. Non-Wetland Waters	15
Table 3. Summary of Non-Wetland Waters	23
Table 4. Preliminary Jurisdiction of Aquatic Resources	25

Attachments

Attachment A. Figures	
Attachment B. Statement of Access	
Attachment C. Antecedent Precipitation Tool and NRCS WETS Table Results	
Attachment D. Arid West Wetland Determination and Ordinary High Water Mark Datasheets	
Attachment E. Photographic Log	
Attachment F. SDAM for the Arid West Forms	
Attachment G. Geographic Information Systems Data	
Attachment H. Aquatic Resources Table	

Acronyms and Abbreviations

°F	degrees Fahrenheit
CDFW	California Department of Fish and Wildlife
Harris	Harris & Associates
NHD	National Hydrography Data
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OHW	ordinary high water mark
Project	Tideline Kensho Residential Project
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
SDAM	Streamflow Duration Assessment Method
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey

This page intentionally left blank.

Section A Site Description, Landscape Setting

A.1 Project Location

Tideline Partners (applicant and property owner) is proposing the Tideline Kensho Residential Project (Project) on approximately five acres in the City of Vista, California (Attachment A, Figures; Figure 1, Regional Location, and Figure 2, Project Site). The Project site is along the eastern side of Lado De Loma Drive (Assessor's Parcel Numbers 179-093-05, -09, -18, -23, -30, -32, and -34) and is in the 7.5-Minute San Marcus Quadrangle, Township 11 South, Range 3 West, Section 32 (Figure 3, USGS Topographic Map). The aquatic resources delineation was conducted on the Project site, in the off-site improvements area, and within a 20-foot survey buffer, herein referred to as the "survey area." The Project site is bordered by a single-family residential neighborhood from the northwest to the southeast, while the SPRINTER light-rail line borders the remaining sides of the Project. On the other side of the SPRINTER tracks is commercial development. The majority of the Project site is undeveloped open space, with a single-family residence in the northern portion of the Project site, a second single-family residence and a recreational vehicle (RV) trailer in the southern portion of the Project site, and a dirt road (Rhoda Lane) running along the eastern side of the site parallel to the SPRINTER tracks (Figure 2). Rhoda Lane provides access to the single-family residences and RV trailer in the northern and southern portions of the Project site. The off-site improvements area (the area in which off-site sidewalk improvements are proposed as part of the Project) occurs in the Guajome Street roadway and is defined as urban/developed land.

A.2 Project Description

The Project proposes a new residential development that would result in the construction of 183 dwelling units, including three three-story buildings and one four-story building with covered parking included in three of the four buildings. The Project also proposes off-site sidewalk improvements along the northern side of Lado De Loma Drive and Guajome Street from Eddie Drive to the northern and western sides of the Project site (i.e., the off-site improvements area). The Project would then require an increase in density on the Project site, as it is currently designated as Medium Density Residential (MD) with a maximum of ten dwelling units per acre. The site would be rezoned out of the Pheasant Hill Specific Plan and into the Downtown Vista Specific Plan and would also include a General Plan amendment, a zoning change, a Site Development Plan, and a Tentative Parcel Map. The Project proposes a variety of Project development features, as shown in Table 1, Tideline Kensho Residential Project Features. A description of the individual features is provided below.

Table 1. Tideline Kensho Residential Project Features

Project Development Feature	Square Footage (sf)	Percent Coverage (%)
Total Lot Size	199,831	100
Apartment Units (Buildings 1–4) Multi-Family Residential Buildings including amenity space: Bicycle storage, pool house, pool/spa, gym, rooftop terrace, and common usable areas	52,468	26.25
Parking Areas: 266 total parking spaces Residential: 218 spaces Accessory (Staff/Visitor): 47 spaces USPS: 1 space	43,653	21.85
Landscape areas (including slopes and some open space areas including community gathering space and gardens)	103,710	51.90

Sources: Safdie Rabines Architects 2022.

A.2.1 Project Drainage Design

The Project would include water- and energy-efficient design features designed for conservation, such as biofiltration basins. A total of seven on-site biofiltration basins would treat stormwater runoff. The biofiltration basins would be throughout the Project site. After construction, stormwater would be conveyed through gutters and storm drains to the on-site biofiltration facilities. The site would continue to discharge runoff into the City’s existing storm drain system in South Santa Fe Avenue, eventually flowing to Buena Vista Creek.

A.3 Landscape Setting

The Project site is in a portion of the City containing both residential and commercial development. It is surrounded by single-family residential neighborhoods to the north, west, and south (across Lado De Loma Drive); commercial development to the northeast (across Guajome Street); and the SPRINTER tracks to the east (Figure 2). Vegetation communities and land cover types on the Project site, in the off-site improvements area, and in the survey area include non-native grassland, coast live oak woodland, disturbed habitat, and urban/developed land, with three non-vegetated channels (Channels 1 through 3). Channels 1 and 2 are earthen-bottom channels that extend west to east through the center of the Project site. Channel 3 is a concrete-lined channel that extends northwest to southeast along the eastern edge of the survey area within the SPRINTER transit right-of-way. The off-site improvements area occurs in the Lado De Loma Drive and Guajome Street roadways and is defined primarily as urban/developed land. The majority of the Project site is undeveloped, and the entire property has historically been disturbed with mowing and other mechanical disturbances, including repeated motor vehicle use through the center of the Project site, which has created a two-track trail with well-formed tire ruts. Rhoda Lane, the dirt access road on the eastern side of the Project site, is also frequently used by local residents. One single-family residence exists in the northern portion of the Project site, and a second single-family residence and an RV trailer

exist in the southern portion of the Project site. The two single-family residences and RV trailer constitute the urban/developed land on the Project site.

The survey area is characterized by the gently sloping hill on the Project site and the relatively flat areas along the off-site improvements area. The slope on the Project site is situated with the western half of the Project site higher in elevation and decreasing in elevation moving east across the Project site. Elevation ranges from approximately 108 feet to 129 feet above mean sea level. The topographic lines on Figure 3, USGS Topographic Map, represent the Project elevations. The off-site improvements area to the east along Guajome Drive sits lower in elevation and raises as it heads west along Lado De Loma Drive to Eddie Drive, with a slight decrease in elevation after Rancho Vista Road.

A.4 Project Site Access

The property owner, Tideline Partners, has granted U.S. Army Corps of Engineers (USACE) personnel access to the Project site, as documented in Attachment B, Statement of Access.

This page intentionally left blank.

Section B Site Alterations, Current, and Past Land Use

Based on historical aerial images dating back to 1938, the unnamed earthen-bottom channels (Channels 1 and 2) did not form in the central portion of the Project site until around 1986 when use of the Project site as an agricultural field ended (Historic Aerials 2023). The stormwater pipe under Lado De Loma Drive was installed sometime after 1986 to direct urban stormwater discharges from the residential developments to the west onto the Project site. It is likely that the periodic stormwater discharges over the past 36 years formed the unnamed channels through erosion. In addition, there is evidence that more recent (since 2010) mechanical earthmoving and motor vehicle use throughout the Project site have altered the flow paths of the channels. Channel 2 may have been a historical stormwater flow path connected to Channel 1 but has been disturbed by mechanical earthmoving and motor vehicles and no longer appears to receive stormwater. Based on historical aerial images dating back to 1938, Channel 3, a concrete-lined channel that occurs within the SPRINTER transit right-of-way, appears to have been constructed between 1953 and 1964 to capture and direct stormwater flows away from the SPRINTER rail line (Historic Aerials 2023).

B.1 Soils

The Project site, off-site improvements area, and survey area are underlain by three soil types: Fallbrook sandy loam, Fallbrook-Vista sandy loam, and Salinas clay loam. These soil units are presented on Figure 4, Soils. Fallbrook sandy loam (nine to 15 percent slopes) occurs across the majority of the Project site, off-site improvements area, and survey area. Fallbrook-Vista sandy loam (nine to 15 percent slopes) occurs on the western edge of the Project site and survey area and in the southwestern and central portions of the off-site improvements area. Salinas clay loam (zero to two percent slopes) occurs in small areas along the northeastern and southeastern edges of the Project site and survey area and at the eastern end of the off-site improvements area. None of these soils are defined as hydric (wetland) soils (USDA 2019).

B.2 Hydrology

The Project site is in the Carlsbad Watershed (Hydrologic Unit 904) (Project Clean Water 2023). The Carlsbad Watershed encompasses a land area of 211 square miles. It lies in the northern portion of San Diego County and neighbors the San Luis Rey Watershed to the north and the San Dieguito Watershed to the south.

The National Wetlands Inventory (NWI) and USGS National Hydrography Data (NHD) mapping results did not identify aquatic features on the Project site, in the off-site improvements area, or in the survey area (Figure 5, National Wetlands Inventory Results). The non-vegetated earthen-bottom Channels 1 and 2 observed in the center of the Project site and the concrete-lined Channel 3 observed along the eastern edge of the survey area during the aquatic resources

delineation fieldwork were not identified on the NWI or NHD mapping results for the Project site, off-site improvements area, and survey area (USFWS 2023; USGS 2023). Channels 1 through 3 are discussed in detail in Section E, Aquatic Resources Descriptions. No other aquatic resources were identified in the NWI or NHD mapping results or observed on the Project site, in the off-site improvements area, or in the survey area.

Buena Vista Creek, which flows directly into Buena Vista Lagoon, a traditional navigable water as defined by the USACE, is approximately 0.5 mile north of Channels 1 through 3. Based on a review of the NWI and NHD results, Channels 1 through 3 are not documented as aquatic resources and do not connect to Buena Vista Creek or any other documented aquatic resource via surface water flow (USGS 2023; USACE 2023a). However, Channel 3 may have a downstream connection to Buena Vista Creek through the municipal stormwater system. Channels 1 through 3 are discussed in detail in Section E.

Drainage patterns on the Project site show evidence of alteration with on-site mechanical disturbances associated with the residential developments in the southern portion of the Project site and bordering the Project site to the north, west, and south. Channels 1 and 2 appear to have formed as a result of erosion from stormwater flows directed onto the Project site through a corrugated metal stormwater pipe on the western edge of the Project site. In addition to historical and recent disturbance of Channels 1 and 2 and across the Project site, the drainage patterns in and connected to the channels in the central portion of the Project site do not appear to be natural and are likely a result of urban stormwater management. Similarly, Channel 3 is an artificial, concrete-lined channel that was constructed to capture and direct stormwater flows away from the SPRINTER transit right-of-way.

B.3 Vegetation

Five vegetation communities and land cover types were observed on the Project site, in the off-site improvements area, and in the survey area. These include non-vegetated channel, non-native grassland, coast live oak woodland, disturbed habitat, and urban/developed land (Oberbauer et al. 2008). Figure 6, Vegetation Communities and Land Cover Types, presents the vegetation community and land cover type boundaries. The vegetation communities associated with aquatic resources on the Project site, in the off-site improvements area, and in the survey area, non-vegetated channel and coast live oak woodland, are described in the following subsections.

B.3.1 Non-Vegetated Channel (64200)

Non-vegetated channel consists of predominantly sandy, gravelly, or rocky channels lacking or with reduced vegetation. Variable water lines inhibit the growth of vegetation, although some weedy species of grasses may grow along the outer edges of the channel. Vegetation may exist here but is usually less than ten percent of the total cover (Oberbauer et al. 2008).

Approximately 0.04 acre of non-vegetated channel (Channels 1 through 3) occurs through the central portion of the Project site and along the eastern edge of the survey area (Figure 6). Channels 1 and 2 are earthen-bottom channels, and Channel 3 is a concrete-lined channel.

Channel 1 is approximately 0.016 acre and begins on the western edge of the Project site at the discharge point of an approximately two-foot-diameter corrugated metal stormwater culvert. From this point, Channel 1 extends approximately 309 linear feet east where it becomes undefined in a dirt road (Rhoda Lane) that runs along the eastern side of the Project site. The stormwater culvert from which Channel 1 forms occurs in the off-site improvements area along the western side of the Project site.

Channel 2 is approximately 0.003 acre and begins in the disturbed uplands in the central portion of the Project site and extends approximately 43 linear feet east where the channel becomes undefined. Channel 2 might have been a historical stormwater flow path connected to Channel 1 but has been disturbed by mechanical earthmoving or vehicles and no longer appears to receive stormwater.

Channel 3 is approximately 0.02 acre and occurs along the eastern edge of the survey area, outside the Project site, within the SPRINTER transit right-of-way (Figure 6). Channel 3 enters the southeastern corner of the survey area and extends approximately 893 linear feet northwest where it ends in a disturbed upland area south of Guajome Street. Channel 3 is connected to a larger concrete channel to the east that is directed through a stormwater culvert under Guajome Street. Channel 3 occurs in disturbed habitat, urban/developed land, and non-native grassland.

Channels 1 through 3 are discussed in detail in Section E.

B.3.2 Coast Live Oak Woodland (71160)

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*) with a poorly developed shrub layer that can include toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes* spp.), and laurel sumac (*Malosma laurina*) or is dominated by black elderberry (*Sambucus nigra*) (Oberbauer et al. 2008). The herb layer of coast live oak woodland is continuous and dominated by ripgut brome and several other introduced grasses.

Approximately 0.26 acre of coast live oak woodland occurs in the central and western portions of the Project site, and approximately 0.05 acre of coast live oak woodland occurs along the southwestern edge of the off-site improvements area, for a total of 0.31 acre (Figure 6). The coast live oak woodland is dominated by interior coast live oak (*Quercus agrifolia* var. *oxyadenia*) with disturbed open areas, non-native grasses, and weeds in the understory.

This page intentionally left blank.

Section C Precipitation Data and Analysis

C.1 Climate and Growing Season

On a regional level, San Diego County has a Mediterranean climate, which is characterized by wet winters and dry summers. This is largely because of a semi-permanent high-pressure zone that sits over the Pacific Ocean during much of the year and forms a fog belt (marine layer). The Project site is generally within the Peninsular Ranges of Southern California. Generalized climate in the region is regarded as dry, subhumid mesothermal, with warm dry summers and cold moist winters, which pushes the growing season to the wet months of the year (late winter to early spring). The rainy season in San Diego County typically lasts from October through March. Summer months include June through September. Vegetation often goes dormant (senescent) during the later summer months until initial rains start in the fall.

The closest weather station to the Project site is the Vista National Oceanic and Atmospheric Administration weather station (EW3055) approximately three miles northwest of the Project site (NOAA 2023). Between 2002 and 2022, the average maximum temperature was 74 degrees Fahrenheit (°F), and the average minimum temperature was 52°F. The annual precipitation between 2002 and 2022 was approximately 12.94 inches. In 2022, the total rainfall was 8.07 inches, approximately 4.47 inches less than the previous year (NRCS 2023).

C.2 Antecedent Precipitation Tool and NRCS WETS Table Results Summary

A typical rainfall year in San Diego County has historically been 11 inches of annual precipitation. To calculate whether the aquatic resources delineation fell into a wet, dry, or typical rainfall year, a Harris & Associates (Harris) aquatic resources specialist used the Antecedent Precipitation Tool Version 1.0.19 (USACE 2023b). The Antecedent Precipitation Tool results determined that the initial aquatic resources delineation was conducted in wetter than normal conditions for precipitation in the dry season during an extreme drought (see Attachment C, Antecedent Precipitation Tool and NRCS WETS Table Results).

The National Resources Conservation Service (NRCS) Wetland Climate Table for 2002–2022 at Vista, California, is in Attachment C. The average annual precipitation over the last 20 years was approximately 12.94 inches (NRCS 2023).

C.3 Wetland Hydrology and Analysis

A Harris aquatic resources specialist reviewed historical and current aerial imagery, topographic maps, and NWI maps. The NWI mapping results did not identify aquatic features on the Project site, in the off-site improvements area, or in the survey area (Figure 5). The two non-vegetated channels (Channels 1 and 2) observed in the center of the Project site and concrete-lined Channel 3 observed along the eastern edge of the survey area during the aquatic resources delineation survey

were not identified on the NWI mapping results. Channels 1 through 3 are discussed in detail in Section E. No other aquatic resources were identified in the NWI mapping results or observed on the Project site, in the off-site improvements area, or in the survey area during the aquatic resources delineation fieldwork conducted on July 20, 2021, and January 19, 2023.

Section D Methods

D.1 Pre-Field Review

Before conducting fieldwork, a Harris aquatic resources specialist referenced the following materials:

- Topographic maps
- Aerial imagery (Google Earth from 1994–2021)
- Historical aerial imagery (Historic Aerials 2023)
- U.S. Fish and Wildlife Service NWI Wetlands Mapper (USFWS 2023)
- U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey for the Project site, which lists hydric soils found in San Diego County (USDA 2019)

D.2 On-Site Aquatic Resources Delineation

The aquatic resources delineation was conducted using the routine on-site determination method described in the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (USACE 2008a). A Harris aquatic resources specialist conducted the initial aquatic resources delineation fieldwork on July 20, 2021, with a follow-up survey conducted on January 19, 2023, to identify aquatic resources on the Project site, in the off-site improvements area, and in the survey area. An Arid West region ordinary high water mark (OHWM) datasheet was completed for each unique aquatic feature observed (Attachment D, Arid West Wetland Determination and Ordinary High Water Mark Datasheets).

Sampling points were taken in each of the unique aquatic resource features. Figure 7, Aquatic Resources for Tideline Kensho Residential Project, shows the sampling points associated with the on-site aquatic resources. Figure 7 was created in adherence with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program and can be referenced in Attachment A (USACE 2016). Representative photographs of the aquatic resources are provided in Attachment E, Photographic Log. The delineation methods conducted at each of the sampling points are described in detail below.

Sampling Point NW-1-1 was taken in the center of Channel 1 on the western edge of the Project site where an OHWM was observed to determine the extent of the non-wetland feature (Figure 7; Photographs 1 and 2). Sampling Point NW-1-1 was taken where Channel 1 forms out of an approximately two-foot-diameter corrugated metal pipe that directs stormwater flows under Lado De Loma Drive from the west onto the Project site. Because an OHWM was observed at Sampling Point NW-1-1, an Arid West region OHWM datasheet was completed. The delineation results for Sampling Point NW-1-1 are presented in Section E.

Sampling Point NW-1-2 was taken in the center of Channel 1 in the western portion of the Project site where the OHWM increased in width and depth and there was an apparent change in sediment texture compared to Sampling Point NW-1-1 (Figure 7; Photograph 3). Because an OHWM was observed at Sampling Point NW-1-2, an Arid West region OHWM datasheet was completed. The delineation results for Sampling Point NW-1-2 are presented in Section E.

Sampling Point NW-1-3 was taken in the center of Channel 1 in the central portion of the Project site where the OHWM decreased in width and depth compared to Sampling Point NW-1-2 (Figure 7; Photograph 4). Because an OHWM was observed at Sampling Point NW-1-3, an Arid West region OHWM datasheet was completed. The delineation results for Sampling Point NW-1-3 are presented in Section E.

Sampling Point NW-1-4 was taken in the center of Channel 1 in the eastern portion of the Project site where the defined channel ends and flows into a dirt road (Rhoda Lane) to determine the extent of the non-wetland feature (Figure 7; Photograph 5). Because an OHWM was observed at Sampling Point NW-1-4, an Arid West region OHWM datasheet was completed. The delineation results for Sampling Point NW-1-4 are presented in Section E.

Sampling Point NW-2-1 was taken in the center of Channel 2 in the central portion of the Project site where the defined Channel 2 forms to determine the extent of the non-wetland feature (Figure 7; Photograph 6). Because an OHWM was observed at Sampling Point NW-2-1, an Arid West region OHWM datasheet was completed. The delineation results for Sampling Point NW-2-1 are presented in Section E.

Sampling Point NW-2-2 was taken in the center of Channel 2 in the eastern portion of the Project site where the defined channel ends and flows into a dirt road (Rhoda Lane) to determine the extent of the non-wetland feature (Figure 7; Photographs 7 and 8). Because an OHWM was observed at Sampling Point NW-2-2, an Arid West region OHWM datasheet was completed. The delineation results for Sampling Point NW-2-2 are presented in Section E.

Sampling Point NW-3-1 was collected in the center of the northern extent of Channel 3 on the eastern edge of the survey area to determine the extent of the non-wetland feature (Figure 7; Photographs 9 through 12). Because an OHWM was observed at Sampling Point NW-3-1, an Arid West region OHWM datasheet was completed. The delineation results for Sampling Point NW-3-1 are presented in Section E.

No hydrophytic vegetation, surface water, or saturated deposited soils were observed in or around earthen-bottom Channels 1 and 2; therefore, no wetland sampling points were taken. The delineation results for Sampling Points NW-1 through NW-1-4, NW-2-1, NW-2-2, and NW-3-1 collected in Channels 1 through 3 are presented in Section E.

D.3 On-Site Ordinary High Water Mark Investigation

The aquatic resources delineation was conducted using the routine on-site determination method described in A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b). As described in the previous subsection, the majority of the Project site, off-site improvements area, and survey area consist primarily of disturbed habitat and urban/developed land in an urban area.

Following the guidance in A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b), an aquatic resources specialist collected and recorded data on vegetation, soil, and hydrologic characteristics used as the basis for OHWM determinations. Arid West region OHWM datasheets were completed for the non-wetland Channels 1 and 2 on the Project site and Channel 3 in the survey area (Attachment D). The OHWMs in Channel 1 (Sampling Points NW-1-1 through NW-1-4), Channel 2 (Sampling Points NW-2-1 and NW-2-2), and Channel 3 (Sampling Point NW-3-1) were identified based on field observations of the presence of the OHWM or defined non-wetland water indicators, including changes in sediment texture, vegetation species or cover, break in bank slope, and floodplain contours in the non-wetland aquatic resource feature (USACE 2008b). Results of the OHWM identifications conducted for Sampling Points NW-1 through NW-1-4, NW-2-1, NW-2-2, and NW-3-1 are presented in Section E.

D.4 Streamflow Duration Assessment

The Streamflow Duration Assessment Method (SDAM) for the Arid West was completed for Channels 1 through 3 (USEPA 2023) (Attachment F, SDAM for the Arid West Forms). SDAMs are rapid field assessment methods that use hydrological, geomorphological, and/or biological indicators, observable in a single site visit, to classify streamflow duration as perennial, intermittent, or ephemeral at the reach scale. The SDAM results for Channels 1 through 3 are presented in Section E.

This page intentionally left blank.

Section E Aquatic Resources Descriptions

E.1 Non-Wetland Waters

Channels 1 and 2 observed on the Project site and Channel 3 observed in the survey area were determined to be non-wetland waters. The non-wetland waters observed on the Project site and in the survey area are summarized in Table 2, Non-Wetland Waters, and described in the following subsections.

Table 2. Non-Wetland Waters

Feature	Non-Wetland Waters (acres) ¹	Linear Feet
Channel 1	0.016	309
Channel 2	0.003	43
Channel 3	0.020	893
Total¹	0.039	1,245

Notes:

¹ Total rounded to one-hundredth of an acre.

The completed Arid West region OHWM datasheets for Channel 1 (Sampling Points NW-1-1 through NW-1-4), Channel 2 (Sampling Points NW-2-1 and NW-2-2), and Channel 3 (Sampling Point NW-3-1) are in Attachment D. Representative photographs of Channels 1 through 3 are provided in Attachment E. Electronic spatial data of the aquatic resources on the Project site and in the survey area is included in Attachment G, Geographic Information Systems Data. The USACE Aquatic Resources Table for the aquatic resources observed on the Project site and in the survey area is provided in Attachment H, Aquatic Resources Table.

E.1.1 Channel 1

Channel 1 begins on the western edge of the Project site at the outfall of an approximately two-foot-diameter corrugated metal pipe and extends approximately 309 linear feet east through the center of the site where it becomes undefined as it disappears into a dirt road (Rhoda Lane) that runs along the eastern side of the Project site. The entire extent of Channel 1 is defined by an OHWM that varies in width between 0.5 foot at its narrowest and three feet at its widest (Figure 7). As discussed in Section D.4, Streamflow Duration Assessment, the SDAM conducted for Channel 1 determined it is an ephemeral feature (Attachment G).

E.1.1.1 Ordinary High Water Mark Analysis

Channel 1 is an approximately 0.016-acre (309 linear feet) non-wetland water that runs through the center of the Project site (Table 2; Figure 7). Figure 7 shows all sampling points (NW-1-1 through NW-1-4) collected in Channel 1, which were within the OHWM of the channel. Attachment E, Photographs 1 through 5, provides representative views of the extent of Channel 1 on the Project site. The OHWM indicators were investigated at Sampling Points NW-1-1 through NW-1-4. The OHWMs documented at Sampling Points NW-1-1 through NW-1-4 are described below.

Sampling Point NW-1-1: The OHWM is approximately two feet wide and 0.5 foot deep (Photographs 1 and 2). The other OHWM indicators observed at Sampling Point NW-1-1 include a change in vegetation species and cover, a break in bank slope, and the presence of a defined bed and bank. Sampling Point NW-1-1 was taken directly east of where the Channel 1 forms at the outlet of the two-foot-diameter corrugated metal pipe on the western edge of the Project site (Photograph 1). The channel at Sampling Point NW-1-1 is highly eroded and has upland grasses and weeds growing in the channel and on the banks. At Sampling Point NW-1-1, Channel 1 is surrounded by coast live oak woodland. Channel 1 is slightly lower in elevation than the surrounding Project site, and the soil at Sampling Point NW-1-1 is sandy loam.

Sampling Point NW-1-2: The OHWM is approximately three feet wide and 0.5 foot deep (Photograph 3). The other OHWM indicators observed at Sampling Point NW-1-2 include a change in vegetation species and cover, a break in bank slope, and the presence of a defined bed and bank. The channel at Sampling Point NW-1-2 is highly eroded and has upland grasses and weeds growing in the channel and on the banks. At Sampling Point NW-1-2, Channel 1 is surrounded by disturbed habitat. Channel 1 is slightly lower in elevation than the surrounding Project site, and the soil at Sampling Point NW-1-2 is sandy loam.

Sampling Point NW-1-3: The OHWM is approximately one foot wide and 0.25 foot deep (Photograph 4). The other OHWM indicators observed at Sampling Point NW-1-3 include a change in average sediment texture, a change in vegetation species and cover, a break in bank slope, and the presence of a defined bed and bank. The channel at Sampling Point NW-1-3 is shallow and has leaf, grass, and weed debris deposited on the edges of the channel and on the banks. At Sampling Point NW-1-3, Channel 1 is surrounded by coast live oak woodland. Channel 1 is at the same elevation as the surrounding Project site, and the soil at Sampling Point NW-1-3 is sandy clay loam.

Sampling Point NW-1-4: The OHWM is approximately 0.5 foot wide and 0.25 foot deep (Photograph 5). The other OHWM indicators observed at Sampling Point NW-1-4 include a change in vegetation species and cover, a break in bank slope, and the presence of a defined bed and bank. Sampling Point NW-1-4 was taken where the defined Channel 1 ends and flows into a dirt road (Rhoda Lane) on the eastern side of the Project site, after which the channel becomes undefined. The channel at Sampling Point NW-1-4 has upland grasses and weeds growing in the channel and on the banks. At Sampling Point NW-1-4, Channel 1 is surrounded by disturbed habitat. Channel 1 is slightly lower in elevation than the surrounding Project site, and the soil at Sampling Point NW-1-4 is sandy clay loam.

No hydrophytic vegetation, surface water, or saturated deposited soils were observed in Channel 1; therefore, no wetland sampling point was taken, and this feature was mapped as a non-wetland water.

E.1.2 Channel 2

Channel 2 begins in the disturbed uplands in the central portion of the Project site and extends approximately 43 linear feet east where it becomes undefined as it meets with the Rhoda Lane dirt road that runs along the eastern side of the Project site. The entire extent of Channel 2 is defined by an OHWM that varies in width between one foot at its narrowest and 3.5 feet at its widest (Figure 7). As discussed in Section D.4, the SDAM conducted for Channel 2 determined it is an ephemeral feature (Attachment F).

E.1.2.1 Ordinary High Water Mark Analysis

Channel 2 is an approximately 0.003-acre (43 linear feet) non-wetland water that runs through the center of the Project site (Table 2; Figure 7). Figure 7 shows the sampling points (NW-2-1 and NW-2-2) collected in Channel 2, which were within the OHWM of the channel. Photographs 6 through 8 in Attachment E provide representative views of the extent of Channel 2 on the Project site. The OHWM indicators were investigated at Sampling Points NW-2-1 and NW-2-2. The OHWMs documented at Sampling Points NW-2-1 and NW-2-2 are described below.

Sampling Point NW-2-1: The OHWM is approximately 3.5 feet wide and three feet deep (Photograph 6). The other OHWM indicators observed at Sampling Point NW-2-1 include a change in vegetation cover, a break in bank slope, and the presence of a defined bed and bank. Sampling Point NW-2-1 was taken where Channel 2 formed from apparent erosion. The channel at Sampling Point NW-2-1 has upland grasses and weeds growing in the channel and on the banks. At Sampling Point NW-2-1, Channel 2 is surrounded by disturbed habitat. Channel 2 is highly eroded and lower in elevation than the surrounding Project site, and the soil at Sampling Point NW-2-1 is sandy loam.

Sampling Point NW-2-2: The OHWM is approximately one foot wide and 0.5 foot deep (Photograph 7). The other OHWM indicators observed at Sampling Point NW-2-2 include a change in vegetation cover, a break in bank slope, and the presence of a defined bed and bank. Sampling Point NW-2-2 was taken directly west of where the defined Channel 2 ends and flows into the dirt road (Rhoda Lane) on the eastern side of the Project site, after which the channel becomes undefined (Photograph 8). The channel at Sampling Point NW-2-2 has upland grasses and weeds growing in the channel and on the banks. At Sampling Point NW-2-2, Channel 2 is surrounded by disturbed habitat. Channel 2 is slightly lower in elevation than the surrounding Project site, and the soil at Sampling Point NW-2-2 is sandy loam.

No hydrophytic vegetation, surface water, or saturated deposited soils were observed in Channel 2; therefore, no wetland sampling point was taken, and this feature was mapped as a non-wetland water.

E.1.3 Channel 3

Channel 3 enters the southeastern corner of the survey area and extends approximately 893 linear feet northwest along the eastern edge of the survey area where it ends in a disturbed upland area south of Guajome Street. Channel 3 is connected to a larger concrete channel to the east that is directed through a stormwater culvert under Guajome Street. The entire extent of Channel 3 that occurs in the survey area is defined by an OHWM with a width of one foot (Figure 7). As discussed in Section D.4, the SDAM conducted for Channel 3 determined it is an ephemeral feature (Attachment F).

E.1.3.1 Ordinary High Water Mark Analysis

Channel 3 is an approximately 0.02-acre (893-linear-foot) non-wetland water that extends along the eastern edge of the survey area (Table 2; Figure 7). Figure 7 shows the sampling point (NW-3-1) collected in Channel 3, which was within the OHWM of the channel. Photographs 9 through 12 in Attachment E provide representative views of the extent of Channel 3 in the survey area. The OHWM indicators were investigated at Sampling Point NW-3-1. The OHWM documented at Sampling Point NW-3-1 is described below.

Sampling Point NW-3-1: The OHWM is approximately 1 foot wide and 0.25 foot deep (Photograph 9). The other OHWM indicators observed at Sampling Point NW-3-1 include a break in bank slope and the presence of a defined bed and bank. Sampling Point NW-3-1 was taken in the northern portion of the channel where OHWM indicators were observed. The channel at Sampling Point NW-3-1 has upland grasses and weeds growing outside the banks. At Sampling Point NW-3-1, Channel 3 is surrounded by disturbed habitat and urban/developed land. Channel 3 was constructed on a slope that continues down into the SPRINTER transit right-of-way to the east. The soil outside of the channel at Sampling Point NW-3-1 is sandy loam.

No hydrophytic vegetation, surface water, or saturated deposited soils were observed in or around Channel 3; therefore, no wetland sampling point was taken, and this feature was mapped as a non-wetland water.

Section F Deviation from Local Wetlands Inventory or National Wetlands Inventory

The NWI mapping results do not identify aquatic features on the Project site, in the off-site improvements area, or in the survey area (Figure 5). The non-vegetated earthen-bottom Channels 1 and 2 observed in the center of the Project site and the concrete-lined Channel 3 observed along the eastern edge of the survey area were not identified on the NWI mapping results. Channels 1 and 2 appear to have formed as a result of erosion from stormwater flows directed onto the Project site through a corrugated metal stormwater pipe on the western edge of the Project site. Channel 3 is an artificial, concrete-lined channel that was constructed to capture and direct stormwater flows away from the SPRINTER transit right-of-way. No other aquatic resources were identified in the NWI mapping results or observed on the Project site, in the off-site improvements area, or in the survey area during the aquatic resources delineation fieldwork.

This page intentionally left blank.

Section G Mapping Method

An aquatic resources specialist digitally mapped the limits of non-wetland, non-tidal waters at the OHWM using an ISXBlue II sub-meter Global Positioning System unit. Electronic spatial data collected in the field is in Attachment G.

This page intentionally left blank.

Section H Conclusions

Based on the investigation of wetland and non-wetland water indicators, the following aquatic resource areas occur on the Project site and in the survey area:

1. One earthen-bottom non-wetland water (Channel 1) was observed in the central portion of the Project site. Channel 1 accounts for approximately 0.016 acre (309 linear feet). Based on database and on-site delineation results, the full extent of Channel 1 is limited to the Project site and does not connect or contribute flows to off-site aquatic resources and, therefore, is an isolated feature. The SDAM conducted for Channel 1 determined it is an ephemeral feature.
2. One earthen-bottom non-wetland water (Channel 2) was observed in the central portion of the Project site. Channel 2 accounts for approximately 0.003 acre (43 linear feet). Based on database and on-site delineation results, the full extent of Channel 2 is limited to the Project site and does not connect or contribute flows to off-site aquatic resources and, therefore, is an isolated feature. The SDAM conducted for Channel 2 determined it is an ephemeral feature.
3. One concrete-lined non-wetland water (Channel 3) was observed along the eastern edge of the survey area. Channel 3 accounts for approximately 0.02 acre (893 linear feet). Based on database and on-site delineation results, Channel 3 may have a downstream connection to Buena Vista Creek through the municipal stormwater system and, therefore, is an isolated feature. The SDAM conducted for Channel 3 determined it is an ephemeral feature.

Table 3, Summary of Non-Wetland Waters, includes the extent and summary of the aquatic resources, Channels 1 through 3, delineated on the Project site and in the survey area.

Table 3. Summary of Non-Wetland Waters

Feature	Cowardin Type ¹	Acres	Linear Feet	Coordinates	Vegetation Community/ Land Cover Type	Summary
Channel 1	R6	0.016	309	33.194999 N, -117.240876 W	Non-vegetated channel	Isolated, ephemeral earthen-bottom channel with OHWM indicators present. The OHWM varies in width between 0.5 foot at its narrowest and three feet at its widest, with depths varying between 0.25 and 0.50 foot.

Table 3. Summary of Non-Wetland Waters

Feature	Cowardin Type ¹	Acres	Linear Feet	Coordinates	Vegetation Community/ Land Cover Type	Summary
Channel 2	R6	0.003	43	33.195367 N, -117.240182 W	Non-vegetated channel	Isolated, ephemeral earthen-bottom channel with OHWM indicators present. The OHWM varies in width between one foot at its narrowest and 3.5 feet at its widest, with depths varying between one and three feet.
Channel 3	R6	0.020	893	33.196593 N, -117.240733 W	Non-vegetated channel	Ephemeral concrete-lined channel with OHWM indicators present. The OHWM is one foot wide and 0.25 foot deep.
Non-Wetland Total		0.038	1,245	—		

Notes: OHWM = ordinary high water mark

1 Cowardin Type: R6 = A wetland, spring, stream, river, pond, or lake that only exists for a short period of time.

Section I Preliminary Jurisdictional Determinations

The aquatic resources observed on the Project site and in the survey area include Channels 1 through 3. Table 4, Preliminary Jurisdiction of Aquatic Resources, provides a summary of the aquatic resources and the potential jurisdiction of these features.

Channels 1 and 2 were determined to be isolated, ephemeral non-wetland waters that do not have a surface connection to a traditional navigable water or other off-site aquatic resources and do not carry a relatively permanent flow of water. Therefore, these features may not be considered jurisdictional by the USACE, Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW) pursuant to Sections 401 and 404 of the Clean Water Act and Section 1602 of the California Fish and Game Code. Channel 3 may have a downstream connection to Buena Vista Creek through the municipal stormwater system and is preliminarily under the jurisdiction of the USACE, RWQCB, or CDFW pursuant to Clean Water Act, Sections 401 and 404, and California Fish and Game Code, Section 1602. Only the agencies can make a final determination of jurisdictional boundaries.

Table 4. Preliminary Jurisdiction of Aquatic Resources

Feature	Feature Type	Vegetation Community/ Land Cover Type	Cowardin Type ¹	Agency Jurisdiction			Description
				USACE	RWQCB	CDFW	
Channel 1	Non-wetland water	Non-vegetated channel	R6	—	—	—	Isolated, ephemeral earthen-bottom channel that forms at the outlet of a two-foot-diameter corrugated metal pipe and flows approximately 309 linear feet from west to east where it become undefined when it enters a dirt road (Rhoda Lane).
Channel 2	Non-wetland water	Non-vegetated channel	R6	—	—	—	Isolated, ephemeral earthen-bottom channel that forms in an upland and flows approximately 43 linear feet from west to east where it become undefined when it enters a dirt road (Rhoda Lane).
Channel 3	Non-wetland water	Non-vegetated channel (concrete-lined)	R6	X	X	X	Ephemeral concrete-lined channel that extends approximately 893 linear feet southeast to northwest where it ends in a disturbed upland area. The channel is connected to a larger concrete channel to the east that is directed through a stormwater culvert under Guajome Street.

Notes: CDFW = California Department of Fish and Wildlife; USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board

This page intentionally left blank.

Section J Disclaimer Statement

This aquatic resources delineation is subject to verification by the USACE, RWQCB, and CDFW. Harris advises all parties to treat the information in this Aquatic Resources Delineation Report as preliminary until the agencies provide written verification of their jurisdictional boundaries.

This page intentionally left blank.

Section K **References**

- Historic Aerials. 2023. “Historic Aerials.” Accessed April 2023. <https://www.historicaerials.com/viewer>.
- NOAA (National Oceanic and Atmospheric Administration). 2023. Climatic Data Online. Accessed April 2023. <https://www.ncdc.noaa.gov/cdo-web/>.
- NRCS (National Resources Conservation Service). 2023. National Water and Climate Center: WETS Table. Accessed April 2023. <https://www.nrcs.usda.gov/wps/portal/wcc/home/climateSupport/agAcisClimateData/>.
- Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on “Preliminary Descriptions of the Terrestrial Natural Communities of California” prepared by Robert F. Holland, PhD, in October 1986. Codes revised by Thomas Oberbauer in February 1996, revised and expanded by Meghan Kelly in August 2006, and further revised and reorganized by Jeremy Buegge in March 2008. Accessed April 2023. https://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch9.0/rtcrefaletters/O14%202014-12-19_OberbauerTM2008.pdf.
- Project Clean Water. 2023. “Carlsbad.” Accessed April 2023. <http://www.projectcleanwater.org/carlsbad-wma/>.
- Safdie Rabines Architects. 2022. Kensho Housing: Site Development Plan Submittal.
- USACE (U.S. Army Corps of Engineers). 1987. Corps of Engineers Wetlands Delineation Manual. Final report. Wetlands Research Program Technical Report Y-87-1 (online edition). Prepared by Environmental Laboratory, U.S. Army Corps of Engineers, Waterways Experiment Station. Wetlands Research Program. January. Accessed April 2023. <http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>.
- USACE. 2008a. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0). Final report. ERDC/EL TR-08-28. Prepared by Environmental Laboratory, U.S. Army Engineer Research and Development Center. Wetlands Regulatory Assistance Program. September. Accessed April 2023. <https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7627>.
- USACE. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. ERDC/CRREL TR-08-12. Prepared by Robert W. Lichvar and Shawn M. McColley. Cold Regions Research and Engineering Laboratory, U.S. Army Engineer Research and Development Center. August.

Accessed April 2023. https://www.spl.usace.army.mil/Portals/17/docs/regulatory/JD/Final/OHWMMManual_2008.pdf.

USACE. 2016. Updated Map and Drawing Standards for the South Pacific Division Regulatory Program. Last updated February 10. Accessed April 2023. <http://www.spd.USACE.army.mil/Missions/Regulatory/PublicNoticesandReferences/tabid/10390/Article/651327/updated-map-and-drawing-standards.aspx>.

USACE. 2023a. “TNWs & Navigable Waters in Los Angeles District.” Accessed April 2023. <https://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Navigable-Waterways/>.

USACE. 2023b. Antecedent Precipitation Tool. Accessed April 2023. <https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool>.

USDA (U.S. Department of Agriculture). 2019. Web Soil Survey. Natural Resources Conservation Service, Soil Survey Staff. Last modified July 31. Accessed April 2023. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

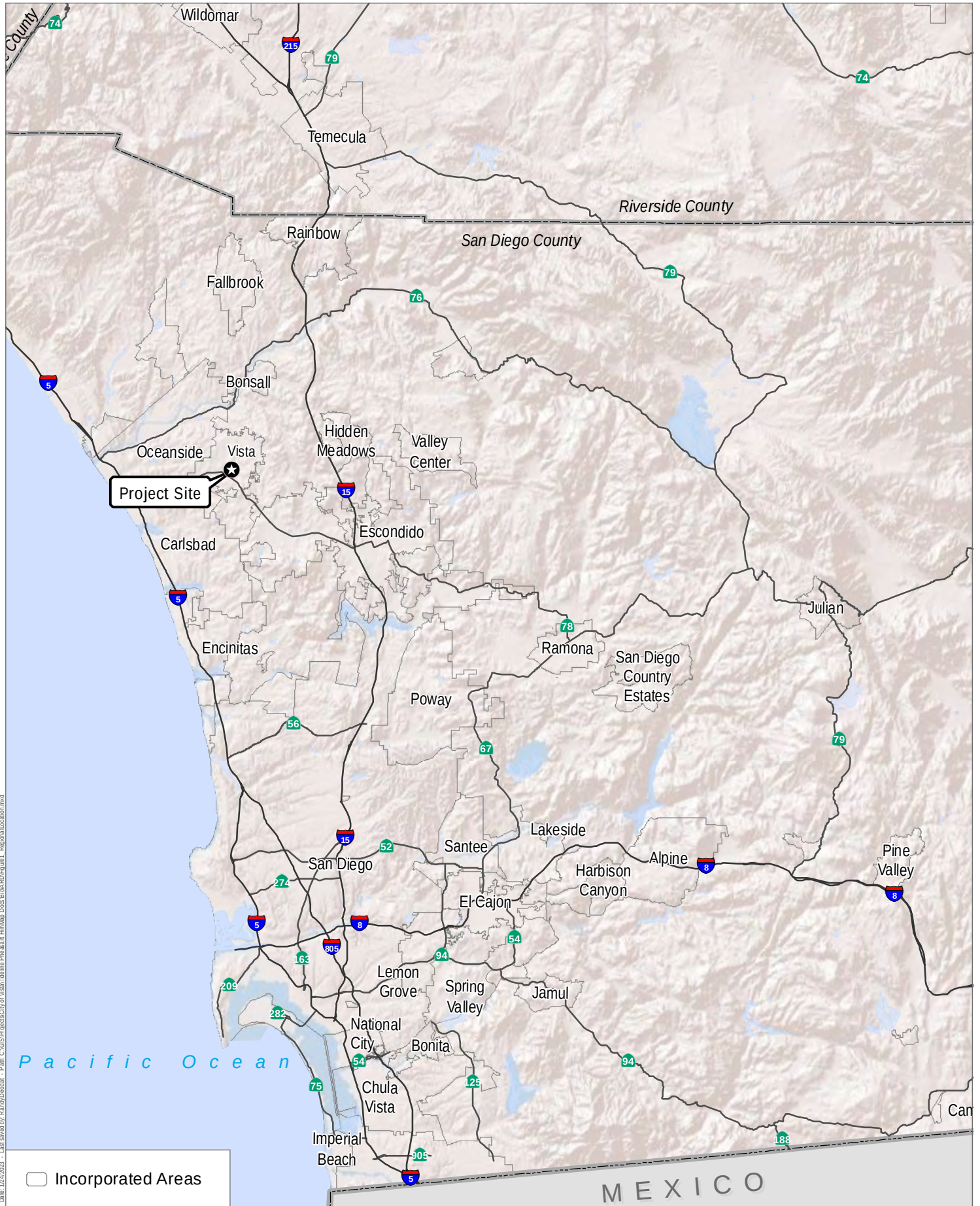
USEPA (U.S. Environmental Protection Agency). 2023. Beta Streamflow Duration Assessment Method for the Arid West (Beta SDAM AW). Version 1.0. March 1. Accessed April 2023. <https://betasdamaw-sccwrp.hub.arcgis.com/>.

USFWS (U.S. Fish and Wildlife Service). 2023. National Wetlands Inventory Wetlands Mapper. Last updated May 3. Accessed April 2023. <https://www.fws.gov/wetlands/Data/Mapper.html>.

USGS (U.S. Geological Survey). 2023. National Hydrography Dataset. Accessed April 2023. <https://www.arcgis.com/home/webmap/viewer.html?url=https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer&source=sd>.

Attachment A. Figures

This page intentionally left blank.



Date: 12/4/2023 - Last saved by: Rmjd/Dreda - Path: C:\GIS\Project\City of Vista\Title Line Phase 1.mxd - Map Doc: BIA\Title Line Phase 1.mxd

Source: ESRI 2021.



Harris & Associates



Figure 1

Regional Location

Tideline Kensho Residential Project



Harris & Associates

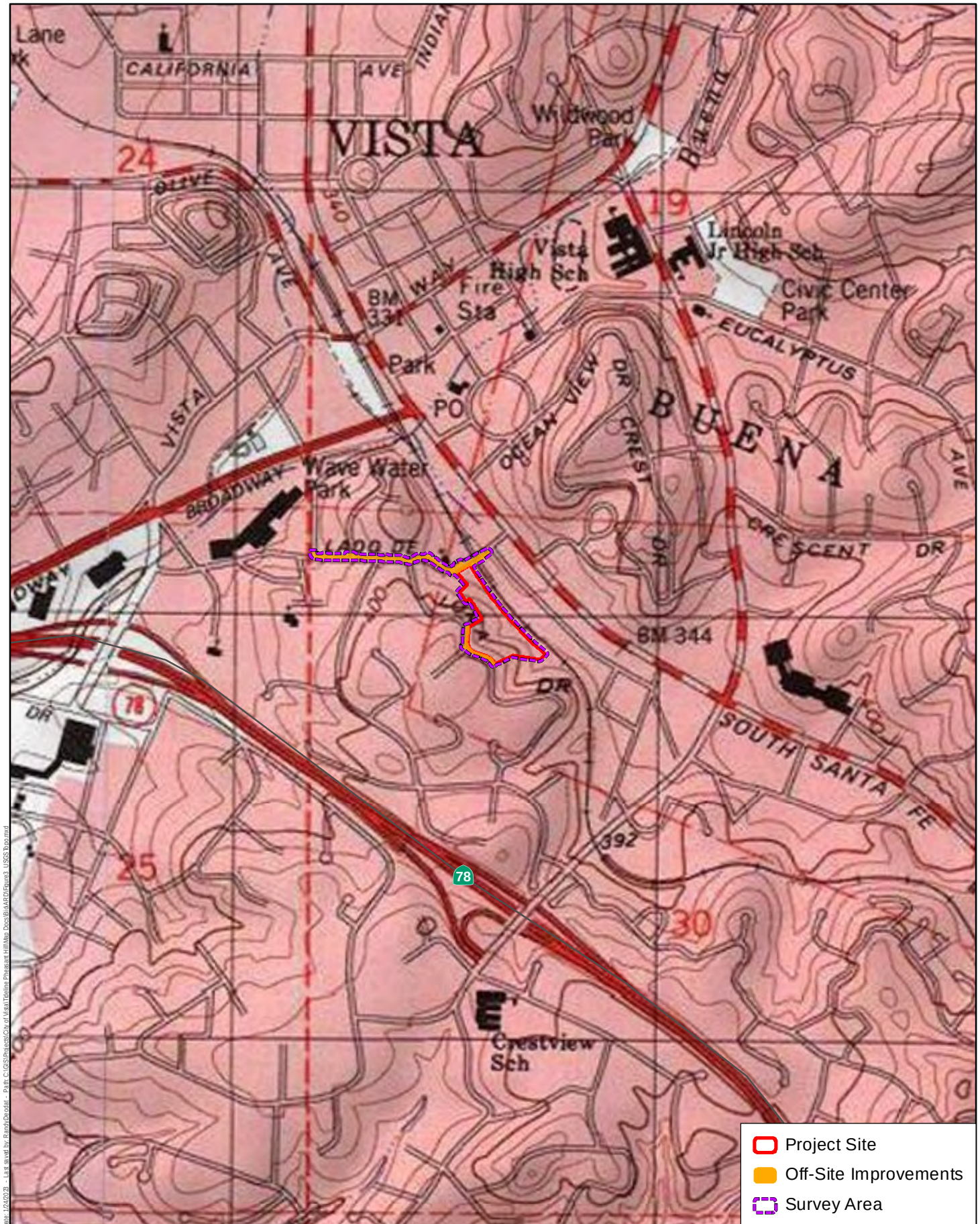


0 150 300
Feet

Figure 2

Project Site

Tideline Kensho Residential Project



Source: USGS Tideline Pheasant Hill Quadrangle 1975.



Harris & Associates

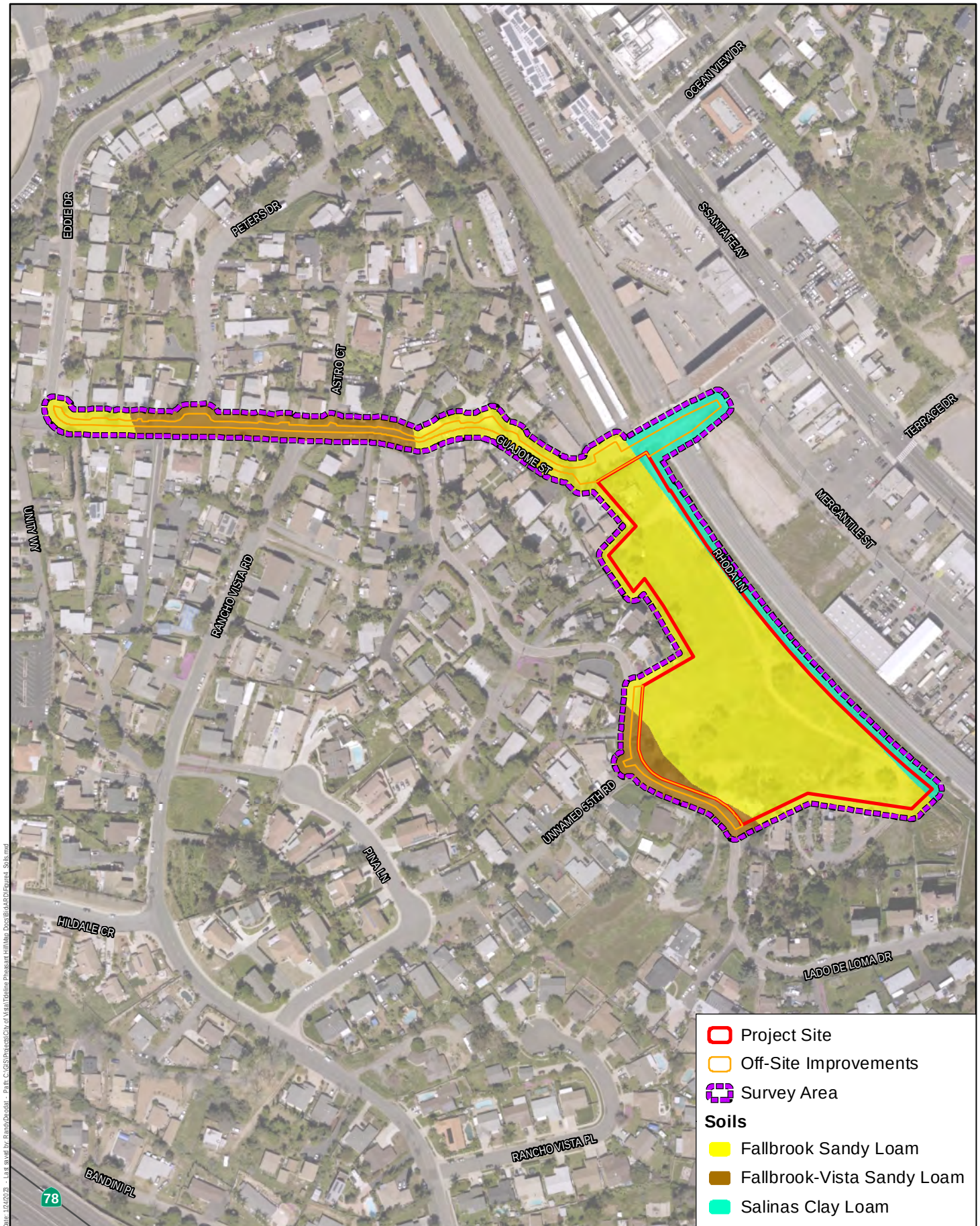


0 500 1,000
Feet

Figure 3

USGS Topographic Map

Tideline Kensho Residential Project



Source: USDA 1973; SanGIS Imagery 2017.



Harris & Associates

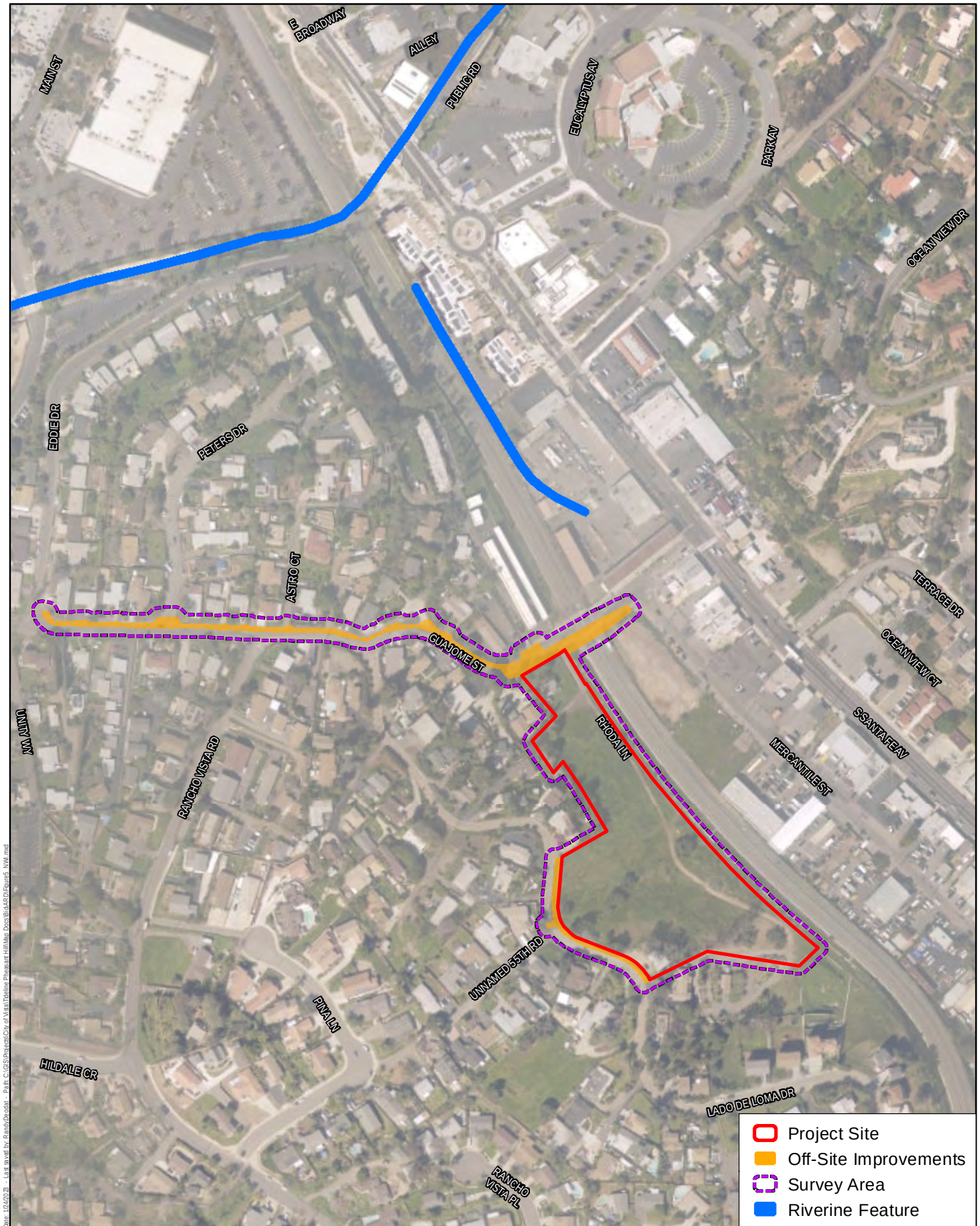


0 150 300
Feet

Figure 4

Soils

Tideline Kensho Residential Project



Source: USFWS 2021; SanGIS Imagery 2017.



Harris & Associates

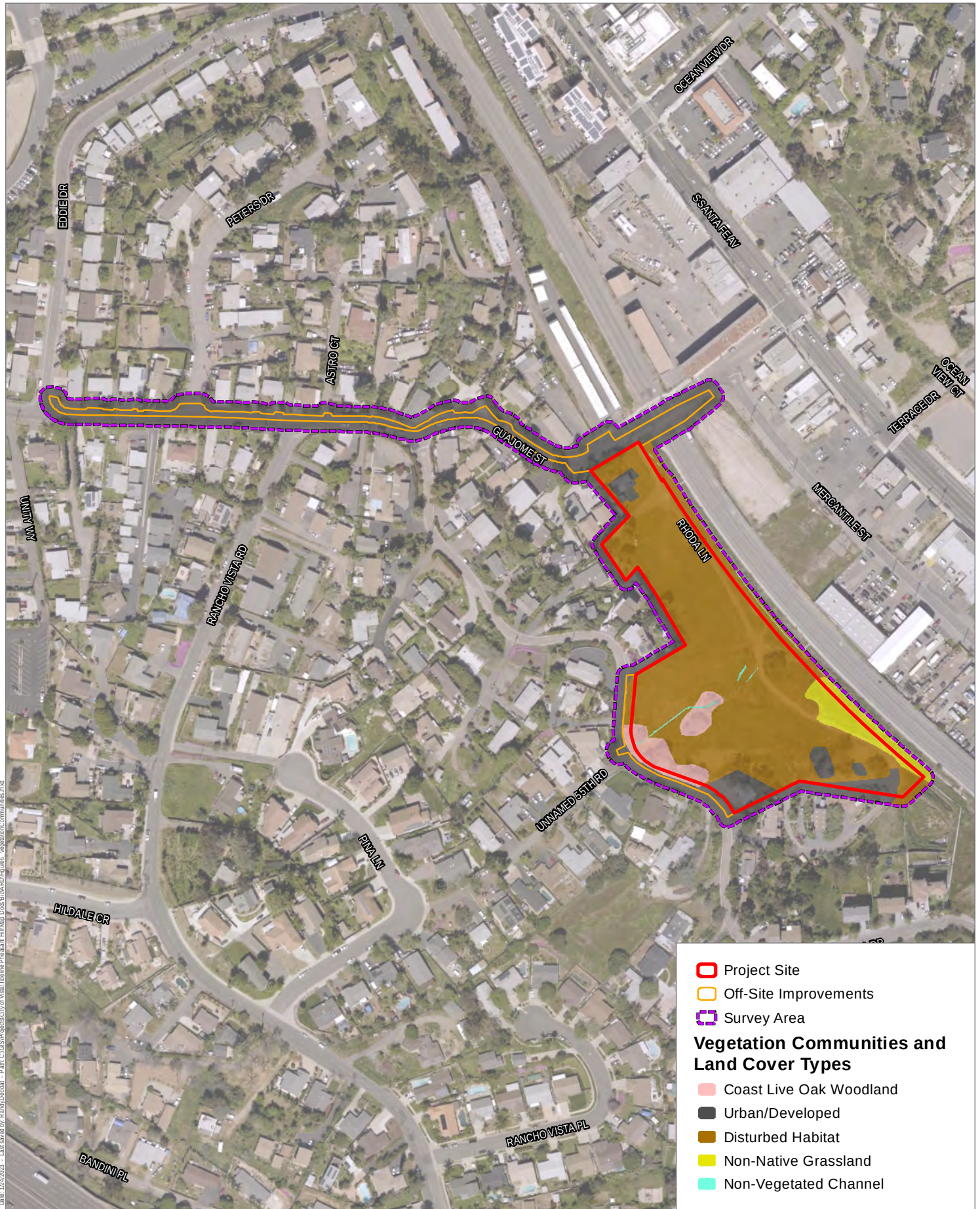


0 150 300
Feet

Figure 5

National Wetlands Inventory Results

Tideline Kensho Residential Project



Source: SanGIS Imagery 2017.



Harris & Associates



0 150 300
Feet

Figure 6
Vegetation Communities and Land Cover Types
Tideline Kensho Residential Project



Figure 7

Aquatic Resources for Tideline Kensho Residential Project

Legend

-  Project Site
-  Off-Site Improvements
-  Survey Area
-  Non-Wetland Sampling Points
-  Reference Points
-  Culvert

Non-Wetland Waters

- Channel 1 (0.015 acre) (321 linear ft)
Channel 2 (0.003 acre) (43 linear ft)
Channel 3 (0.02 acre) (881 linear ft)



Coordinate System: NAD 1983 California State Plane Zone 6
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: No Coordinate System
1 inch = 100 feet

Created on July 28th, 2021
Revised on January 23rd, 2023

Made in accordance with the Updated Map and Drawing Standards
for the South Pacific Division Regulatory Program, as amended on
February 10, 2016, by: Jason Detters, Project Manager Enforcement and
Special Projects Unit U.S. Army Corps of Engineers South Pacific Division
Sacramento District, Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2922

This page intentionally left blank.

Attachment B. Statement of Access

This page intentionally left blank.

Statement of Access

Tideline Partners (property owner) allows U.S. Army Corps of Engineers (USACE) personnel to access the project site. The Project site is accessible from Interstate 5 by taking exit 51B onto State Route 78 East. Travel six miles east, then take exit 6B onto Vista Village Drive. Turn left onto Mar Vista Drive, then in 0.2 mile, turn right onto Lado de Loma Drive. In 0.6 mile, the Project site is on the eastern side of Lado De Loma Drive. The Project site is east of Lado De Loma Drive and south of Guajome Street in Vista, California 92083 (see Attachment A, Figures; Figure 1, Regional Location, and Figure 2, Project Site).

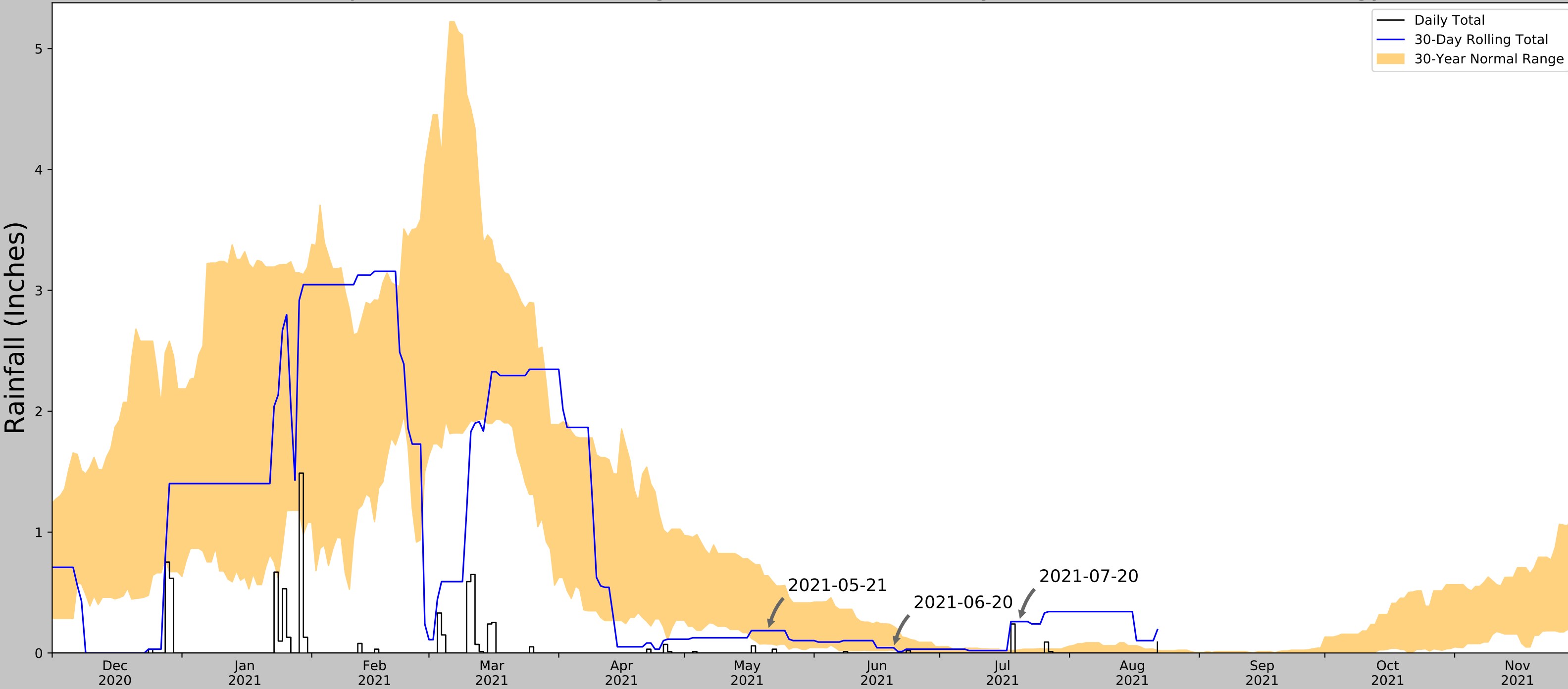
Lev Gershman, Managing Partner
Tideline Partners
2148 Jimmy Durante Boulevard, Suite B
Del Mar, California 92014

This page intentionally left blank.

**Attachment C. Antecedent Precipitation Tool and
NRCS WETS Table Results**

This page intentionally left blank.

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	33.196, -117.241
Observation Date	2021-07-20
Elevation (ft)	391.38
Drought Index (PDSI)	Extreme drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-07-20	0.0	0.025984	0.259843	Wet	3	3	9
2021-06-20	0.022441	0.219685	0.043307	Normal	2	2	4
2021-05-21	0.074016	0.638583	0.185039	Normal	2	1	2
Result							Wetter than Normal - 15



Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
VISTA	33.2353, -117.2322	430.118	2.763	38.738	1.35	10967	73
VISTA 1.2SE	33.1862, -117.2311	504.921	0.887	113.541	0.5	45	17
VISTA 1.5NNW	33.2192, -117.2536	416.995	1.761	25.615	0.837	25	0
CARLSBAD PALOMAR AP	33.1281, -117.2794	328.084	5.191	63.296	2.664	161	0
ESCONDIDO #2	33.1211, -117.09	600.066	10.152	208.686	6.687	153	0
CAMP PENDLETON MCAS	33.3, -117.35	75.131	9.555	316.249	7.322	2	0

WETS Table

WETS Station: VISTA, CA													
Requested years: 2002 - 2022													
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall					
Jan	68.3	45.3	56.8	2.16	0.64	2.43	3	-					
Feb	67.7	45.1	56.4	-	-	-	-	-					
Mar	68.7	47.5	58.1	1.53	0.68	1.87	4	-					
Apr	71.2	49.9	60.6	0.96	0.18	1.07	2	-					
May	72.2	54.7	63.4	0.36	0.07	0.33	1	-					
Jun	75.7	58.8	67.2	0.05	0.00	0.04	0	-					
Jul	80.4	62.6	71.5	0.13	0.00	0.05	0	-					
Aug	81.8	63.1	72.4	0.02	0.00	0.02	0	-					
Sep	82.3	-	-	0.13	0.00	0.10	0	-					
Oct	77.6	56.1	66.8	0.71	0.11	0.55	1	-					
Nov	73.0	49.8	61.4	1.19	0.41	1.37	2	-					
Dec	66.5	45.0	55.7	2.50	1.34	3.00	4	-					
Annual:					-	-							
Average	73.8	-	-	-	-	-	-	-	-				
Total	-	-	-	-			-	-					
GROWING SEASON DATES													
Years with missing data:	24 deg = 7	28 deg = 7	32 deg = 6										
Years with no occurrence:	24 deg = 14	28 deg = 14	32 deg = 12										
Data years used:	24 deg = 14	28 deg = 14	32 deg = 15										
Probability	24 F or higher	28 F or higher	32 F or higher										
50 percent *	Insufficient data	Insufficient data	Insufficient data										
70 percent *	Insufficient data	Insufficient data	Insufficient data										
* Percent chance of the growing season occurring between the Beginning and Ending dates.													
STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1957								0.00	0.00	1.61	0.62	1.92	4.15
1958													
1959													
1960													
1961													
1962					0.38	0.30	0.00	0.00	0.00	T	0.00	0.08	0.76
1963	T	2.87	1.48	1.43	T	0.12	0.00	0.02	2.57	0.49	3.13	0.10	12.21
1964	2.57	0.35	1.80	0.37	0.19	0.02	0.00	0.00	0.00	0.32	1.77	1.06	8.45
1965	0.57	0.71	1.38	5.01	0.06	0.15	0.14	T	0.22	0.00	7.40	5.29	20.93
1966	1.32	1.50	0.43	T	0.02	T	0.00	0.00	0.15	0.38	1.56	5.98	11.34
1967	2.96	0.00	2.11	3.68	0.05	0.21	0.00	0.00	T	0.00	2.34	2.81	14.16
1968	0.60	0.36	3.15	0.84	0.23	0.12	0.05	0.00	0.00		0.43	1.13	6.91

1969	6.91	7.21	2.49	0.58	0.26	0.17	0.12	0.05	T	0.01	0.92	0.44	19.16
1970	1.02	1.89	1.96	0.23	T	0.00	T	0.00	0.00	0.05	2.71	2.92	10.78
1971	0.75	0.81	0.23	1.34	1.42	0.10	0.00	0.00	0.06	0.93	0.33	4.32	10.29
1972	0.00	0.29	0.00	0.40	0.30	0.60	0.00	T		0.72	3.19	1.77	7.27
1973	2.66	3.38	4.08	0.20	0.10	T	0.00	T	0.00		1.97	0.19	12.58
1974	4.91	0.24	2.33	0.33	0.18	0.00	0.00	0.00	0.00	1.59	0.26	2.35	12.19
1975	0.18	1.81	3.78	3.17	0.18	0.16	0.00	0.00	0.00	0.03	1.43	0.68	11.42
1976	0.00	4.68	1.98	1.36	T	0.37	0.12	0.00	1.89	0.02	0.50	1.06	11.98
1977	3.60	0.30	1.50	0.10	2.45	T	0.00	1.78	0.00	0.01	0.31	2.33	12.38
1978	9.08	4.87	6.84	1.52	0.05	0.00	0.00	0.05	1.14	T	2.66	2.15	28.36
1979	5.93	2.14	4.24	0.00	0.07	0.04	T	0.09	0.00	0.95	0.24	0.42	14.12
1980	10.40	9.13	4.01	0.75	0.33	T	0.01	0.00	0.00	0.39	0.00	0.74	25.76
1981	1.35	2.46	2.85	0.75	0.12	0.00	0.05	0.00	0.00	0.46	1.40	1.00	10.44
1982	M3.32	1.43	4.83	0.83	0.15	0.24	0.00	T	0.80	0.17	2.99	1.75	16.51
1983	2.57	3.00	8.28	2.57	0.22	0.05	0.00	0.20	0.46	0.96	2.66	3.27	24.24
1984	M0.32	0.03	0.03	0.61	0.00	0.04	0.05	0.16	0.05	M0.03	1.57	4.47	7.36
1985	0.83	1.34	0.76	0.30	T	0.04	T	0.00	0.78	0.21	5.46	1.45	11.17
1986	0.78	4.33	4.12	1.11	0.00	0.00	0.08	T	1.57	M0.65	1.33	1.53	15.50
1987	1.63	1.37	1.35	0.48	0.06		0.21	0.12	0.07	2.63		M2.75	10.67
1988	1.65	0.64	0.34	3.49	T	0.00	MT	0.40	0.00	0.00	1.23	3.12	10.87
1989	0.58	0.90	1.17	0.09	0.14	0.00	M0.00	0.00	0.42	0.34	0.16	T	3.80
1990	3.02	1.93	0.58	0.84	0.67	0.66	T	0.16	0.05		0.50	0.29	8.70
1991	0.85	3.84	7.67	0.02	0.01	0.00	0.09	T	0.01	0.56	0.10	1.62	14.77
1992	2.81	4.59	4.26	0.08	0.22	0.00	0.07	0.34	0.00	0.45	0.02	2.89	15.73
1993	12.29	5.09	1.22	0.00		0.59	0.02	0.00	0.00	0.09	1.02	0.89	21.21
1994	1.43	2.99	3.12	0.95	0.07	0.00	0.03	T	T	0.09	0.81	0.63	10.12
1995	9.29	1.30	8.41	1.64	0.54	0.48	0.10	0.00	0.00	T	0.03	0.29	22.08
1996	1.58	2.78	1.88	0.67	0.11	0.00	T	0.00	T	0.91	2.75	1.64	12.32
1997	6.17	0.68	0.00	0.28	0.00	0.04	0.64	0.07	1.11	T	2.20	1.37	12.56
1998	M2.82	M11.04	M3.08		M2.04	0.16	0.10	0.00	0.32	0.14	1.23	0.69	21.62
1999	1.74	M0.85	0.98	1.41	0.00	0.37	0.02	0.00	T	0.00	T	M0.07	5.44
2000	0.63	3.44	M0.91	0.90	0.13	0.00	0.00	0.01	0.13	1.23	M0.20	M0.04	7.62
2001	3.10	4.78	1.33	1.50	0.25	0.00	0.00	0.00	0.00	0.00	1.22	1.12	13.30
2002	0.23	M0.17	0.73	0.57	0.05	0.02	T	0.00	0.28	0.02	1.93	2.07	6.07

2003	0.04	5.42	1.90	2.05	0.30	0.20	T	0.02	0.00	T	0.74	0.87	11.54
2004	M0.00	M3.93	0.34	0.58	0.00	0.08	0.00	0.00	0.00	5.63	M1.48	2.93	14.97
2005	7.46	M7.02	M1.14	0.80	0.03	T	M0.00	0.00	0.15	0.89	M0.03	M0.23	17.75
2006	M1.03	M1.27	M2.48	M1.75	0.57	0.01	0.03	0.05	0.00	0.50	0.03	M0.75	8.47
2007	1.86	2.47	0.23	0.69	0.02	0.00	0.00	0.05	M0.07	0.03	2.04	2.56	10.02
2008	M3.88	2.25	0.10	0.01	0.36	0.00	0.00	0.00	0.00	M0.00	M1.49	3.60	11.69
2009	M0.19	2.89	0.16	0.03	0.10	M0.01	0.00	0.00	0.00	0.04	0.32	2.46	6.20
2010	M5.23	3.40	0.51	2.66	0.00	0.00	0.42	0.00	0.03	M1.54	M0.88	8.12	22.79
2011	M1.91	M2.52	2.64	M1.12	M1.00	M0.00	0.03	0.00	M0.02	1.85	M2.31	0.82	14.22
2012	M0.95	M1.63	1.78	M1.47	0.08	M0.00	0.01	0.01	0.02	0.54	0.53	3.06	10.08
2013	1.54	0.69	1.52	0.05	0.88	0.00	0.01	0.00	0.00	1.26	1.07	0.44	7.46
2014	0.11	1.24	1.20	0.52	0.00	0.00	0.00	0.18	0.00	0.00	0.74	3.66	7.65
2015	0.54	0.50	1.44	0.24	1.22	0.23	1.14	0.00	1.26	0.58	1.12	1.73	10.00
2016	2.69	0.67	1.80	0.47	0.26	0.00	0.00	0.00	0.14	0.04	1.74	4.29	12.10
2017	6.80	5.98	0.19	0.03	1.60	0.02	0.03	0.02	0.04	0.00	0.02	0.00	14.73
2018	3.19	0.54	2.51	0.05	0.32	0.00	0.25	0.00	0.00	1.05	1.41	2.69	12.01
2019	3.20	8.77	1.76	0.49	1.30	0.13	0.03	0.00	0.04	0.00	4.36	4.57	24.65
2020	0.64	0.78	5.16	6.58	0.01	0.36	0.00	0.00	0.00	0.17	0.71	1.40	15.81
2021	3.05	0.11	2.34	0.11	0.10	0.03	0.69	0.16	0.16	1.35	0.00	4.44	12.54
2022	0.63	0.54	2.20	0.14	0.01	0.01	0.00	0.00	0.46	0.20	2.04	1.84	8.07
2023	M4.84												4.84

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

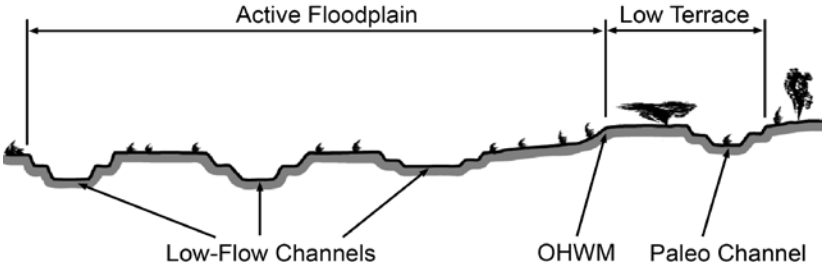
Data missing for all days in a month or year is blank.

Creation date: 2023-01-24

**Attachment D. Arid West Wetland Determination and
Ordinary High Water Mark Datasheets**

This page intentionally left blank.

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: Tideline Pheasant Hill Residential Project Number: Stream: Unnamed Channel 1 (AF-1; NW-1-1 through NW-1-4) Investigator(s): Katie Laybourn	Date: July 20, 2021 Town: Vista Photo begin file#: Time: 9:00am - 9:45am State: CA Photo end file#:
Y ☒ / N ☐ Do normal circumstances exist on the site? Y ☒ / N ☐ Is the site significantly disturbed?	Location Details: The project site is surrounded by single-family residential neighborhoods to the north, west and south, commercial development to the northeast, and the SPRINTER railroad tracks to the east Projection: 33.194999 N, -117.240876 W Datum: NAD83 Coordinates: 33.195425 N, -117.240058 W
Potential anthropogenic influences on the channel system: The majority of the project site is undeveloped, and the entire property has historically been disturbed with mowing and other mechanical disturbances, including repeated vehicle use through the center and along the dirt access road on the east side of the site.	
Brief site description: The project site is in a residential and commercial portion of the city surrounded by single-family residential neighborhoods to the north, west and south, commercial development to the northeast, and the SPRINTER railroad tracks to the east. The project site consists of coast live oak woodland, non-native grassland, disturbed habitat, single-family residences, and native and non-native trees around the edges. The majority of the project site is undeveloped.	
Checklist of resources (if available): ☒ Aerial photography Dates: ☒ Topographic maps ☐ Geologic maps ☒ Vegetation maps ☒ Soils maps ☐ Rainfall/precipitation maps ☐ Existing delineation(s) for site ☒ Global positioning system (GPS) ☐ Other studies ☐ Stream gage data Gage number: Period of record: ☐ History of recent effective discharges ☐ Results of flood frequency analysis ☐ Most recent shift-adjusted rating ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event	
Hydrogeomorphic Floodplain Units 	
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW M: 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW M and record the indicators. Record the OHW M position via: ☐ Mapping on aerial photograph ☐ Digitized on computer ☒ GPS ☐ Other:	

Cross section drawing:

Top of bank width = 3 ft



OHWL depth = 0.5 ft

OHWL width = 2 ft

OHWL

GPS point: NW-1-1

Indicators:

- ☐ Change in average sediment texture
☒ Change in vegetation species
☒ Change in vegetation cover

- ☒ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Corrugated metal stormwater pipe located approximately 2 feet west of sampling point NW-1-1; channel heavily eroded and stormwater pipe is filled with sediment and appears to be clogged with the sediment

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: NW-1-1

Characteristics of the floodplain unit:

Average sediment texture: Sandy loam

Total veg cover: 110 % Tree: 20 % Shrub: 0 % Herb: 90 %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)
☒ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☒ Presence of bed and bank
☐ Benches

- ☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

Cross section drawing:

Top of bank width = 4 ft



OHWL depth = 0.5 ft

OHWL width = 3 ft

OHWL

GPS point: NW-1-2

Indicators:

- ☐ Change in average sediment texture
☒ Change in vegetation species
☒ Change in vegetation cover

- ☒ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Highly eroded and incised channel at sampling point NW-2

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: NW-1-2

Characteristics of the floodplain unit:

Average sediment texture: Sandy loam

Total veg cover: 90 % Tree: 0 % Shrub: 0 % Herb: 90 %

Community successional stage:

- ☐ NA
☒ Early (herbaceous & seedlings)
☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

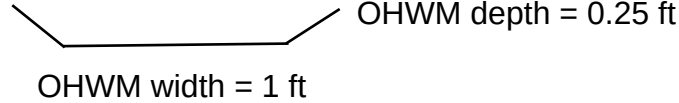
- ☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☒ Presence of bed and bank
☐ Benches

- ☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

Cross section drawing:

Top of bank width = 1.5 ft



OHWM

GPS point: NW-1-3

Indicators:

- ☒ Change in average sediment texture
☒ Change in vegetation species
☒ Change in vegetation cover

- ☒ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Shallow channel that runs through the coast live oak woodland, sediment changes to more clayey texture

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: NW-1-3

Characteristics of the floodplain unit:

Average sediment texture: Sandy clay loam

Total veg cover: 95 % Tree: 75 % Shrub: 0 % Herb: 20 %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)
☐ Early (herbaceous & seedlings) ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks ☐ Soil development
☐ Ripples ☐ Surface relief
☒ Drift and/or debris ☐ Other: _____
☒ Presence of bed and bank ☐ Other: _____
☐ Benches ☐ Other: _____

Comments:

Evidence of leaf and vegetation litter/debris and sediment deposition within shallow channel at sampling point NW-1-3

Cross section drawing:

Top of bank width = 1 ft



OHWL depth = 0.25 ft

OHWL width = 0.5 ft

OHWL

GPS point: NW-1-4

Indicators:

- ☐ Change in average sediment texture
☒ Change in vegetation species
☒ Change in vegetation cover

- ☒ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Sampling point NW-1-4 is the end of the channel; flows appear to exit the channel onto the dirt road where flows spread out on road surface; shallow channel is eroded where it empties onto the dirt road

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: NW-1-4

Characteristics of the floodplain unit:

Average sediment texture: Sandy clay loam

Total veg cover: 90 % Tree: 0 % Shrub: 0 % Herb: 90 %

Community successional stage:

- ☐ NA ☐ Mid (herbaceous, shrubs, saplings)
☒ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

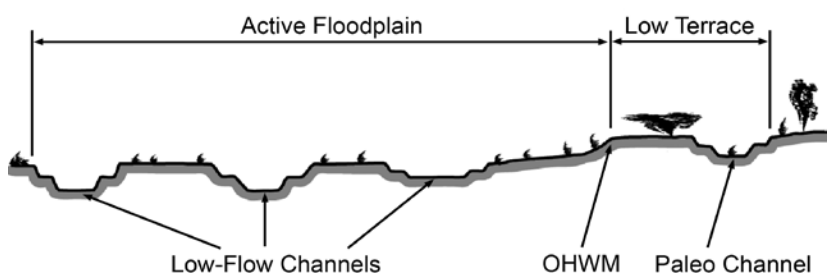
Indicators:

- ☐ Mudcracks ☐ Soil development
☐ Ripples ☐ Surface relief
☒ Drift and/or debris ☐ Other: _____
☒ Presence of bed and bank ☐ Other: _____
☐ Benches ☐ Other: _____

Comments:

Evidence of vegetation litter/debris within shallow channel at sampling point NW-1-4

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Tideline Pheasant Hill Residential Project Number: Stream: Unnamed Channel 2 (AF-2; NW-2-1 and NW-2-2) Investigator(s): Katie Laybourn	Date: July 20, 2021 Town: Vista Photo begin file#: Time: 10:00am State: CA Photo end file#:
Y ☒ / N ☐ Do normal circumstances exist on the site? Y ☒ / N ☐ Is the site significantly disturbed?	Location Details: The project site is surrounded by single-family residential neighborhoods to the north, west and south, commercial development to the northeast, and the SPRINTER railroad tracks to the east Projection: 33.195367 N, -117.240182 W ; Datum: NAD83 Coordinates: 33.195493 N, -117.240097 W
Potential anthropogenic influences on the channel system: The majority of the project site is undeveloped, and the entire property has historically been disturbed with mowing and other mechanical disturbances, including repeated vehicle use through the center and along the dirt access road on the east side of the site.	
Brief site description: The project site is in a residential and commercial portion of the city surrounded by single-family residential neighborhoods to the north, west and south, commercial development to the northeast, and the SPRINTER railroad tracks to the east. The project site consists of coast live oak woodland, non-native grassland, disturbed habitat, single-family residences, and native and non-native trees around the edges. The majority of the project site is undeveloped.	
Checklist of resources (if available): ☒ Aerial photography Dates: ☒ Topographic maps ☐ Geologic maps ☒ Vegetation maps ☒ Soils maps ☐ Rainfall/precipitation maps ☐ Existing delineation(s) for site ☒ Global positioning system (GPS) ☐ Other studies ☐ Stream gage data Gage number: Period of record: ☐ History of recent effective discharges ☐ Results of flood frequency analysis ☐ Most recent shift-adjusted rating ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event	
Hydrogeomorphic Floodplain Units 	
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW: 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW and record the indicators. Record the OHW position via: ☐ Mapping on aerial photograph ☐ Digitized on computer ☒ GPS ☐ Other:	

Cross section drawing:

Top of bank width = 4 ft



OHWL depth = 3 ft

OHWL width = 3.5 ft

OHWL

GPS point: NW-2-1

Indicators:

- ☐ Change in average sediment texture
☐ Change in vegetation species
☒ Change in vegetation cover

- ☒ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Sampling point NW-2-1 is where the isolated erosional channel forms in uplands; historic flows from the stormwater pipe east of NW-2-1 appear to have eroded this channel, and flows may have been diverted from mechanical or vehicle disturbance, or growth of the coast live oak woodland east of NW-2-1

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: NW-2-1

Characteristics of the floodplain unit:

Average sediment texture: Sandy loam

Total veg cover: 95 % Tree: 0 % Shrub: 0 % Herb: 95 %

Community successional stage:

- ☐ NA
☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☒ Presence of bed and bank
☐ Benches

- ☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

Channel overgrown with upland grasses at NW-2-1

Cross section drawing:

Top of bank width = 2 ft



OHWL depth = 0.5 ft

OHWL width = 1 ft

OHWL

GPS point: NW-2-2

Indicators:

- ☐ Change in average sediment texture
☐ Change in vegetation species
☒ Change in vegetation cover

- ☒ Break in bank slope
☐ Other: _____
☐ Other: _____

Comments:

Sampling point NW-2-2 is where the isolated erosional channel ends and flows into the dirt road to the east where flows appear to spread out and the channel becomes undefined

Floodplain unit:

☒ Low-Flow Channel

☐ Active Floodplain

☐ Low Terrace

GPS point: NW-2-2

Characteristics of the floodplain unit:

Average sediment texture: Sandy loam

Total veg cover: 90 % Tree: 0 % Shrub: 0 % Herb: 90 %

Community successional stage:

- ☐ NA
☒ Early (herbaceous & seedlings)
☐ Mid (herbaceous, shrubs, saplings)
☐ Late (herbaceous, shrubs, mature trees)

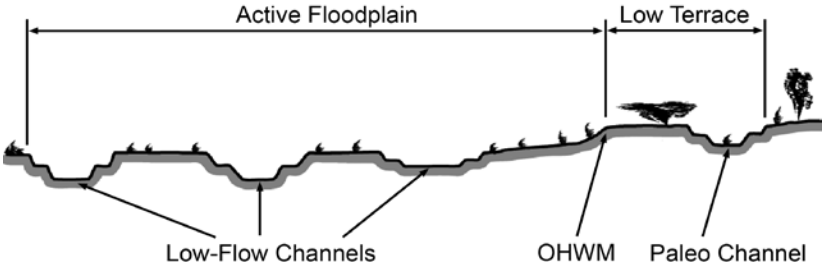
Indicators:

- ☐ Mudcracks
☐ Ripples
☐ Drift and/or debris
☒ Presence of bed and bank
☐ Benches

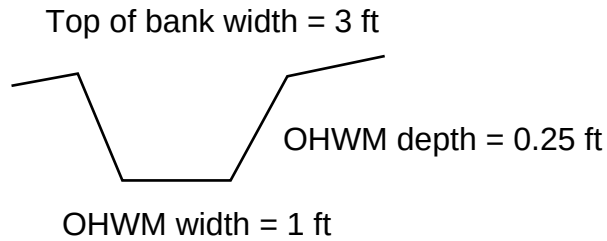
- ☐ Soil development
☐ Surface relief
☐ Other: _____
☐ Other: _____
☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Tideline Pheasant Hill Residential Project Number: Stream: Unnamed Channel 3 (concrete-lined) (AF-3; NW-3-1) Investigator(s): Katie Laybourn	Date: January 19, 2023 Town: Vista Photo begin file#: Time: 10:45am State: CA Photo end file#:
Y ☒ / N ☐ Do normal circumstances exist on the site? Y ☒ / N ☐ Is the site significantly disturbed?	Location Details: The project site is surrounded by single-family residential neighborhoods to the north, west and south, commercial development to the northeast, and the SPRINTER railroad tracks to the east Projection: Datum: NAD83 Coordinates: 33.196593 N, -117.240733 W
Potential anthropogenic influences on the channel system: Concrete-lined channel in the SPRINTER railroad right-of-way; trash and debris, the channel's source of water is likely urban stormwater runoff	
Brief site description: The survey area is in a residential and commercial portion of the city surrounded by single-family residential neighborhoods to the north, west and south, commercial development to the northeast, and the SPRINTER railroad tracks to the east. The channel is in a disturbed and developed railroad corridor.	
Checklist of resources (if available): ☒ Aerial photography Dates: ☒ Topographic maps ☐ Geologic maps ☒ Vegetation maps ☒ Soils maps ☐ Rainfall/precipitation maps ☐ Existing delineation(s) for site ☒ Global positioning system (GPS) ☐ Other studies ☐ Stream gage data Gage number: Period of record: ☐ History of recent effective discharges ☐ Results of flood frequency analysis ☐ Most recent shift-adjusted rating ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event	
Hydrogeomorphic Floodplain Units 	
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW: 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHW and record the indicators. Record the OHW position via: ☐ Mapping on aerial photograph ☐ Digitized on computer ☒ GPS ☐ Other:	

Cross section drawing:



OHWM

GPS point: NW-3-1

Indicators:

- | | |
|---|---|
| ☐ Change in average sediment texture | ☒ Break in bank slope |
| ☐ Change in vegetation species | ☐ Other: _____ |
| ☐ Change in vegetation cover | ☐ Other: _____ |

Comments:

Concrete-lined channel with an OHWM visible

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: NW-3-1

Characteristics of the floodplain unit:

Average sediment texture: Sandy loam

Total veg cover: 40 % Tree: 0 % Shrub: 0 % Herb: 40 %

Community successional stage:

- | | |
|--|--|
| ☐ NA | ☐ Mid (herbaceous, shrubs, saplings) |
| ☒ Early (herbaceous & seedlings) | ☐ Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|--|---|
| ☐ Mudcracks | ☐ Soil development |
| ☐ Ripples | ☐ Surface relief |
| ☐ Drift and/or debris | ☐ Other: _____ |
| ☒ Presence of bed and bank | ☐ Other: _____ |
| ☐ Benches | ☐ Other: _____ |

Comments:

Weeds and upland grasses occur outside of the concrete-lined channel

Attachment E. Photographic Log

This page intentionally left blank.

Drawn 1/24/2022 - List made by Randi Doud - Path: C:\GIS\Projects\City of Mesa\Timeline Photos\HMA\Map Doc\BICARD\Attachment E Photo Log.mxd



Source: SanGIS Imagery 2017.



Harris & Associates



0 50 100
Feet

Attachment E

Photo Log

Timeline Kensho Residential Project

This page intentionally left blank.

Channel 1



Photograph 1: (33.194999 N, -117.240876 W) Northwest-facing view of the western reach of the two-foot-wide Channel 1 in the western portion of the Project site. This photo also shows where the highly eroded channel forms at the outlet of the two-foot-diameter corrugated metal culvert on the western edge of the Project site. This photo shows where Sampling Point NW-1-1 was taken to determine the presence of OHWM indicators. This photo also shows the sediment clogging the corrugated metal culvert and the erosion of the channel at the outlet of the culvert.



Photograph 2: (33.194999 N, -117.240876 W) East-facing view of the western reach of the two-foot-wide earthen-bottom channel in the western portion of the Project site. This photo shows where Sampling Point NW-1-1 was taken to determine the presence of OHWM indicators.



Photograph 3: (33.195070 N, -117.240741 W) East-facing view of the three-foot-wide Channel 1 in the western portion of the Project site. This photo shows where Sampling Point NW-1-2 was taken to determine the presence of OHWM indicators.



Photograph 4: (33.195244 N, -117.240321 W) East-facing view of the one-foot-wide Channel 1 in the central portion of the Project site. This photo shows where Sampling Point NW-1-3 was taken to determine the presence of OHWM indicators. This photo shows where Channel 1 runs through the interior coast live oak woodland in the central portion of the Project site and where Channel 1 becomes shallow and changes soil texture.



Photograph 5: (33.195425 N, -117.240058 W) East-facing view of the 0.5-foot-wide Channel 1 in the eastern portion of the Project site. This photo shows where Sampling Point NW-1-4 was taken to determine the presence of OHWM indicators. This photo also shows where the defined Channel 1 ends and flows into a dirt road on the eastern side of the Project site.

Channel 2



Photograph 6: (33.195367 N, -117.240182 W) East-facing view of the 3.5-foot-wide Channel 2 in the central portion of the Project site. This photo shows where Sampling Point NW-2-1 was taken to determine the presence of OHWM indicators. This photo also shows where Channel 2 formed from apparent erosion.



Photograph 7: (33.195493 N, -117.240097 W) West-facing view of the one-foot-wide Channel 2 in the eastern portion of the Project site. This photo shows where Sampling Point NW-2-2 was taken to determine the presence of OHWM indicators.



Photograph 8: (33.195493 N, -117.240097 W) Southeast-facing view of the one-foot-wide Channel 2 in the eastern portion of the Project site. This photo shows where Sampling Point NW-2-2 was taken to determine the presence of OHWM indicators. This photo shows where the defined Channel 2 ends and flows into the dirt road on the eastern side of the Project site.

Channel 3



Photograph 9: (33.196593 N, -117.240733 W) Southeast-facing view of the one-foot-wide Channel 3 along the eastern edge of the survey area. This photo shows where Sampling Point NW-3-1 was taken to determine the presence of OHWM indicators. The northern extent of the concrete-lined channel is also visible in the lower-half of the photo.



Photograph 10: (33.196412 N, -117.240628 W) East-facing view of Channel 3 along the eastern edge of the survey area. This photo shows where Channel 3 connects to another larger concrete-lined channel that runs parallel east of the survey area through the SPRINTER transportation right-of-way.



Photograph 11: (33.196216 N, -117.240421 W) Southeast-facing view of Channel 3. This photo shows the upland grasses and weeds growing outside of the channel banks. The eastern side of the Project site and the chain-link fence separating it from the eastern portion of the survey area is visible in the upper right-hand-corner of the photograph.



Photograph 12: (33.195849 N, -117.240079 W) Southeast-facing view of Channel 3 along the eastern edge of the survey area. Channel 3 continues southeast where it enters the southeastern corner of the survey area.

Attachment F. SDAM for the Arid West Forms

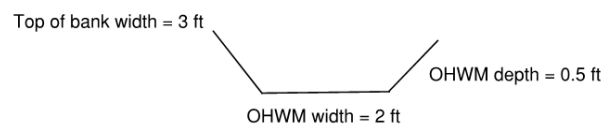
This page intentionally left blank.

Beta Arid West Streamflow Duration Assessment Method

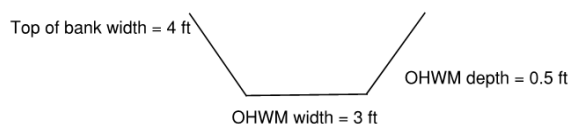
General site information

Project name or number: Tideline Kensho Residential Project		
Site code or identifier: N/A	Assessor(s): Katie Laybourn	
Waterway name: Unnamed Channel 1		Visit date: 7/20/2021
Current weather conditions (check one) ☐ Storm/heavy rain ☐ Steady rain ☐ Intermittent rain ☐ Snowing ☐ Cloudy (___ % cover) ☒ Clear/Sunny	Notes on current or recent weather conditions (e.g., precipitation in previous week): Hot, sunny weather and no precipitation in the week prior to delineation. Coordinates at downstream end (decimal degrees): Lat (N): 33.194999 N Long (W): -117.240876 W Datum: NAD83	
Surrounding land-use within 100 m (check one or two): ☒ Urban/industrial/residential ☐ Agricultural (farmland, crops, vineyards, pasture) ☐ Developed open-space (e.g., golf course) ☐ Forested ☐ Other natural ☐ Other: _____	Describe reach boundaries: The extent of channel 1 that runs through the project site begins on the western edge of the project site and runs approximately 309 linear feet east through the center of the site to a dirt road that runs along the eastern side of the project site.	
Mean channel width (m) 1.5 feet (0.46 m)	Reach length (m): 40x width; min 40 m; max 200 m. 309 feet (94.2 m)	Enter photo ID, or check if completed Attachment E, Photographs 1 through 5
Disturbed or difficult conditions (check all that apply): ☐ Recent flood or debris flow ☐ Stream modifications (e.g., channelization) ☒ Diversions ☒ Discharges ☐ Drought ☐ Vegetation removal/limitations ☐ Other (explain in notes) ☐ None		Notes on disturbances or difficult site conditions: Channel 1 formed from stormwater flows exiting a 2-foot diameter corrugated metal culvert on the west side of the project site that runs under Lado de Loma Drive west of the site.
Observed hydrology: ___ 0 ___ % of reach with surface flow ___ 0 ___ % of reach with sub-surface or surface flow ___ 0 ___ # of isolated pools		Comments on observed hydrology: No surface water flow observed during delineation.

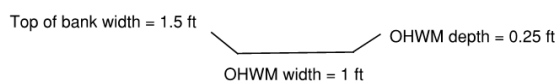
Site sketch:



Western Reach (sampling point NW-1)



Central Reach 1 (sampling point NW-2)



Central Reach 2 (sampling point NW-3)

Top of bank width = 1 ft
OHWM width = 0.5 ft
OHWM depth = 0.25 ft

Eastern Reach (sampling point NW-4)

1. Hydrophytic plant species

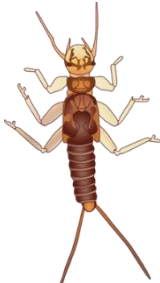
Record up to 5 hydrophytic plant species (FACW or OBL in the **Arid West** regional wetland plant list) within the assessment area: **within the channel or up to one half-channel width**. Explain in notes if species has an odd distribution (e.g., covers less than 2% of assessment area, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID, or check if photo is taken.

Check if applicable: ☐ No vegetation in assessment area ☒ No hydrophytes in assessment area

Species	Odd distribution?	Notes	Photo ID
N/A			

Notes on hydrophytic vegetation: **All vegetation observed in and around Channel 1 were upland species**

2 and 3. Aquatic invertebrates

2. How many aquatic invertebrates are quantified in a 15-minute search? Number of individuals quantified: ☒ None ☐ 1 to 19 ☐ 20 + (Do not count mosquitos) Photo ID: <u>N/A</u>	3. Is there evidence of aquatic stages of EPT (Ephemeroptera, Plecoptera and Trichoptera)? Yes / ☒ No  Ephemeroptera larva Image credit: Dieter Tracey  Plecoptera larva Tracey Saxby  Trichoptera larva Tracey Saxby
--	---

Notes on aquatic invertebrates: **None observed**

4. Algal Cover

Are algae found on the streambed? ☐ Check if <u>all</u> observed algae appear to be deposited from an upstream source.	☒ Not detected ☐ Yes, < 10% cover ☐ Yes, ≥ 10% (check Yes in single indicator below)	Notes on algae cover: None observed	Photo ID: Photos 1 through 5
--	--	---	--

5. Are single indicators observed?

Indicator	Present	Notes	Photo ID
Fish	☐ Yes ☒ No, no fish ☐ No, only non-native mosquitofish	None observed	Photos 1 through 5
Algae cover ≥ 10%	☐ Yes ☒ No	None observed	Photos 1 through 5

Supplemental information E.g., aquatic or semi-aquatic amphibians, snakes, or turtles; iron-oxidizing bacteria and fungi; etc.

Photo log

Indicate if any other photos taken during the assessment

Photo ID	Description
Photos 1 through 5	Attachment E, Photographic Log

Additional notes about the assessment:

Classification: _____Ephemeral_____

1. Hydrophytic plant species	2. Aquatic invertebrates	3. EPT taxa	4. Algae	5. Single indicators • fish present • algae cover $\geq 10\%$	Classification
None	None	Absent	Absent	Absent	Ephemeral
				Present	At least intermittent
			Present	Absent	Need more information
	Few (1-19)	Absent		Present	At least intermittent
			Absent	Absent	Need more information
				Present	At least intermittent
		Present	Present	Absent	Need more information
				Present	At least intermittent
					At least intermittent
	Many (20+)	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present	Absent	Need more information
		Present		Present	At least intermittent
					At least intermittent
Few (1-2)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent	Absent		Intermittent
			Present		At least intermittent
		Present			At least intermittent
	Many (20+)	Absent	Absent		Intermittent
			Present		At least intermittent
		Present	Absent		At least intermittent
			Present		Intermittent
Many (3+)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent			At least intermittent
		Present			Perennial
	Many (20+)	Absent			At least intermittent
		Present			Perennial

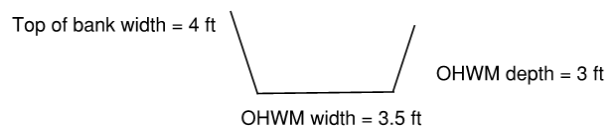
Shading provided to enhance readability by increasing the contrast between neighboring cells; empty cells indicate the classification will not change with additional information however it is recommended that all five indicators be measured and recorded during every assessment.

Beta Arid West Streamflow Duration Assessment Method

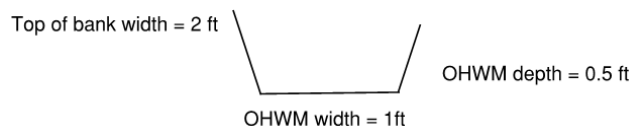
General site information

Project name or number: Tideline Kensho Residential Project		
Site code or identifier: N/A	Assessor(s): Katie Laybourn	
Waterway name: Unnamed Channel 2		Visit date: 7/20/2021
Current weather conditions (check one) ☐ Storm/heavy rain ☐ Steady rain ☐ Intermittent rain ☐ Snowing ☐ Cloudy (___ % cover) ☒ Clear/Sunny	Notes on current or recent weather conditions (e.g., precipitation in previous week): Hot, sunny weather and no precipitation in the week prior to delineation.	Coordinates at downstream end (decimal degrees): Lat (N): 33.195367 N Long (W): -117.240182 W Datum: NAD83
Surrounding land-use within 100 m (check one or two): ☒ Urban/industrial/residential ☐ Agricultural (farmland, crops, vineyards, pasture) ☐ Developed open-space (e.g., golf course) ☐ Forested ☐ Other natural ☐ Other:		Describe reach boundaries: The extent of channel 2 that runs through the project site begins in the central portion of the project site and runs approximately 43 linear feet east to a dirt road that runs along the eastern side of the project site.
Mean channel width (m) 2.25 feet (0.68 m)	Reach length (m): 40x width; min 40 m; max 200 m. 43 feet (13 m)	Enter photo ID, or check if completed Attachment E, Photographs 6 through 8
Disturbed or difficult conditions (check all that apply): ☐ Recent flood or debris flow ☒ Stream modifications (e.g., channelization) ☒ Diversions ☐ Discharges ☐ Drought ☒ Vegetation removal/limitations ☐ Other (explain in notes) ☐ None		Notes on disturbances or difficult site conditions: Channel 2 may have been an historic stormwater flow path connected to Channel 1 but has been disturbed by mechanical earth moving or vehicles and is higher in elevation than Channel 1 and no longer appears to receive stormwater.
Observed hydrology: ___ 0 ___ % of reach with surface flow ___ 0 ___ % of reach with sub-surface or surface flow ___ 0 ___ # of isolated pools		Comments on observed hydrology: No surface water flow observed during delineation.

Site sketch:



Western Reach (sampling point NW-5)



Eastern Reach (sampling point NW-6)

1. Hydrophytic plant species

Record up to 5 hydrophytic plant species (FACW or OBL in the **Arid West** regional wetland plant list) within the assessment area: **within the channel or up to one half-channel width**. Explain in notes if species has an odd distribution (e.g., covers less than 2% of assessment area, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID, or check if photo is taken.

Check if applicable: ☐ No vegetation in assessment area ☒ No hydrophytes in assessment area

Species	Odd distribution?	Notes	Photo ID
N/A			

Notes on hydrophytic vegetation: **All vegetation observed in and around Channel 2 were upland species**

2 and 3. Aquatic invertebrates

2. How many aquatic invertebrates are quantified in a 15-minute search? Number of individuals quantified: ☒ None ☐ 1 to 19 ☐ 20 + (Do not count mosquitos) Photo ID: <u>N/A</u>	3. Is there evidence of aquatic stages of EPT (Ephemeroptera, Plecoptera and Trichoptera)? Yes / ☒ No  Ephemeroptera larva Image credit: Dieter Tracey  Plecoptera larva Image credit: Tracey Saxby  Trichoptera larva Image credit: Tracey Saxby
--	--

Notes on aquatic invertebrates: **None observed**

4. Algal Cover

Are algae found on the streambed? ☐ Check if <u>all</u> observed algae appear to be deposited from an upstream source.	☒ Not detected ☐ Yes, < 10% cover ☐ Yes, ≥ 10% (check Yes in single indicator below)	Notes on algae cover: None observed	Photo ID: Photos 6 through 8
--	--	---	--

5. Are single indicators observed?

Indicator	Present	Notes	Photo ID
Fish	☐ Yes ☒ No, no fish ☐ No, only non-native mosquitofish	None observed	Photos 6 through 8
Algae cover ≥ 10%	☐ Yes ☒ No	None observed	Photos 6 through 8

Supplemental information E.g., aquatic or semi-aquatic amphibians, snakes, or turtles; iron-oxidizing bacteria and fungi; etc.

Photo log

Indicate if any other photos taken during the assessment

Photo ID	Description
Photos 6 through 8	Attachment E, Photographic Log

Additional notes about the assessment:

Classification: _____Ephemeral_____

1. Hydrophytic plant species	2. Aquatic invertebrates	3. EPT taxa	4. Algae	5. Single indicators • fish present • algae cover $\geq 10\%$	Classification
None	None	Absent	Absent	Absent	Ephemeral
				Present	At least intermittent
			Present	Absent	Need more information
	Few (1-19)	Absent		Present	At least intermittent
			Absent	Absent	Need more information
				Present	At least intermittent
		Present	Present	Absent	Need more information
				Present	At least intermittent
				Present	At least intermittent
	Many (20+)	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present	Absent	Need more information
				Present	At least intermittent
		Present			At least intermittent
					At least intermittent
Few (1-2)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent	Absent		Intermittent
			Present		At least intermittent
		Present			At least intermittent
	Many (20+)	Absent	Absent		Intermittent
			Present		At least intermittent
		Present	Absent		At least intermittent
			Present		Intermittent
Many (3+)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent			At least intermittent
		Present			Perennial
	Many (20+)	Absent			At least intermittent
		Present			Perennial

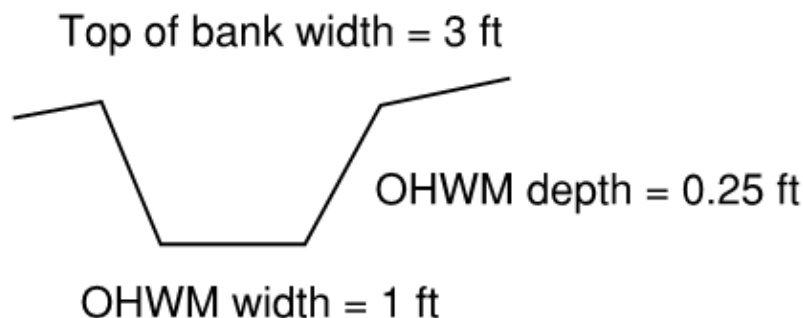
Shading provided to enhance readability by increasing the contrast between neighboring cells; empty cells indicate the classification will not change with additional information however it is recommended that all five indicators be measured and recorded during every assessment.

Beta Arid West Streamflow Duration Assessment Method

General site information

Project name or number: Tideline Kensho Residential Project		
Site code or identifier: N/A	Assessor(s): Katie Laybourn	
Waterway name: Unnamed Channel 3		Visit date: 1/19/2023
Current weather conditions (check one) ☐ Storm/heavy rain ☐ Steady rain ☐ Intermittent rain ☐ Snowing ☐ Cloudy (___ % cover) ☒ Clear/Sunny	Notes on current or recent weather conditions (e.g., precipitation in previous week): Cool, sunny weather and less than one inch of precipitation in the week prior to delineation.	Coordinates at downstream end (decimal degrees): Lat (N): 33.196593 N Long (W): -117.240733 W Datum: NAD83
Surrounding land-use within 100 m (check one or two): ☒ Urban/industrial/residential ☐ Agricultural (farmland, crops, vineyards, pasture) ☐ Developed open-space (e.g., golf course) ☐ Forested ☐ Other natural ☐ Other:	Describe reach boundaries: Channel 3 enters the southeastern corner of the survey area and extends approximately 893 linear feet northwest along the eastern edge of the survey area where it ends in a disturbed upland area south of Guajome Street. Channel 3 is connected to a larger concrete channel to the east that is directed through a stormwater culvert under Guajome Street.	
Mean channel width (m) [OHWM] 1 foot (0.91 m)	Reach length (m): 40x width; min 40 m; max 200 m. 893 feet (272 m)	Enter photo ID, or check if completed Attachment E, Photographs 9 through 12
Disturbed or difficult conditions (check all that apply): ☐ Recent flood or debris flow ☒ Stream modifications (e.g., channelization) ☐ Diversions ☐ Discharges ☐ Drought ☐ Vegetation removal/limitations ☐ Other (explain in notes) ☐ None	Notes on disturbances or difficult site conditions: Channel 3 is an artificial, concrete-lined channel that was constructed to capture and direct stormwater flows away from the SPRINTER transit right-of-way.	
Observed hydrology: ___ 0 ___ % of reach with surface flow ___ 0 ___ % of reach with sub-surface or surface flow ___ 0 ___ # of isolated pools		Comments on observed hydrology: No surface water flow observed during delineation.

Site sketch:



1. Hydrophytic plant species

Record up to 5 hydrophytic plant species (FACW or OBL in the **Arid West** regional wetland plant list) within the assessment area: **within the channel or up to one half-channel width**. Explain in notes if species has an odd distribution (e.g., covers less than 2% of assessment area, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID, or check if photo is taken.

Check if applicable: ☐ No vegetation in assessment area ☒ No hydrophytes in assessment area

Species	Odd distribution?	Notes	Photo ID
N/A			

Notes on hydrophytic vegetation: **All vegetation observed outside of the Channel 3 banks were upland species**

2 and 3. Aquatic invertebrates

2. How many aquatic invertebrates are quantified in a 15-minute search? Number of individuals quantified: ☒ None ☐ 1 to 19 ☐ 20 + (Do not count mosquitos) Photo ID: <u>N/A</u>	3. Is there evidence of aquatic stages of EPT (Ephemeroptera, Plecoptera and Trichoptera)? Yes / ☒ No  Ephemeroptera larva Image credit: Dieter Tracey  Plecoptera larva Tracey Saxby  Trichoptera larva Tracey Saxby
--	---

Notes on aquatic invertebrates: **None observed**

4. Algal Cover

Are algae found on the streambed? ☐ Check if <u>all</u> observed algae appear to be deposited from an upstream source.	☒ Not detected ☐ Yes, < 10% cover ☐ Yes, ≥ 10% (check Yes in single indicator below)	Notes on algae cover: None observed	Photo ID: Photos 9 through 12
--	--	---	---

5. Are single indicators observed?

Indicator	Present	Notes	Photo ID
Fish	☐ Yes ☒ No, no fish ☐ No, only non-native mosquitofish	None observed	Photos 9 through 12
Algae cover ≥ 10%	☐ Yes ☒ No	None observed	Photos 9 through 12

Supplemental information E.g., aquatic or semi-aquatic amphibians, snakes, or turtles; iron-oxidizing bacteria and fungi; etc.

Photo log

Indicate if any other photos taken during the assessment

Photo ID	Description
Photos 9 through 12	Attachment E, Photographic Log

Additional notes about the assessment:

Classification: _____Ephemeral_____

1. Hydrophytic plant species	2. Aquatic invertebrates	3. EPT taxa	4. Algae	5. Single indicators • fish present • algae cover $\geq 10\%$	Classification
None	None	Absent	Absent	Absent	Ephemeral
				Present	At least intermittent
			Present	Absent	Need more information
	Few (1-19)	Absent		Present	At least intermittent
			Absent	Absent	Need more information
				Present	At least intermittent
		Present	Present	Absent	Need more information
				Present	At least intermittent
				Present	At least intermittent
	Many (20+)	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present	Absent	Need more information
				Present	At least intermittent
		Present			At least intermittent
					At least intermittent
Few (1-2)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent	Absent		Intermittent
			Present		At least intermittent
		Present			At least intermittent
	Many (20+)	Absent	Absent		Intermittent
			Present		At least intermittent
		Present	Absent		At least intermittent
			Present		Intermittent
Many (3+)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent			At least intermittent
		Present			Perennial
	Many (20+)	Absent			At least intermittent
		Present			Perennial

Shading provided to enhance readability by increasing the contrast between neighboring cells; empty cells indicate the classification will not change with additional information however it is recommended that all five indicators be measured and recorded during every assessment.

Attachment G. Geographic Information Systems Data

Can be provided upon request.

This page intentionally left blank.

Attachment H. Aquatic Resources Table

This page intentionally left blank.

[illegible]

This page intentionally left blank.

Attachment 3. Species Observed

This page intentionally left blank.

Plant Species Observed

Scientific Name	Common Name	Special Status
GYMNOSPERMS		
Pinaceae - Pine family		
<i>Pinus jeffreyi</i>	Jeffrey pine	
EUDICOTS		
Aizoaceae - Fig-marigold family		
* <i>Carpobrotus chilensis</i>	Chilean sea fig	
Anacardiaceae - Sumac or Cashew family		
* <i>Schinus molle</i>	Peruvian pepper tree	
* <i>Schinus terebinthifolius</i>	Brazilian pepper tree	
Asteraceae - Sunflower family		
<i>Ambrosia psilostachya</i>	Western ragweed	
<i>Baccharis pilularis ssp. pilularis</i>	Coyote brush	
<i>Baccharis salicifolia ssp. salicifolia</i>	Mule fat	
<i>Baccharis sarothroides</i>	Broom baccharis	
<i>Erigeron sp.</i>	Daisy	
* <i>Glebionis coronaria</i>	Crown daisy	
* <i>Helminthotheca echioides</i>	Bristly ox-tongue	
<i>Heterotheca grandiflora</i>	Telegraph weed	
<i>Isocoma menziesii</i>	Coastal goldenbush	
<i>Pseudognaphalium californicum</i>	California everlasting	
* <i>Silybum marianum</i>	Blessed milkthistle	
* <i>Sonchus asper ssp. asper</i>	Prickly sow thistle	
* <i>Sonchus oleraceus</i>	Common sow thistle	
Boraginaceae - Borage family		
<i>Amsinckia sp.</i>	Fiddleneck	
Brassicaceae - Mustard family		
* <i>Brassica nigra</i>	Black mustard	
* <i>Hirschfeldia incana</i>	Shortpod mustard	
* <i>Raphanus sativus</i>	Radish	
* <i>Sisymbrium irio</i>	London rocket	
Cactaceae - Cactus family		
* <i>Opuntia ficus-indica</i>	Mission prickly pear	

Scientific Name	Common Name	Special Status
Chenopodiaceae - Goosefoot family		
<i>Atriplex lentiformis</i>	Big saltbush	
* <i>Chenopodium murale</i>	Nettleleaf goosefoot	
* <i>Salsola australis</i>	Southern russian thistle	
Convolvulaceae - Morning-glory family		
<i>Calystegia sp.</i>	Morning-glory	
Crassulaceae - Stonecrop family		
* <i>Crassula ovata</i>	Jade plant	
Cucurbitaceae - Gourd family		
<i>Marah macrocarpa</i>	Large fruit wild cucumber	
Euphorbiaceae - Spurge family		
* <i>Croton setigerus</i>	Doveweed	
* <i>Ricinus communis</i>	Castorbean	
Fabaceae - Legume family		
<i>Acmispon glaber</i>	Deerweed	
Fagaceae - Oak family		
<i>Quercus agrifolia</i>	Coast live oak	
Geraniaceae - Geranium family		
* <i>Erodium cicutarium</i>	Redstem filaree	
* <i>Erodium moschatum</i>	Whitestem filaree	
Lamiaceae - Mint family		
* <i>Marrubium vulgare</i>	Horehound	
Malvaceae - Mallow family		
* <i>Alyogyne huegelii</i>	Blue hibiscus	
* <i>Malva parviflora</i>	Cheeseweed	
Myrtaceae - Myrtle family		
* <i>Eucalyptus sideroxylon</i>	Red River gum	
Nyctaginaceae - Four O'clock family		
* <i>Bougainvillea sp.</i>	Bougainvillea	
Oxalidaceae - Oxalis family		
* <i>Oxalis pes-caprae</i>	Bermuda buttercup	
* <i>Oxalis purpurea</i>	Purple wood-sorrel	
Papaveraceae - Poppy family		
<i>Eschscholzia californica</i>	California poppy	

Scientific Name	Common Name	Special Status
Polygonaceae - Buckwheat family		
<i>Eriogonum fasciculatum</i>	California buckwheat	
Solanaceae - Nightshade family		
<i>Datura wrightii</i>	Wright's jimsonweed	
* <i>Nicotiana glauca</i>	Tree tobacco	
Tropaeolaceae - Nasturtium family		
* <i>Tropaeolum majus</i>	Garden nasturtium	
Urticaceae - Nettle family		
* <i>Urtica urens</i>	Dwarf nettle	
Verbenaceae - Vervain family		
* <i>Lantana camara</i>	Lantana	
MONOCOTS		
Agavaceae - Century Plant family		
* <i>Agave americana</i>	American century plant	
* <i>Agave attenuata</i>	Fox tail agave	
Arecaceae - Palm family		
* <i>Phoenix canariensis</i>	Canary Island palm	
* <i>Phoenix dactylifera</i>	Date palm	
* <i>Syagrus romanzoffiana</i>	Queen palm	
* <i>Washingtonia robusta</i>	Mexican fan palm	
Asparagaceae - Asparagus family		
* <i>Asparagus asparagoides</i>	African asparagus fern	
Asphodelaceae - Asphodel family		
* <i>Aloe maculata</i>	Spotted Aloe	
Cyperaceae - Sedge family		
* <i>Cyperus involucratus</i>	Umbrella flatsedge	
Iridaceae - Iris family		
* <i>Chasmanthe floribunda</i>	African cornflag	
Poaceae - Grass family		
* <i>Arundo donax</i>	Giant reed	
* <i>Avena barbata</i>	Slender wild oat	
* <i>Cynodon dactylon</i>	Bermuda grass	
<i>Hordeum sp.</i>	Barley	
* <i>Pennisetum setaceum</i>	African fountain grass	

	Scientific Name	Common Name	Special Status
*	<i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	

Legend

*= Non-native or invasive species

Special Status:

Federal:

FE = Endangered

FT = Threatened

State:

SE = Endangered

ST =Threatened

CRPR – California Rare Plant Rank

1A. Presumed extinct in California and elsewhere

1B. Rare or Endangered in California and elsewhere

2A. Presumed extinct in California, more common elsewhere

2B. Rare or Endangered in California, more common elsewhere

3. Plants for which we need more information - Review list

4. Plants of limited distribution - Watch list

Threat Ranks

.1 - Seriously endangered in California

.2 – Fairly endangered in California

.3 – Not very endangered in California

Wildlife Species Observed

Scientific Name	Common Name	Special Status
INVERTEBRATES		
Moths, Skippers and Butterflies		
<i>*Pieris rapae</i>	Cabbage White	
<i>Brephidium exile</i>	Western Pygmy-Blue	
<i>Nymphalis antiopa</i>	Mourning Cloak	
<i>Danaus plexippus</i>	Monarch	FC, SDC Group 2
VERTEBRATES		
Reptiles		
<i>Sceloporus occidentalis longipes</i>	Great Basin Fence Lizard	
Birds		
<i>Ardea herodias</i>	Great Blue Heron	SDC Group 2
<i>Buteo lineatus</i>	Red-shouldered Hawk	SDC Group 2
<i>Zenaida macroura</i>	Mourning Dove	
<i>Calypte anna</i>	Anna's Hummingbird	
<i>Selasphorus sasin</i>	Allen's Hummingbird	
<i>Picoides nuttallii</i>	Nuttall's Woodpecker	
<i>Sayornis saya</i>	Say's Phoebe	
<i>Tyrannus vociferans</i>	Cassin's Kingbird	
<i>Corvus brachyrhynchos</i>	American Crow	
<i>Corvus corax</i>	Common Raven	
<i>Poecile gambeli</i>	Mountain Chickadee	
<i>Thryomanes bewickii</i>	Bewick's Wren	
<i>Mimus polyglottos</i>	Northern Mockingbird	
<i>Oreothypis celata</i>	Orange-crowned Warbler	
<i>Setophaga coronata</i>	Yellow-rumped Warbler	
<i>Melospiza crissalis</i>	California Towhee	
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow	
<i>Icterus cucullatus</i>	Hooded Oriole	
<i>Haemorhous mexicanus</i>	House Finch	
<i>*Passer domesticus</i>	House Sparrow	
Mammals		
<i>Sylvilagus audubonii</i>	Desert Cottontail	
<i>Spermophilus beecheyi</i>	California Ground Squirrel	

Scientific Name	Common Name	Special Status
<i>Odocoileus hemionus</i>	Southern Mule Deer	SDC Group 2
<i>Thomomys bottae</i>	Botta's Pocket Gopher	
<i>Canis familiaris</i>	Domestic dog	

Legend

*= Non-native or invasive species

Special Status:

Federal:

FC = Federate Candidate for Listing

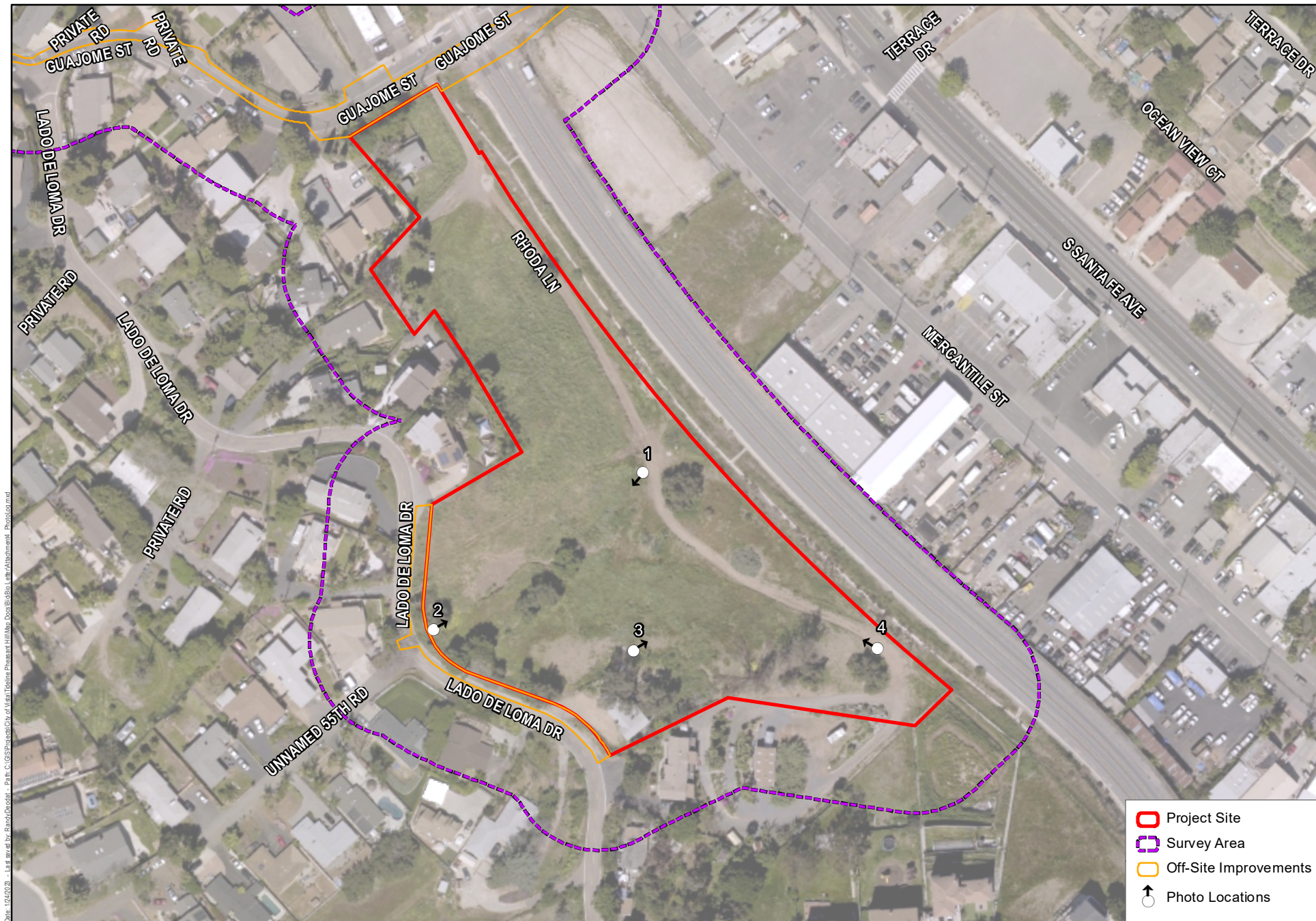
County:

SDC Group 1 = includes animal species that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met.

SDC Group 2 - includes animal species that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

Attachment 4. Photographic Log

This page intentionally left blank.



Source: SanGIS Imagery 2017.



Harris & Associates



0 75 150
Feet

Attachment 4

Project Site Photographic Log Locations

Tideline Kensho Residential Project

This page intentionally left blank.

Central/Western Project Site



Photograph 1: (33.195493 N, -117.240097 W) Southwest-facing and up-slope view of the central and western portions of the Project site. This photo shows the disturbed habitat surrounding the non-vegetated Channels 1 and 2 in the foreground and the coast live oak woodland in the background.



Photograph 2: (33.194999 N, -117.240876 W) Northeast-facing and down-slope view of the central and western portions of the Project site. This photo shows the disturbed habitat surrounding the non-vegetated Channel 1 in the foreground and the coast live oak woodland in the right-hand-side background.

Southern Project Site



Photograph 3: (33.194887 N, -117.239800 W) East-facing view of the southern portion of the Project site. This photo shows the disturbed habitat in the foreground and the recreational vehicle (RV) in the background.



Photograph 4: (33.194857 N, -117.239358 W) Northwest-facing view of the southern portion of the Project site. This photo shows the Rhoda Lane dirt road in the foreground, non-native grassland in the right-hand-side background, and the RV and associated storage shed in the left-hand-side background.
