

## **Appendix C. Biological Resources Letter Report**

*This page intentionally left blank.*





September 27, 2021

Darren Parker  
City of Escondido, Planning Division  
201 North Broadway  
Escondido, California 92025

**Subject: Biological Resources Letter Report for the East Valley Specific Plan PEIR**

Dear Mr. Parker:

This letter report documents biological resources in the City of Escondido (City), California, for the East Valley Specific Plan (EVSP or project) Program Environmental Impact Report (Attachment 1; Figures, Figure 1, Regional Location, and Figure 2, Project Location).

## **Project Description and Location**

The City is preparing a new EVSP that would focus growth and increase density in the new EVSP Area, located in central Escondido (Figure 1). The goal of the proposed EVSP is to encourage new housing opportunities, improve economic vibrancy, and allow for flexibility in use and implementation as the EVSP Area changes over time. The EVSP would rezone the existing EVSP Area to cluster uses to create a more cohesive pattern and design with a goal of revitalizing the physical character and economic health of the community. The proposed land uses are shown on Figure 2. The EVSP presents goals, policies, design standards, and implementation strategies for topics such as land use, mobility, and parks. The EVSP is intended to provide guidance for private development and public investment through 2035. The EVSP includes a Density Transfer Program (EVSP Density Transfer Program) to enable the City to transfer densities from undeveloped or underutilized properties in the EVSP Area to other properties in the EVSP Area to enable a developing property to increase its density beyond what current zoning would permit.

The EVSP Area is located in central Escondido, immediately adjacent to, and east of downtown. As shown on Figure 2, the EVSP Area is generally bound by Escondido Creek to the north; Harding Street to the east, Grand Avenue and East 2nd Avenue to the south; and North Hickory, South Hickory, and North Fig Streets to the west. The EVSP Area lies adjacent to a variety of neighborhoods; Downtown Escondido located to the west, residential neighborhoods located to the north and south, and large commercial shopping centers located to the east. The Escondido Transit Center is an approximately 20-minute walk southwest of the EVSP Area and there are multiple transit stops throughout.

## **Environmental Setting**

Following is a description of the existing conditions in the EVSP Area.

### **Land Use**

The majority of the EVSP Area is urban/developed land surrounded by urban/developed land in the center of the City. Escondido Creek, a concrete-lined flood control channel, flows through the center of Escondido and along the northern edge of the EVSP Area, in an east–west direction.

### **Topography and Soils**

The EVSP Area ranges in elevation from 650 to 715 feet above mean sea level (Figure 3, USGS Topographic Map). The U.S. Department of Agriculture Natural Resources Conservation Service soil series identifies the five soils in the planning area, including, Fallbrook sandy loams, Placencia sandy loam, Ramona sandy loams, Reiff Fine sandy loams, and Visalia sandy loam, as shown on Figure 4, Soils.

## Hydrology

The EVSP Area is located in part of the Carlsbad and San Dieguito Watersheds (Hydrologic Unit Codes 904, and 905).

The Carlsbad Watershed covers approximately 211 square miles and extends from the headwaters above Lake Wohlford in the east to the Pacific Ocean in the west, and borders San Luis Rey and San Dieguito Watersheds to the north and south, respectively (Project Clean Water 2021a). There are numerous important surface hydrologic features within the Carlsbad Watershed Management Area including four unique coastal lagoons, three major creeks, and two large water storage reservoirs.

The San Dieguito Watershed covers approximately 345 square miles including portions of the Cities of Del Mar, Escondido, Poway, San Diego, and Solana Beach, and unincorporated areas of San Diego County (Project Clean Water 2021b). It lies in the west-central portion of the County and neighbors Carlsbad and San Luis Rey Watersheds to the north and Los Peñasquitos and San Diego River Watersheds to the south. Rainfall to the area primarily drains through the San Dieguito River, which stretches east to west and originates near Santa Ysabel, in the Cuyamaca Mountains. The river eventually discharges to the Pacific Ocean near the communities of Del Mar and Solana Beach.

## Climate

Meteorological data for the planning area are gathered at the Ramona Airport approximately 30 miles southeast of the EVSP Area (NOAA 2021). In the EVSP Area, the normal daily maximum temperature is 84 degrees Fahrenheit (°F) in August, and the normal daily minimum temperature is 45°F in December. The average annual temperature is approximately 65°F, with very few days exceeding 91°F and dropping below 38° (NOAA 2021). Due to the temperate climate, the growing season is typically year-round.

The average precipitation in the EVSP Area is approximately 15 inches annually, primarily occurring from October through April. Based on data from the Ramona Airport, the vicinity of the EVSP Area receives the greatest amount of rain, an average of approximately 3.4 inches, in February (NOAA 2021).

## Regulatory Setting

This section summarizes federal, state, regional, and local regulations, plans, policies, and programs that provide protection and management of sensitive biological resources that are applicable to the project. The federal government administers nonmarine plant- and wildlife-related issues through the U.S. Fish and Wildlife Service (USFWS), while waters of the United States issues are administered by the U.S. Army Corps of Engineers (USACE). California law relating to wetland, water-related, and wildlife issues is administered by the California Department of Fish and Wildlife (CDFW). Under the California Environmental Quality Act (CEQA), impacts associated with a proposed project or program are assessed with regard to significance criteria determined by the CEQA lead agency (in this case, the City of Escondido) pursuant to the CEQA Guidelines. Biological resources-related laws and regulations that apply include the federal Endangered Species Act (FESA), Migratory Bird Treaty Act (MBTA), Clean Water Act (CWA), CEQA, California Endangered Species Act, and California Fish and Game Code.

### Federal

**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.

**FESA, Sections 7 and 9 (16 USC 1531 et seq.; 50 CFR Part 402).** This prohibits 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 USFWS through a permit under Sections 4(d), 7, or 10(a).

**MBTA (16 USC 703–712; 50 CFR 10).** The federal MBTA prohibits the direct or indirect take of migratory birds and their active nests unless permitted.

## 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.).** Section 2050 of the California Fish and Game Code prohibits any activities that would jeopardize or take a species designated as threatened or endangered by the state.

**Streambed Alteration Agreement (California Fish and Game Code, Section 1600).** The California Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or their tributaries, or use materials from a streambed, to submit a notification for a Streambed Alteration Agreement to the CDFW.

**California Fish and Game Code, Section 1602.** Section 1602 regulates water resources in the State of 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 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.

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

**CEQA, as amended (California Public Resources Code, Section 21000 et seq.).** The goal of CEQA is to assist California public agencies in identifying potential significant negative environmental impacts caused by their actions and avoiding or mitigating those impacts when feasible.

**California Fully Protected Wildlife Species Provision (California Fish and Game Code, Sections 3511, 4700, 5050, and 5515).** These provisions prohibit the taking of fully protected birds, mammals, amphibians and fish.

**California Native Plant Protection Act of 1977 (California Fish and Game Code, Section 1900–1913).** These provisions preserve, protect, and enhance endangered or rare native plants of the state.

**Regional Water Quality Control Board (RWQCB).** The RWQCB regulates impacts to 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 to waters of the United States. The RWQCB also regulates impact to waters of the state (usually limited to “isolated” waters or swales that may not fall under USACE jurisdiction) under the Porter-Cologne Water Quality Control Act.

**Natural Community Conservation Planning Act (NCCP Act), as amended (California Fish and Game Code, Section 2800–2835).** The primary objective of the NCCP 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 (Porter-Cologne).** Regulated by the RWQCB for impacts to waters of the state. Although water quality issues related to impacts to waterways are normally addressed during 401 Water Quality Certification, should a water of the State of California be determined by the USACE not to have CWA jurisdiction, Porter-Cologne 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.

## Local

**City of Escondido – Mature and Protected Tree Ordinance.** The City establishes regulations and standards for the preservation, protection, and selected removal of mature and protected trees. A City-issued vegetation removal permit is required before clearing, pruning, or destroying vegetation and before any encroachments by

construction activities that disturb the root system within the dripline (i.e., the outer extent margin of a tree's canopy) of any mature and protected trees. Issuance of a vegetation removal permit requires the submittal of a tree survey and, as applicable, a tree protection and/or replacement mitigation plan. Tree protection, removal, and replacement standards are outlined in the Escondido General Plan and in Chapter 33 (Zoning), Article 55 (Grading and Erosion Control) of the Escondido Municipal Code (Ordinance 2001-21). The Escondido General Plan recognizes any oak tree species and other mature trees, as defined below, as significant aesthetic and ecological resources deserving protection within the boundaries of the City. Section 33-1052 and 33-1068 of the Escondido Municipal Code sets forth rules and standards for mature tree removal, protection, and replacement.

**Section 33-1502 (Definitions).** A mature tree is any self-supporting woody perennial plant, native or ornamental, with a single well-defined stem or multiple stems supporting a crown of branches. The single stem, or one of multiple stems of any mature oak tree (genus *Quercus*), shall have a diameter 4 inches or greater when measured at 4.5 feet diameter at breast height (DBH) above the tree's natural grade. All other mature trees shall have a DBH of 8 inches, or greater, for a single stem or one of the multiple stems. A protected tree is any oak that has a 10-inch or greater DBH, or any other tree species or individual specimen listed on the historic register, or is determined to substantially contribute to the historic character of a property or structure listed on the local historic register, pursuant to Article 40 of the Escondido Zoning Code.

**Section 33-1068 (Vegetation Clearing and Protection).** Pursuant to this section, regulations and standards are established to safeguard life and property and the public welfare concerning the preservation, protection, and selected removal of mature trees, protected trees, and historically significant trees located within the boundaries of the City. A vegetation removal permit and appropriate standards for the replacement of vegetation approved for removal is required before clearing, pruning, or destroying City-regulated vegetation, and before any encroachments by construction activities that destroy or disturb the root system within the dripline of regulated trees. Issuance of a vegetation removal permit requires the submittal of a tree survey and may potentially require a tree replacement and/or protection plan.

**Section 33-1069 (Vegetation Protection and Replacement).** Pursuant to this section, every feasible effort and measure to avoid damage to existing trees to remain on site shall be taken by the owner and developer during clearing, grading, and construction activity, including the placement of City-approved tree protection barriers. If mature trees cannot be preserved on site, they shall be replaced at a minimum ratio of 1:1. If protected trees cannot be preserved on site they shall be replaced at a minimum ratio of 2:1. However, the number, size, and species of replacement trees can be determined on a case-by-case basis by the City's Director of Community Development.

## Escondido General Plan

### *Resource Conservation Element*

The EVSP Area is within the Escondido General Plan planning area and, therefore, is subject to the goals and policies outlined in the General Plan Elements. The Resource Conservation Element of the Escondido General Plan (City of Escondido 2012a) provides detailed goals and policies to protect and maintain natural resources, such as open space, wildlife, trails, visual resources agricultural resources, historical and cultural resources, water, air, and climate, and to prevent wasteful resource exploitation, degradation, and destruction. The following goals and policies apply to biological resources.

### **Biological and Open Space Resources**

- **Goal 1:** Preservation and enhancement of Escondido's open spaces and significant biological resources as components of a sustainable community.
  - **Policy 1.1:** Establish and maintain an interconnected system of open space corridors, easements, trails, public/quasi-public land, and natural areas that preserves sensitive lands, permanent bodies of water, floodways, and slopes over 35 percent, and provides for wildlife movement.
  - **Policy 1.6:** Preserve and protect significant wetlands, riparian, and woodland habitats as well as rare, threatened or endangered plants and animals and their habitats through avoidance. If avoidance is not

possible, require mitigation of resources either on- or off-site at ratios consistent with State and federal regulations, and in coordination with those agencies having jurisdiction over such resources.

- **Policy 1.7:** Require that a qualified professional conduct a survey for proposed development projects located in areas potentially containing significant biological resources to determine their presence and significance. This shall address any flora or fauna of rare and/or endangered status, declining species, species and habitat types of unique or limited distribution, and/or visually prominent vegetation.
- **Policy 1.8:** Require that proposed development projects implement appropriate measures to minimize potential adverse impacts on sensitive habitat areas, such as buffering and setbacks. In the event that significant biological resources are adversely affected, consult with appropriate state and federal agencies to determine adequate mitigation or replacement of the resource.
- **Policy 1.9:** Encourage proposed development projects to minimize the removal of significant stands of trees unless needed to protect public safety and to limit tree removal to the minimum amount necessary to assure continuity and functionality of building spaces.
- **Policy 1.10:** Prohibit any activities in riparian areas other than those permitted by appropriate agencies to protect those resources.
- **Policy 1.11:** Construct appropriate barriers to be maintained by property owners or homeowners' associations that restrict access to areas containing sensitive biological resources.
- **Policy 1.12:** Promote the use of native plants for public and private landscaping purposes within the city.

#### **Trail Network**

- **Policy 2.5:** Ensure safe and efficient maintenance of trails that minimize impacts to the environment.
- **Policy 2.9:** Employ sustainable practices for landscaping, use pervious paving materials to minimize stormwater runoff, and employ other techniques for the construction and improvement of the trail network.

#### **Water Resources and Quality**

- **Goal 6:** Preservation and protection of the City's surface water and groundwater quality and resources.
  - **Policy 6.2:** Protect the surface water resources in the city including Lake Wohlford, Dixon Lake, Lake Hodges, Escondido Creek, and other waterways.
  - **Policy 6.4:** Require new development to preserve areas that provide opportunities for groundwater recharge (i.e., areas where substantial surface water infiltrates into the groundwater), stormwater management, and water quality benefits.
  - **Policy 6.5:** Maintain natural and improved drainages as permanent open space.
  - **Policy 6.6:** Control encroachments into wetlands and designated floodways to protect the community's water resources.
  - **Policy 6.8:** Maintain Escondido's natural creek system in an undisturbed state with a minimum of a 50-foot buffer and setback for development, or as established by appropriate wildlife agencies, unless stream course alteration, channelization, and/or improvements are approved by necessary state and federal agencies and the City.
  - **Policy 6.9:** Conserve and restore creeks to their natural states whenever possible, and allow areas where channelization has occurred for flood control purposes to serve as urban open space.
  - **Policy 6.10:** Maintain Escondido's natural creek system in an undisturbed state with a minimum of a 50-foot buffer and setback for development, or as established by appropriate wildlife agencies, unless stream course alteration, channelization, and/or improvements are approved by necessary state and federal agencies and the City.
  - **Policy 6.12:** Regulate construction and operational activities through the use of stormwater protection measures in accordance with the City's National Pollution Discharge Elimination System permit.
  - **Policy 6.14:** Require new development to protect the quality of water resources and natural drainage systems through site design and use of source controls, stormwater treatment, runoff reduction measures, best management practices, and Low Impact Development measures.

## County of San Diego Draft North County Multiple Species Conservation Program

The EVSP Area is within the incorporated City boundary, which is not within the jurisdiction of the County of San Diego Draft North County MSCP Plan. In addition, the North County MSCP Plan is in draft form and not yet adopted. Therefore, the EVSP Area is not subject to the Draft North County MSCP Plan.

## Methods

This biological resources analysis included a database and literature review to document the existing biological conditions of the EVSP Area. The County of San Diego geographic information system (GIS) and National Wetlands Inventory Wetland Mapper databases were utilized to identify and quantify the vegetation communities and aquatic resources within the EVSP Area. No on-site biological surveys or field reconnaissance were conducted as a part of this project. The results of this review provide information on the potential constraints to project development due to the presence of sensitive biological resources.

## Literature Review

The following were reviewed to gather biological resources data pertinent to the project:

- Escondido General Plan Environmental Impact Report (City of Escondido 2012b)
- Escondido General Plan (City of Escondido 2012a)
- County of San Diego MSCP (County of San Diego 1998)
- California Natural Diversity Database (CDFW 2021)
- USFWS National Wetlands Inventory Wetlands Mapper (USFWS 2021a)
- USFWS Information for Planning and Consultation (USFWS 2021b)
- Calflora Database (Calflora 2021)
- The California Native Plant Society (CNPS) Rare Plant Program Inventory of Rare Plants (CNPS 2021)

## Results

The results presented in this section provide data from the database review conducted for the EVSP Area.

### Vegetation Communities and Land Cover Types

The vegetation communities and land cover types identified in the EVSP Area include open water and urban/developed land (Figure 5, Vegetation Communities and Land Cover Types). Table 1, Vegetation Communities and Land Cover Types in the East Valley Specific Plan, presents the acreages of the vegetation communities and land cover types in the EVSP Area.

**Table 1. Vegetation Communities and Land Cover Types in the East Valley Specific Plan**

Vegetation Community and Land Cover Type	Planning Area (acres) <sup>2</sup>
<b>Aquatic</b>	
Open Water <sup>1</sup>	3.6
<b>Disturbed and Urban/Developed</b>	
Urban/Developed Land	190.2
<b>Total</b>	<b>193.8</b>

Source: Oberbauer et al. 2008.

**Notes:**

<sup>1</sup> Sensitive vegetation community.

<sup>2</sup> Vegetation community acreages have been rounded to the nearest one-tenth acre.



## Aquatic Vegetation Communities

### **Open Water**

Open water habitat is composed of year-round bodies of water in the form of lakes, streams, ponds, or rivers. This includes portions of water bodies that are usually covered by water and contain less than 10 percent vegetative cover.

One open-water channel, Escondido Creek, occurs in the northern portion of the EVSP Area (Figure 5). Escondido Creek is a concrete-lined channel that primarily conveys water from the upper Carlsbad Watershed, including Lake Wohlford and Dixon Lake, as well as urban stormwater runoff from the EVSP Area and surrounding City.

## Disturbed and Urban/Developed Lands

### **Urban/Developed Land**

Urban/developed land includes areas of existing residential, commercial, and industrial development (locations of existing manufactured structures), roadways, parking lots, pedestrian paths, horticultural open spaces, landscape buffers and courtyards, plazas, gardens, recreation fields, and areas dominated by non-native (introduced) vegetation.

The majority of the EVSP Area consists of urban/developed land (Figure 5). The urban/developed land in the EVSP Area has the potential to provide nursery and foraging habitat for wildlife species, including birds, small mammals, and reptiles.

## Aquatic Resources

Escondido Creek runs through the northern portion of the EVSP Area (Figures 5 and 6, Aquatic Resources). This open-water channel is classified as riverine by the USFWS NWI report.

Aquatic resources delineations were not conducted for the EVSP Area. However, wetlands and waters potentially subject to the regulatory jurisdiction of the USACE pursuant to Section 404 of the CWA (33 USC 1344), RWQCB pursuant to Section 401 of the CWA or the Porter-Cologne Act, and the CDFW pursuant to Sections 1600 et seq. of the California Fish and Game Code likely occur in the EVSP Area (associated with Escondido Creek). The aquatic vegetation community, open water, occurs in the EVSP Area and may fall under the regulatory jurisdiction of the USACE, RWQCB, or CDFW (Figure 6).

Wetland and non-wetland waters including non-vegetated stream channels, erosional features, gullies, and concrete-lined channels have the potential to occur in the EVSP Area (Figure 6). These features may fall under the regulatory jurisdiction of the USACE, RWQCB, or CDFW.

## 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 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.

As described in the Literature Review section, distributions of historical sensitive plant and wildlife species observations in the vicinity of the EVSP Area were reviewed in preparation of this letter report. The sensitive plant species include thread-leaved brodiaea (*Brodiaea filifolia*), Orcutt's brodiaea (*Brodiaea orcuttii*), California adolphia (*Adolphia californica*), San Diego ambrosia (*Ambrosia pumila*), San Diego sagewort (*Artemisia palmeri*), Coulter's saltbush (*Atriplex coulteri*), wart-stemmed ceanothus (*Ceanothus verrucosus*), southern tarplant (*Centromadia parryi* ssp. *australis*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), variegated dudleya (*Dudleya variegata*), Palmer's goldenbush (*Ericameria palmeri* ssp. *palmeri*), San Diego barrel cactus (*Ferocactus viridescens*), Palmer's grapplinghook (*Harpagonella palmeri*), decumbent goldenbush (*Isocoma menziesii* var.



*decumbens*), San Diego marsh-elder (*Iva hayesiana*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), San Diego goldenstar (*Muilla clevelandii*), and Nuttall's scrub oak (*Quercus dumos*).

The sensitive wildlife species that are either known to occur or have some potential to occur within the vicinity of the EVSP Area include San Diego fairy shrimp (*Branchinecta sandiegonensis*), monarch butterfly (*Danaus plexippus*), Quino checkerspot butterfly (*Euphydryas editha quino*), Hermes copper butterfly (*Lycaena Hermes*), arroyo toad (*Anaxyrus californicus*), western spadefoot (*Spea hammondi*), California legless lizard (*Anniella pulchra*), orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), red diamond rattlesnake (*Crotalus ruber*), southwestern pond turtle (*Clemmys marmorata pallida*), Coronado skink (*Eumeces skiltonianus interparietalis*), Blainville's horned lizard (*Phrynosoma blainvillei*), Cooper's hawk (*Accipiter cooperii*), tricolored blackbird (*Agelaius tricolor*), golden eagle (*Aquila chrysaetos*), Bell's sparrow (*Artemisiospiza belli belli*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegonensis*), northern harrier (*Circus cyaneus hudsonius*), southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-breasted chat (*Icteria virens*), California black rail (*Laterallus jamaicensis coturniculus*), white-faced ibis (*Plegadis chihi*), coastal California gnatcatcher (*Polioptila californica californica*), western bluebird (*Sialia mexicana*), least Bell's vireo (*Vireo bellii pusillus*), pallid bat (*Antrozous pallidus*), Dulzura (California) pocket mouse (*Chaetodipus californicus femoralis*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), Townsend's big-eared bat (*Corynorhinus townsendii*), Stephens' kangaroo rat (*Dipodomys stephensi*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), western yellow bat (*Lasiurus xanthinus*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), San Diego desert woodrat (*Neotoma lepida intermedia*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), big free-tailed bat (*Nyctinomops macrotis*), southern mule deer (*Odocoileus hemionus fuliginata*), Pacific pocket mouse (*Perognathus longimembris pacificus*), and American badger (*Taxidea taxus*).

As previously discussed, the EVSP Area is fully built out, consisting of urban/developed land with the channelized Escondido Creek running along the northern boundary of the Specific Plan area. Therefore, the sensitive plant and wildlife species that have a potential to occur in the City were determined to have no potential to occur in the EVSP Area.

### Critical Habitat

The potential for critical habitat to occur in the EVSP Area was also analyzed. Critical habitat for San Diego ambrosia, arroyo toad, and coastal California gnatcatcher occurs around the edges of the City and is displayed on Figure 7, Critical Habitat. No critical habitat occurs in the EVSP Area.

### Wildlife Corridors

Wildlife corridors include both local movement routes and regional corridors and linkages. Local movement routes often connect resources, such as water sources, foraging areas, and den/cover sites, on a localized level, often on a daily or nightly basis. Regional movement corridors or linkages connect larger patches of open space and are important to wildlife for seasonal movements and for the long-term genetic flow between subpopulations. For large mammals, regional corridors are often required to provide a network of large-scale foraging or hunting areas. Corridors can be continuous habitat features, or "stepping stones," such as rest areas along a bird migration route. Corridors often follow linear topographic, water, or vegetation features. The overall biological value of a site is based on a variety of factors, including habitat types present, quality of habitat, diversity of biological resources present, potential to support sensitive biological resources, patch size, and connectivity to other high-quality habitat, among others.

The Escondido General Plan Environmental Impact Report (City of Escondido 2012b) and Escondido General Plan (City of Escondido 2012a) were reviewed to confirm the presence of designated habitat linkages and dispersal corridors in the planning area. These documents identify five large areas of natural habitats, located in the northeastern, eastern, southern, southwestern, and northwestern portions of the City, contain the vast majority of the City's remaining open space and have been identified by the County MSCP. These core areas provide two primary landscape linkages: 1) east-west across the northern portion of the City, including Daley Ranch, between



the County of San Diego and northern San Marcos; and 2) east-west across the southern portion of the City, as part of the San Pasqual River Valley corridor. The southern habitat linkage, in particular, is considered essential for maintaining natural genetic exchange and population connectivity for the California gnatcatcher and coastal cactus wren populations in the San Pasqual River Valley. The areas north of Daley Ranch are considered a core linkage in the Draft North County MSCP Plan.

The majority of the EVSP Area is not likely to function as a wildlife movement corridor because it is primarily made up of and surrounded by urban/developed land that does not provide connections to open space areas in the City.

## Significance of Project Impacts

### Significance Criteria

Direct impacts to biological resources occur when they are altered or destroyed during or as a result of project implementation. Examples of such impacts include removing or grading vegetation, filling wetland habitat, 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, change 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 habitat.

Appendix G of the CEQA Guidelines (CEQA Guidelines, Section 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 a significant effect on biological resources may occur if the project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
2. 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.
3. 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, hydrologic interruption, or other means.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. 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 1: Sensitive Plant and Wildlife Species

#### *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 special-status species in local or regional plans, policies, or regulations or by the CDFW or USFWS.

#### *Impact Analysis*

##### *Sensitive Plant Species*

The EVSP Area is in the central portion of the planning area and consists of and is entirely surrounded by urban/developed land with one open-water concrete channel, Escondido Creek, running through the northern

portion of the plan area, which is completely fenced in (Figure 5). No critical habitat for sensitive plant species occurs in the EVSP Area (Figure 7). As discussed in the previous section, the urban/developed land occurring in the EVSP Area is unlikely to result in impacts to native habitat because these areas have been previously disturbed and have a lower likelihood of supporting sensitive plant species. Therefore, development consistent with the EVSP would not result in direct or indirect impacts to sensitive plant species, and mitigation is not required.

### **Sensitive Wildlife Species**

The EVSP Area is in the central portion of the planning area and consists of and is entirely surrounded by urban/developed land with Escondido Creek running through the northern portion of the plan area, which is completely fenced in (Figure 5). No critical habitat for sensitive wildlife species occurs in the EVSP Area (Figure 7). As discussed in the previous section, the urban/developed land occurring in the EVSP would be less likely to result in impacts to native habitat because these areas have been previously disturbed and have a lower likelihood of supporting sensitive wildlife species. Therefore, development consistent with the EVSP would not result in direct or indirect impacts to sensitive wildlife species and mitigation is not required.

### **Nesting Birds**

Implementation of future projects in the EVSP Area would have the potential to impact nesting birds. Activities such as vegetation clearing, grubbing, or trimming could potentially harm active nesting birds. In addition to vegetation disturbance, impacts to nesting birds may include noise and other disturbances due to the proximity of construction activities. Construction activities conducted during the bird and raptor breeding season (typically January 15 through August 31) could directly or indirectly impact nesting birds and raptors. Implementation of projects consistent with the EVSP could result in potentially significant direct and indirect impacts to nesting birds and raptors and mitigation is required.

## **Threshold 2: Riparian Habitat or Other Sensitive Natural Community**

### ***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.

### ***Impact Analysis***

As previously discussed, the EVSP Area is in the central portion of the planning area and consists of and is entirely surrounded by urban/developed land with Escondido Creek running through the northern portion of the plan area (Figure 5). The urban/developed land occurring in the EVSP would be less likely to result in impacts to sensitive vegetation communities because these areas have been previously disturbed and do not support sensitive vegetation communities. While Escondido Creek is a concrete-lined channel that primarily conveys water through the EVSP Area and is unlikely to be impacted by development, this creek has the potential to support sensitive aquatic vegetation communities. Therefore, implementation of projects within or adjacent to Escondido Creek within the EVSP Area could result in potentially significant direct and indirect impacts to sensitive vegetation communities, and mitigation is required.

## **Threshold 3: Jurisdictional Aquatic Resources**

### ***Guidelines for Determination of Significance***

A significant impact would result if the project would have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrologic interruption, or other means.

### ***Impact Analysis***

As previously discussed, the EVSP Area is entirely surrounded by urban/developed land with Escondido Creek running through the northern portion of the plan area (Figure 5). While it is unlikely that the Escondido Creek channel would be impacted by development, an aquatic resources delineation was not conducted, and any

potential impacts to this aquatic resource would require consultation with the USACE, RWQCB, and CDFW. Potential impacts to state or federal jurisdictional aquatic resources would be considered significant and require permits from the USACE, RWQCB, and CDFW. An aquatic resources delineation would be required for any impacts to potentially jurisdictional aquatic resources. Future projects consistent with the EVSP within or adjacent to the Escondido Creek channel could result in significant direct and/or indirect impacts to jurisdictional aquatic resources, and mitigation is required.

#### **Threshold 4: Wildlife Corridors and Habitat Linkages**

##### ***Guidelines for Determination of Significance***

A significant impact would result if the project would 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.

##### ***Impact Analysis***

The EVSP Area is in the central portion of the City and consists of and is entirely surrounded by urban/developed land with Escondido Creek running through the northern portion of the plan area, which is completely fenced in (Figure 5). The urban/developed land occurring in the EVSP would be less likely to function as a wildlife movement corridor or nursery site because the area has been previously disturbed and does not support native habitat. Therefore, development consistent with the EVSP would not result in direct or indirect impacts to wildlife corridors and habitat linkages and mitigation is not required.

While the EVSP Area is unlikely to function as a wildlife corridor or habitat linkage because it does not support native habitat, development in the EVSP Area has the potential to remove trees or other vegetation that provides nursery sites to wildlife, particularly birds. Therefore, implementation of future projects that would remove trees or vegetation consistent with the EVSP would result in potentially significant direct and indirect impacts to nursery sites, and mitigation is required.

#### **Threshold 5: Local Policies or Ordinances**

##### ***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.

##### ***Impact Analysis***

Development in the EVSP Area, located within the City, is required to comply with policies protecting biological resources identified in the Resource Conservation Element of the Escondido General Plan (City of Escondido 2012a).

As discussed under Thresholds 1, 2, and 4, the EVSP Area projects' potential impacts to sensitive plant species and sensitive vegetation communities, wildlife corridors, and habitat linkages would not occur. Therefore, projects in the EVSP Area would not conflict with the Escondido General Plan Goal 1, Policies 1.1 through 1.12, regarding the preservation of open spaces, preserves, and biological resources in the EVSP Area.

As discussed under Thresholds 2 through 4, the EVSP Area projects' potential impacts to sensitive wildlife species (nesting birds in particular), jurisdictional aquatic resources, and nursery sites would be potentially significant before incorporation of mitigation. With implementation of mitigation measures for sensitive wildlife species, sensitive vegetation communities, jurisdictional aquatic resources, and nursery sites discussed in the Proposed Mitigation section, the project would not conflict with the Escondido General Plan Goal 1, Policies 1.1 through 1.12, regarding the preservation of open spaces, preserves, and biological resources in the planning area and County.

As discussed under Threshold 3, future projects in the planning area would avoid or, if avoidance is not feasible, fully mitigate potential impacts to jurisdictional aquatic resources, thereby complying with the Escondido General Plan Goal 6, Policies 6.1 through 6.6, 6.8 through 6.10, 6.12, and 6.14, related to conserving water resources.

No impacts related to conflicts with applicable policies or ordinances protecting biological resources would occur from implementation of projects consistent with the EVSP, and no mitigation is required.

## **Threshold 6: Regional Conservation Planning**

### ***Guidelines for Determination of Significance***

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

### ***Impact Analysis***

As discussed in the Regulatory Setting section, the EVSP Area is not located within the County of San Diego Draft North County MSCP plan area and is therefore not subject to the plan's requirements.

The EVSP Area occurs within the boundaries of the Draft Escondido MHCP Subarea Plan; however, the Draft Escondido MHCP Subarea Plan has not been approved or adopted. Therefore, the Draft Escondido MHCP Subarea Plan does not apply to the EVSP Area. Once approved, the Draft Escondido MHCP would be the applicable conservation plan for the EVSP. Existing habitat conservation agreements and required permitting from the CDFW and USFWS would ensure that future implementation of the MHCP would not be precluded by new development in the EVSP. Therefore, no impacts to regional conservation plans would occur from the implementation of projects consistent with the EVSP, and no mitigation is required.

## **Cumulative Impacts**

The area considered for cumulative impacts to biological resources includes the City and immediately surrounding lands and waterway. Cumulative development in combination with the projects in the planning area and EVSP Area may impact sensitive plant and wildlife species, riparian and sensitive habitat communities, and federally protected wetlands and 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. Implementation of projects in the EVSP Area would increase density and intensity of existing land uses. However, all projects, approved in the City's jurisdiction are required to be consistent with the Escondido General Plan conservation and open space goals and policies (City of Escondido 2012a), the Escondido Zoning Ordinance, and Escondido Excavation and Grading Ordinance. Furthermore, impacts to biological resources associated with future development consistent with the EVSP would be less than significant with mitigation incorporated. Therefore, the projects in the EVSP Area would have incremental contribution to cumulative impacts associated with biological resources, and impacts to biological resources would not be cumulatively considerable. Cumulative impacts would be less than significant, and no mitigation is required.

## **Mitigation**

### **Sensitive Wildlife Species**

#### ***Nesting Birds***

Implementation of Mitigation Measure BIO-1 would require pre-construction nesting bird surveys for projects in the EVSP Area that contain or are adjacent to mature trees, are within or adjacent to undeveloped land and/or open space in the EVSP Area, and for projects that would remove trees or vegetation to reduce potential impacts to nesting birds protected by the California Fish and Game Code and MBTA.

**BIO-1: Pre-Construction Nesting Bird Surveys.** To the extent feasible, grubbing, trimming, or clearing of vegetation from the EVSP Area shall not occur during the general bird nesting season (January 15 through September 15). If grubbing, trimming, or clearing of vegetation cannot feasibly occur outside the general bird nesting season, a qualified biologist shall perform a pre-construction nesting bird survey in the areas in the EVSP Area with vegetation supporting nesting birds. Nesting bird surveys shall occur within 10 days before the start of vegetation clearing or grubbing to determine if active bird nests are

present. If no active bird nests are identified in the planning area or within a 300-foot buffer of the planning area, no further mitigation is necessary. If active nests of bird species covered by the Migratory Bird Treaty Act are detected in the EVSP Area during the 10-day pre-construction survey, construction activities shall stay outside a 300-foot buffer around the active nest. For raptor species, this buffer shall be expanded to 500 feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by construction activity. Once the young have fledged and a qualified biologist has determined the nest is inactive, normal construction activities can occur.

### **Jurisdictional Aquatic Resources**

In the event that state- or federally protected jurisdictional aquatic resources are identified in the EVSP Area and cannot be avoided, Mitigation Measures BIO-2 and BIO-3 shall be implemented.

**BIO-2: Aquatic Resources Delineation.** Future projects within or adjacent to Escondido Creek that have the potential to impact sensitive aquatic resources shall be required to conduct an aquatic resources delineation following the methods outlined in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region to map the extent of wetlands and non-wetland waters, determine jurisdiction, and assess potential impacts. The aquatic resources shall be conducted by a qualified biologist. The results of the delineation shall be presented in an Aquatic Resources Delineation Report and be incorporated into the California Environmental Quality Act documents required for approval and permitting of the proposed project.

**BIO-3: Aquatic Resources Permitting.** Future projects within or adjacent to Escondido Creek that have been determined through Mitigation Measure BIO-2 to have a significant impact to sensitive aquatic resources shall obtain required permits and authorizations from the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and San Diego Regional Water Quality Control Board. The regulatory agency authorizations shall include impact avoidance and minimization measures and mitigation measures for unavoidable impacts. Specific avoidance and minimization measures and mitigation measures for impacts to jurisdictional resources shall be determined through discussions with the regulatory agencies during the proposed project permitting process and may include monetary contributions to a mitigation bank or habitat creation, restoration, or enhancement.

### **Significance After Mitigation**

Implementation of projects consistent with the EVSP would result in potentially significant impacts to nesting birds, jurisdictional aquatic resources, and nursery habitats.

Implementation of Mitigation Measure BIO-1 would reduce potential direct and indirect impacts to nesting birds by requiring pre-construction nesting bird surveys project sites that contain or are adjacent to mature trees, are within or adjacent to undeveloped land, and for projects that would remove trees or vegetation in the EVSP Area. With implementation of Mitigation Measure BIO-1, potential direct and indirect impacts to nesting birds from implementation of projects consistent with the EVSP would be reduced to a less than significant level.

Mitigation Measures BIO-2 and BIO-3 would be implemented to reduce impacts to state or federally protected aquatic resources by conducting aquatic resources delineation and aquatic resources permitting for development within or adjacent to the Escondido Creek channel. With implementation of Mitigation Measures BIO-2 and BIO-3, potential impacts to sensitive aquatic vegetation and state or federally protected aquatic resources through direct removal, filling, hydrological interruption, or other means from implementation of the EVSP would be reduced to a less than significant level.

Implementation of Mitigation Measure BIO-1 would reduce potential impacts to wildlife corridors, linkages, and nursery habitat by requiring pre-construction nesting bird surveys on project sites that contain or are adjacent to mature trees, are within or adjacent to undeveloped land, and for projects that would remove trees or vegetation

in the EVSP Area. With implementation of Mitigation Measure BIO-1, potential impacts to wildlife corridors, linkages, and nursery habitat from implementation of projects in the consistent with the EVSP would be reduced to a less than significant level.

With implementation of Mitigation Measures BIO-1 through BIO-3, potential impacts to sensitive biological resources from implementation of projects consistent with the EVSP would be less than significant.

## References

- Calflora. 2021. Calflora Database. Accessed March 2021. <https://www.calflora.org/>.
- CDFG (California Department of Fish and Game). 1993a. Southern California Coastal Sage Scrub NCCP Process Guidelines. Amended November.
- CDFG. 1993b. Southern California Coastal Sage Scrub NCCP Conservation Guidelines. August.
- CDFG. 1998. Natural Communities Conservation Planning General Process Guidelines.
- CDFW (California Department of Fish and Wildlife). 2016. Natural Communities Conservation Planning General Process Guidelines. Amended January 1.
- CDFW. 2021. California Natural Diversity Database (CNDDDB), RareFind 5, commercial version dated May 1, 2020. Accessed March 2021. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.
- City of Escondido. 2012. Escondido General Plan Environmental Impact Report. April.
- City of Escondido. 2012. Escondido General Plan. May.
- CNPS (California Native Plant Society). 2021. Inventory of Rare and Endangered Plants. Online edition, v8-03 0.39. Accessed March 2021. <http://www.rareplants.cnps.org>.
- County of San Diego. 1998. County of San Diego Subarea Plan. Multiple Species Conservation Program.
- Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1992. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior – Fish and Wildlife Service. December 1979. Reprinted 1992.
- Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game. October.
- NOAA (National Oceanic and Atmospheric Administration). 2021. “Ramona Airport (KRNM).” NOAA National Weather Service. Accessed February 2021. <https://forecast.weather.gov/MapClick.php?lat=33.0403&lon=-116.9049>.
- Project Clean Water. 2021a. Carlsbad Watershed Management Area. Accessed February 2021. <http://www.projectcleanwater.org/watersheds/carlsbad-wma/>.
- Project Clean Water 2021b. San Dieguito Watershed Management Area. Accessed February 2021. <http://www.projectcleanwater.org/watersheds/san-dieguito-wma/>.
- Project Clean Water 2021c. San Luis Rey Watershed Management Area. Accessed February 2021. <http://www.projectcleanwater.org/watersheds/san-luis-rey-wma/>.
- 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 March 2021. <https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf>.
- USDA (U.S. Department of Agriculture). 2021. Web Soil Survey. Natural Resources Conservation Service, Soil Survey Staff. Last modified July 31, 2019. Accessed March 2021. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- USFWS (U.S. Fish and Wildlife Service). 2021a. Information for Planning and Consultation Database. Accessed March 2021. <https://ecos.fws.gov/ipac/location/VYC7O2UW3VEMNCWJPGVZBTDW64/resources>.
- USFWS. 2021b. National Wetland Inventory Wetlands Mapper. Last updated October 1. Accessed March 2021. <https://www.fws.gov/wetlands/Data/Mapper.html>.

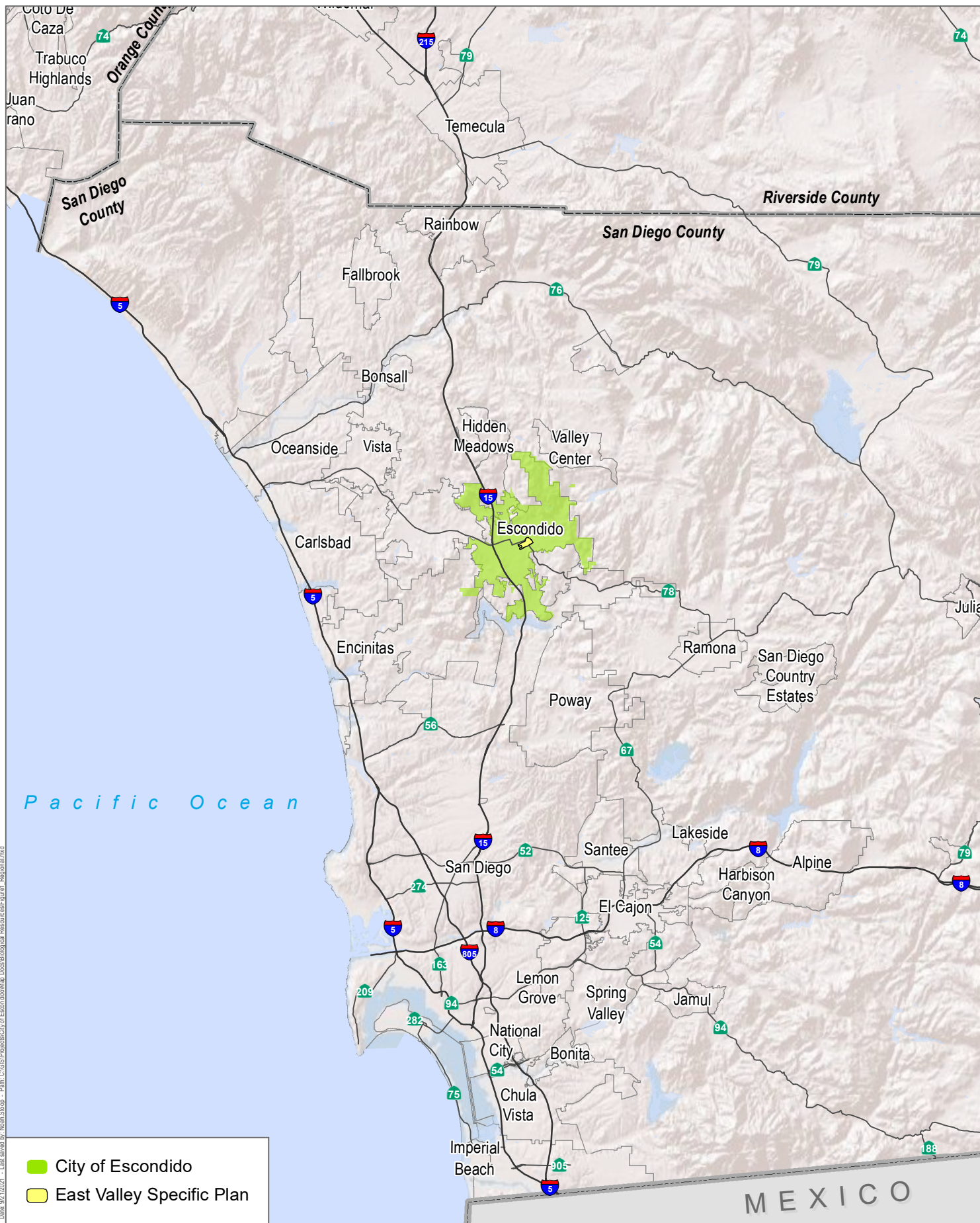


## **Attachment 1. Figures**

---

*This page intentionally left blank.*

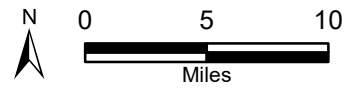




Date: 9/21/2021 - Last saved by: Noah Strop - Path: C:\GIS\Projects\City of Escondido\Map Docs\Biological Resources\Figure1 - Regional.mxd

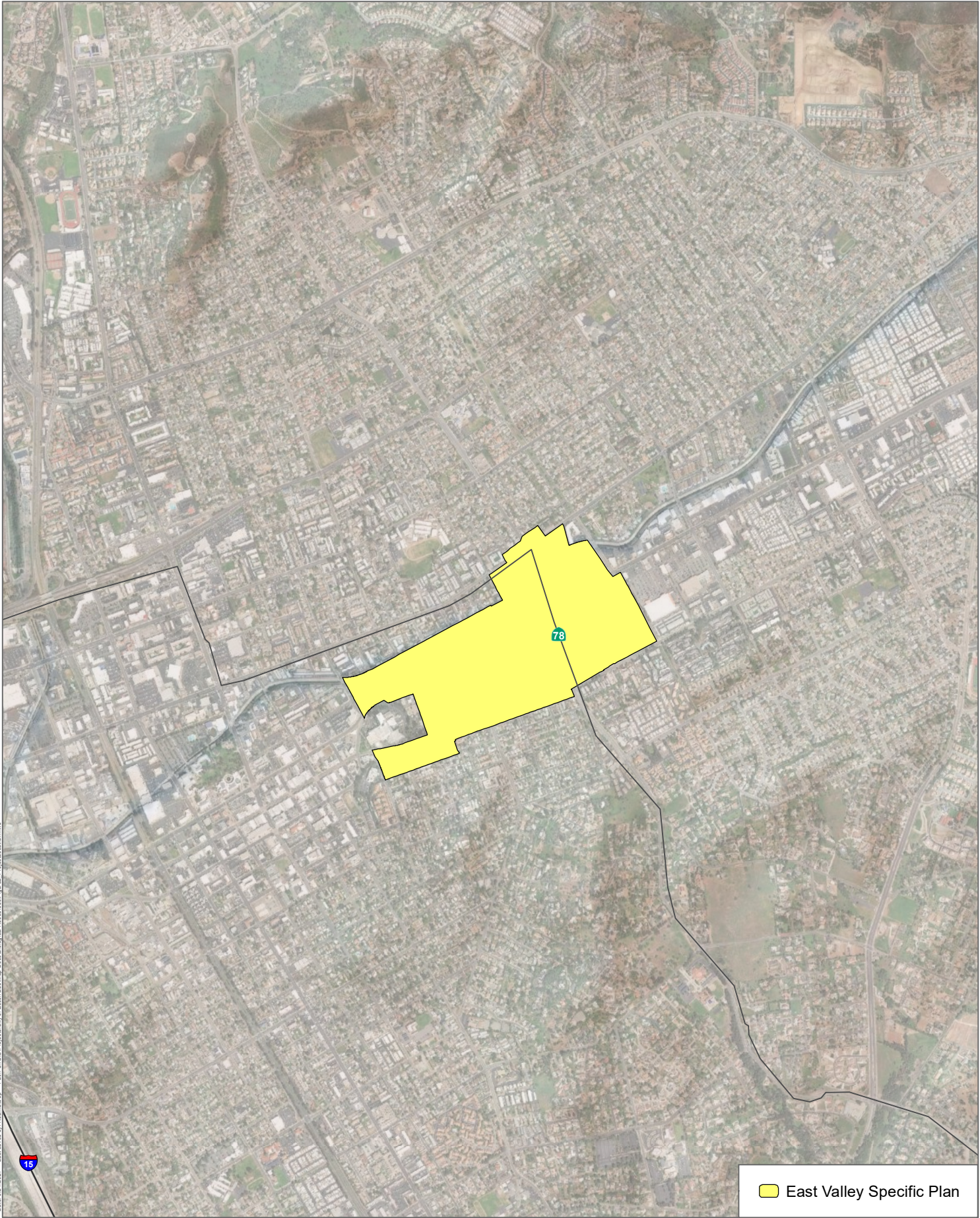
- City of Escondido
- East Valley Specific Plan

Source: ESRI 2020.



**Figure 1**  
Regional Location  
East Valley Specific Plan





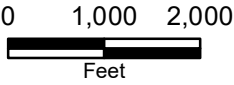
Date: 9/21/2021 - Last saved by: Noah Strop - Path: C:\GIS\Projects\City of Escondido\Map Docs\Boo\Local Resources\Figure 2 - Project Location.mxd

East Valley Specific Plan

Source: ESRI 2021.



Harris & Associates

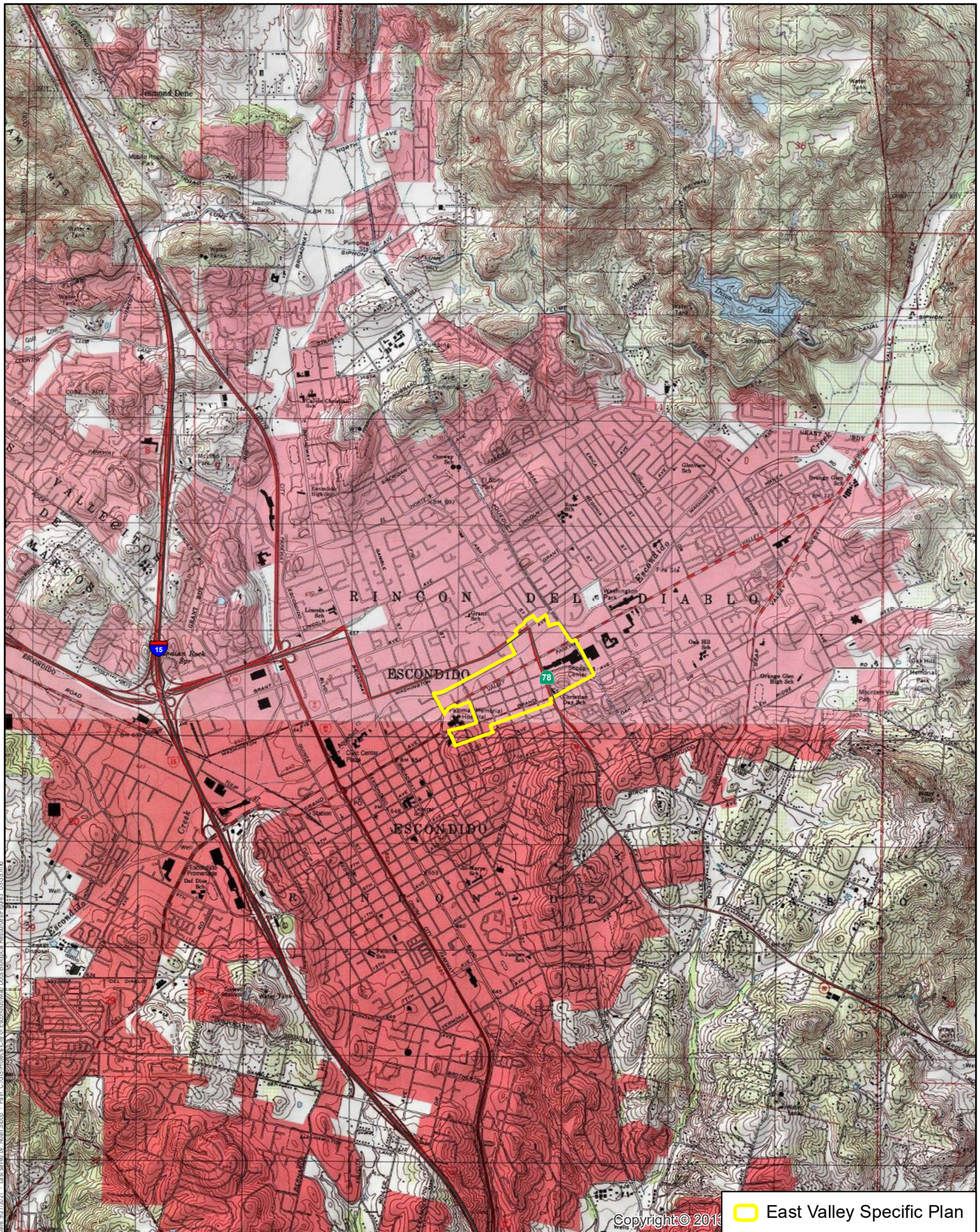


## Figure 2

Project Location

East Valley Specific Plan



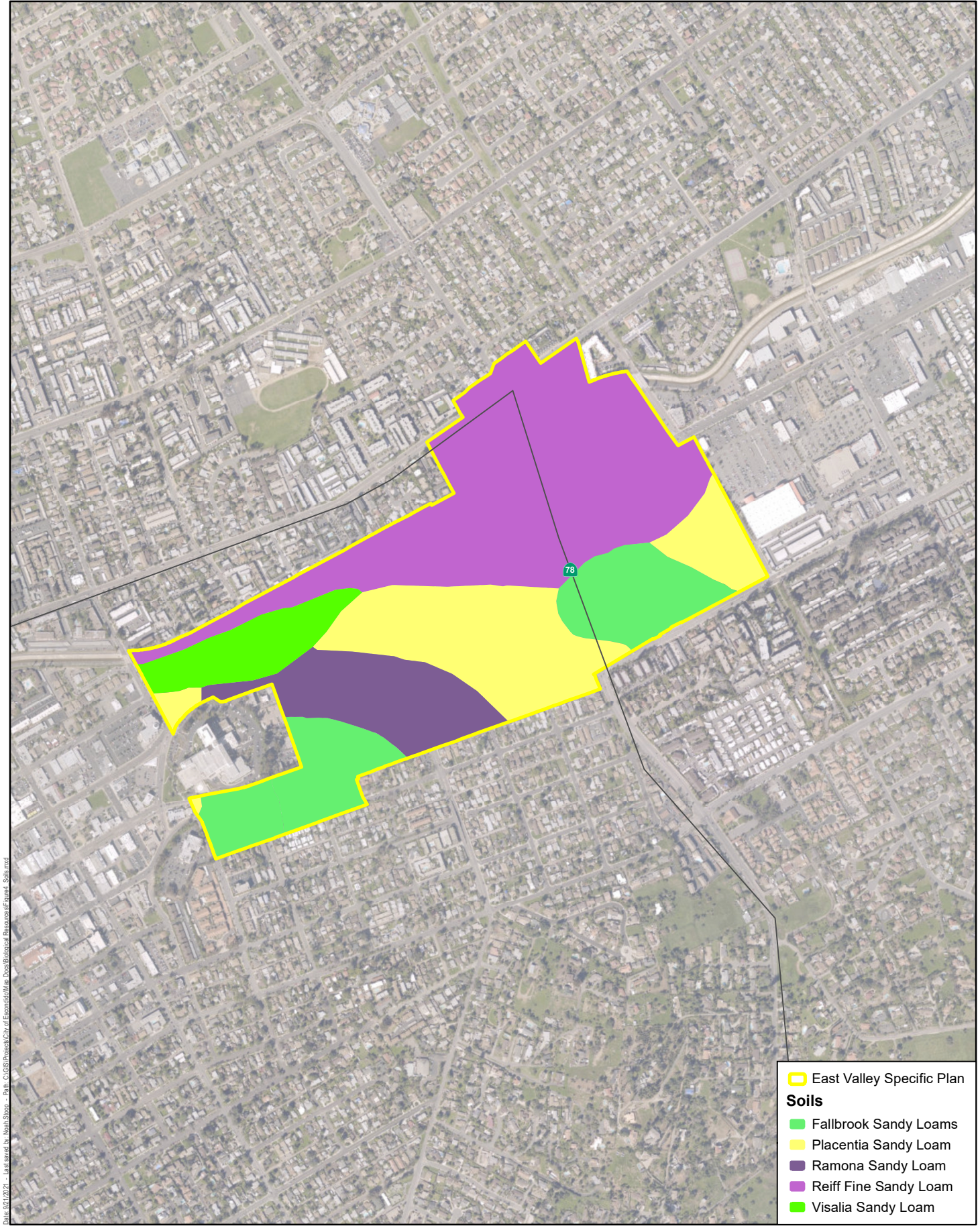


Date: 9/21/2021 - last saved by: Noah Shoop - Path: C:\GIS\Projects\City of Escondido\Map Docs\Escondido\Escondido\Figure3\_USGS.mxd

Copyright © 2013  
 Wells

Source: USGS 1967, 1983, 1988; SanGIS Imagery 2017.





Date: 9/1/2021 - List saved by Noah Shop - Path: C:\GIS\Projects\City of Escondido\Map Docs\Escondido\Resources\Figures\Figure4\_Soils.mxd

**East Valley Specific Plan**

**Soils**

- Fallbrook Sandy Loams
- Placentia Sandy Loam
- Ramona Sandy Loam
- Reiff Fine Sandy Loam
- Visalia Sandy Loam

Source: USDA 2007; SanGIS Imagery 2017.



**Harris & Associates**

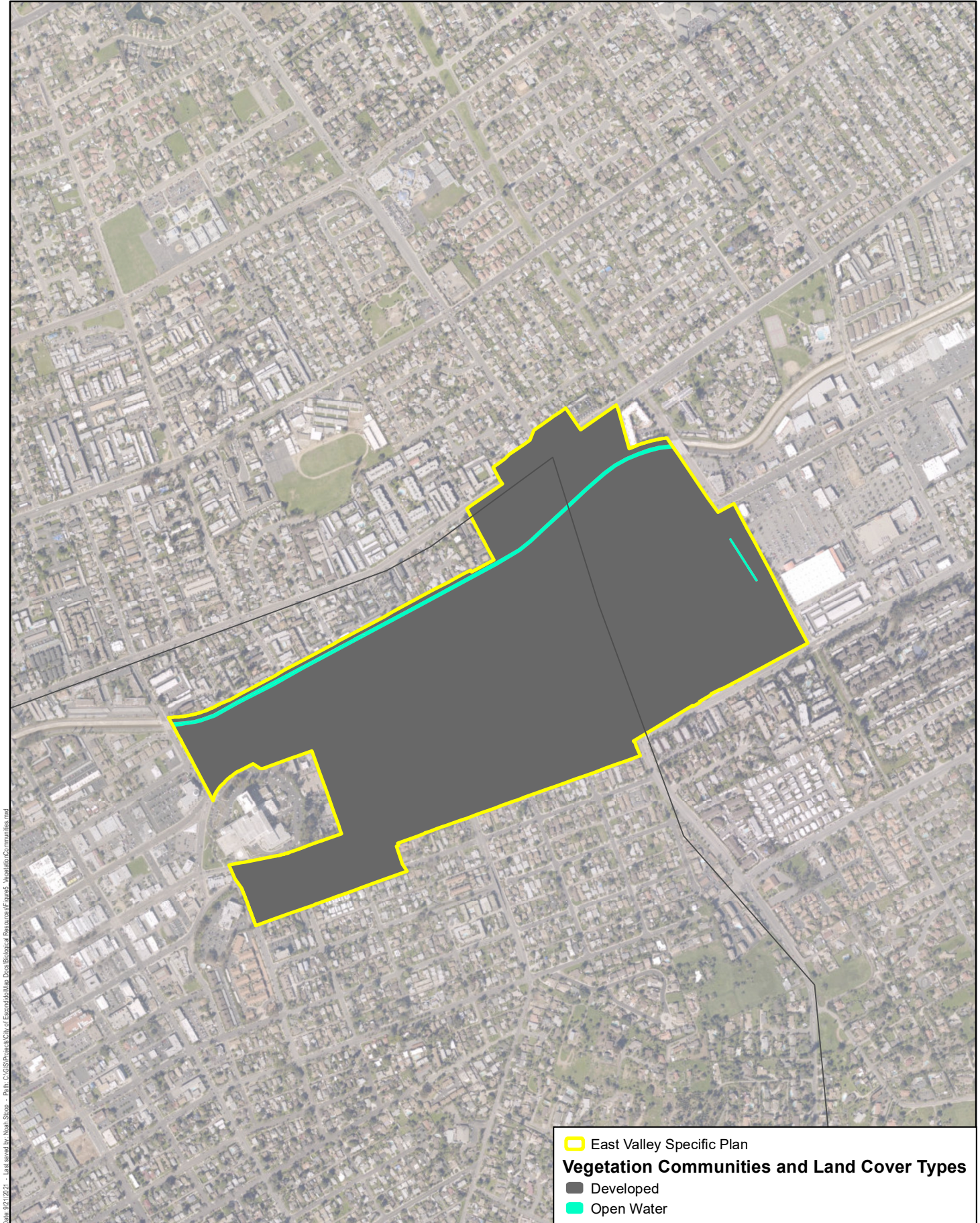


**Figure 4**

Soils

East Valley Specific Plan

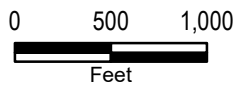




Source: National Wetlands Inventory 2021; SanGIS Vegetation 2013; SanGIS Imagery 2017.



**Harris & Associates**






**Figure 5**  
 Vegetation Communities and Land Cover Types  
 East Valley Specific Plan



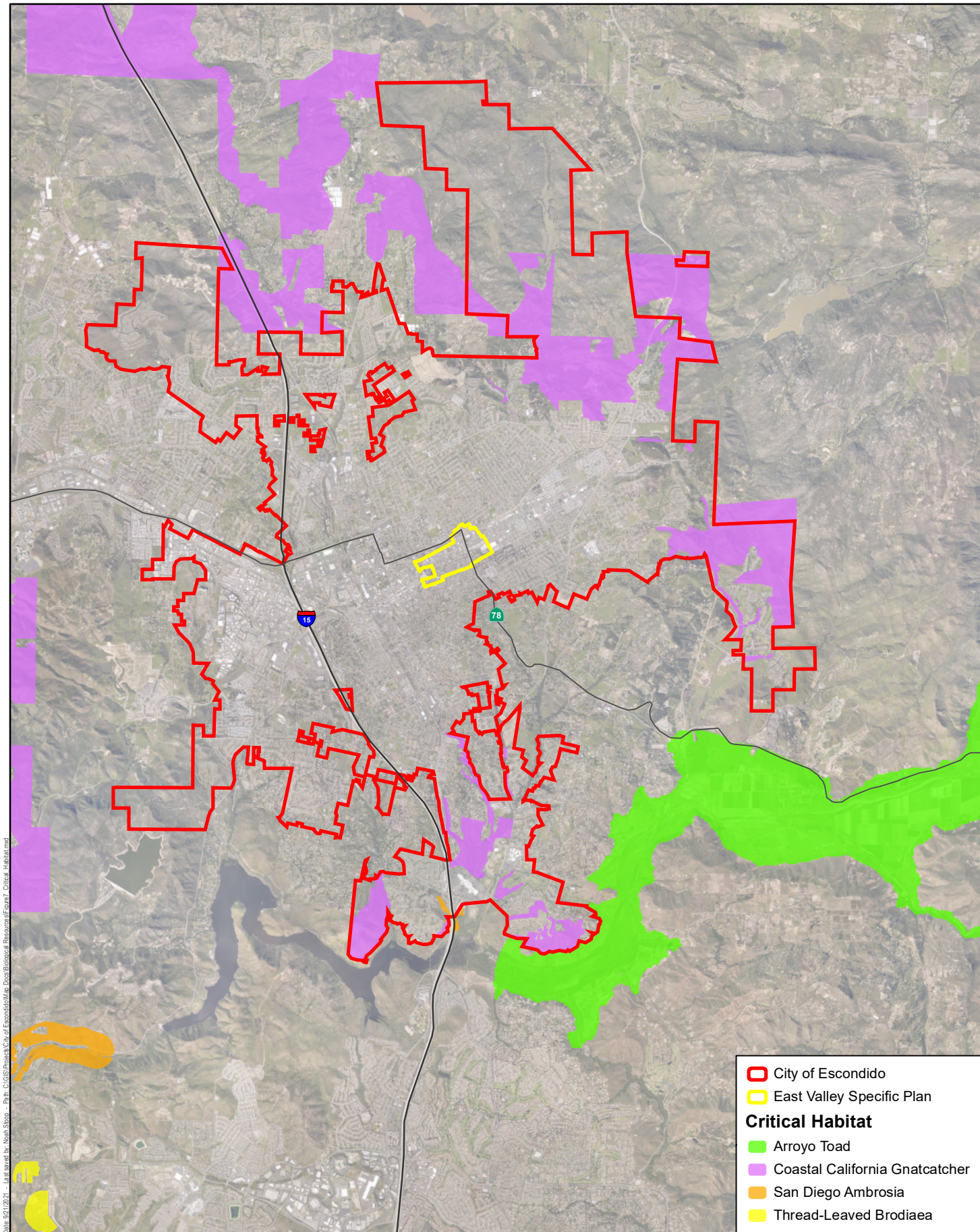


Date: 9/21/2021 - List saved by Noah Shop - Path: C:\GIS\Projects\City of Escondido\Map Docs\Biological Resources\Figure6\_AquaticResources.mxd

	East Valley Specific Plan
<b>National Wetlands Inventory Category</b>	
	Freshwater Pond
	Riverine

Source: National Wetlands Inventory 2021; SanGIS Imagery 2017.





Source: USFWS 2007, 2010, 2011; SanGIS Imagery 2017.

*This page intentionally left blank.*