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**Guadalupe River Trail Project
Biological Resources Report**



Project #7609

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Section 1. Introduction

In November 2016, the City of San José prepared the Guadalupe River Trail Master Plan to develop trail design guidelines and features, determine implementation measures for trail and park-like amenity developments, and identify a trail alignment that minimizes environmental impacts along a 4.9-mile portion of the Guadalupe River (City of San José 2016). Our report describes the biological resources present on the proposed Guadalupe River Trail (Project) alignment, as well as the potential impacts of the Project and measures necessary to reduce those impacts to less-than-significant levels under the California Environmental Quality Act (CEQA). The study area encompasses the proposed Project site, including the trail construction footprint and construction staging areas, as well as some areas adjacent to the site where potential indirect impacts could occur.

1.1 Biological Resources Report Approach

It is our understanding that several reaches of the trail alignment will overlap with the U.S. Army Corps of Engineers' (USACE's) Upper Guadalupe Channel Flood Control Project, which entails the construction of improvements in the Guadalupe River channel, and that segments of the trail will not be constructed until after the USACE improvements are completed. Several segments of the trail alignment as currently planned are not feasible unless the USACE improvements (i.e., channel realignment, bank stabilization, and flood walls) are constructed first; for example, in some areas the currently proposed trail alignment overlaps steep banks that will be stabilized or otherwise modified by the USACE's project. As a result, such segments could not be constructed until after the USACE's project is implemented, unless the trail alignment is altered to avoid the steep channel banks (e.g., reduce trail width or move trail alignment away from the channel) that are present under current conditions. The trail construction plan on which our analysis is based was apparently prepared, at least in part, assuming prior construction of the USACE's project. This has implications for our description of existing/baseline conditions and assessment of impacts under CEQA.

1.1.1 Description of Existing Conditions

For the purpose of this report, the existing conditions descriptions and the impact assessments have been prepared based on conditions observed in the field during surveys conducted in December 2016, as described in Section 2 (*Methods*) below. We are unable to describe what the actual baseline environmental conditions of those segments that overlap with the planned USACE improvements (i.e., the conditions that will be present following USACE project implementation) will be. Therefore, our description of existing conditions is based solely on those conditions that were observed during our December 2016 surveys (i.e., those conditions that are currently present in the field). Additional assessment of baseline conditions will be needed in the future for those locations where baseline conditions have changed (e.g., due to implementation of the USACE's project), or if proposed trail locations change. Although the existing conditions described in this report focus on the impact areas that were provided in plans by Mark Thomas & Company, we have also included descriptions of

general habitat conditions and potential for special-status species occurrence in immediately adjacent areas to facilitate future environmental review.

1.1.2 Impact Assessment

As noted above, some proposed trail segments will be constructed on features associated with the USACE's project, which has not yet been implemented. As a result, the impacts (e.g., to land cover types) estimated by overlaying the Project's plans on existing habitats do not accurately represent what the actual Project impacts will be. We have assessed impacts based on overlaying the current Project plans on existing habitat conditions. However, it is worth noting the following:

- In locations where the proposed trail alignment overlaps with the USACE's planned channel improvements, Project impacts on sensitive biological resources will likely be less than those that we have estimated based on existing conditions because either the extent of biological resources will be reduced by the USACE's project, or the trail alignment will be modified to avoid sensitive biological resources. Therefore, actual impacts to developed or landscaped areas are likely to be higher than we have estimated, and impacts to sensitive habitats such as riparian habitat are likely to be lower than we have estimated.
- In some locations, the planned trail alignment could result in substantial indirect impacts on biological resources that are currently present. For example, construction of the trail on a steep river bank could necessitate work at the toe of the bank, possibly in the Guadalupe River itself. In addition, paving over the roots of large riparian trees whose trunks are not within the Project footprint could impair the health of these trees, possibly to the point of causing tree loss. Our impact assessment includes a qualitative discussion of impacts that could occur, but that are currently unquantifiable.

For these reasons, our quantitative impact assessment relies solely on an overlay of the impact areas on existing habitat conditions. Additional environmental review will need to be performed where the approach for this report cannot fully account for the changes to baseline conditions that have been planned and will presumably be constructed as a component of the USACE project. Accordingly, this report takes a programmatic approach to assessing impacts and prescribing mitigation measures along the 4.9-mile trail alignment. If a future project-specific impact assessment will be needed, this report also describes how Project-specific impacts will be described in the future, such as by mapping the extent of sensitive biological resources prior to construction.

1.1.3 Branham to Chynoweth Reach

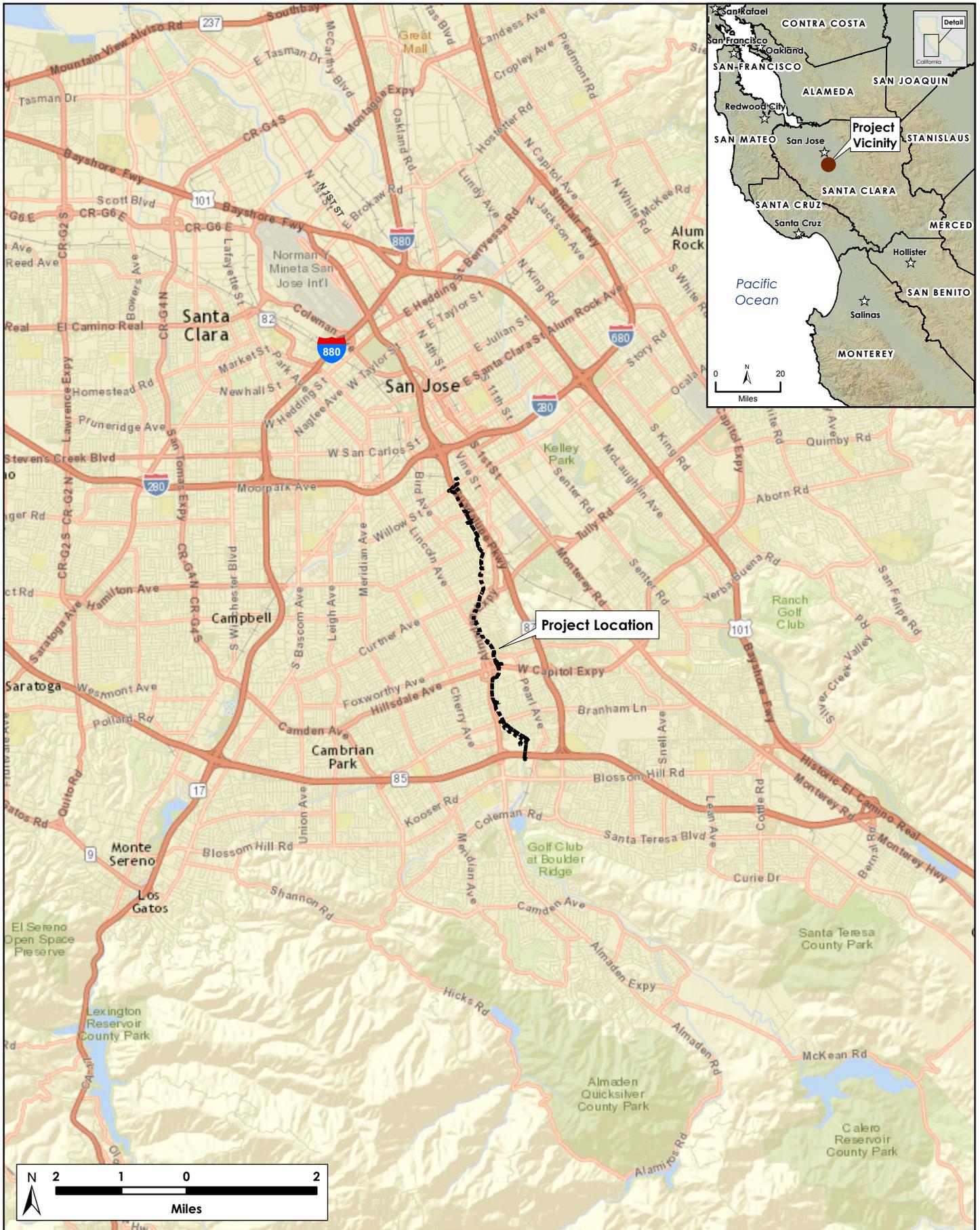
In addition to the programmatic impact assessment prepared for the entire 4.9-mile trail alignment, this report includes a project-specific impact analysis for the segment of the Project between Branham Lane and Chynoweth Avenue, which is the southernmost reach in the Project site. It is our understanding that this segment of the trail does not overlap with the USACE's flood protection project, that the current existing conditions will not change substantially prior to construction of the Branham to Chynoweth Reach trail

segments and pedestrian bridge, and that the current Project plans for this reach are sufficient to conduct a project-specific assessment. Therefore, additional assessment for the Branham to Chynoweth Reach, including a separate quantification of impacts, is included in each impact discussion.

1.2 Project Description

The proposed regional trail alignment project entails the construction of 4.9 miles of trail from Virginia Street to Chynoweth Avenue in south San José (Figures 1 and 2). The proposed Project would provide a continuous trail connection to the northern segment of the Guadalupe River Trail, which continues from San Jose to Alviso. The majority of the trail would consist of a 12-foot wide Class I paved trail, with 2-foot compacted base rock shoulders. Physically constrained portions would be narrowed to a 10-foot wide paved trail without shoulders. Although portions of the trail would be below the 10-year flood water elevation (primarily at road undercrossings), the entire Project site would be located outside of the active river channel and above the ordinary high water mark (OHWM). Narrow trail sections, such as at road undercrossings, would be the 8-foot standard width for Class I trails. Three new pedestrian bridges would be constructed for the Project, including Guadalupe River crossings at the intersection of Almaden Expressway and Koch Lane and at the south end of the alignment near Danview Court, and a crossing over a planned future flood channel at the Three Creeks Trail node. In addition, one existing railroad bridge that crosses over the Guadalupe River between the Three Creeks Trail and the east end of Falcon Place will potentially be reconstructed or reused for the Project. Limited landscaping would be constructed for the Project, although the Master Plan proposes the development of several small plaza areas and areas for public art opportunities. The proposed construction footprint of the trail, bridges, and plazas, including staging and access areas, is shown in Figure 3. Per guidance from Mark Thomas & Company, we have assumed that construction of the trail will be accomplished within the trail footprints provided (i.e., no additional access or temporary construction areas, outside the trail footprint, will be needed aside from construction staging areas that are included in Figure 3).

The Project includes 12 proposed reaches of the Guadalupe River Trail alignment that are described in detail in the Master Plan and are briefly summarized here and in Table 1. The entire trail alignment runs adjacent to the Guadalupe River and passes through multiple public and private parcels, including unpaved trails through public parks, existing paved roads and sidewalks along public streets, several Santa Clara Valley Water District (SCVWD) facilities and access roads, and a few private residences. The majority of the trail alignment is located at the top of the river banks, with the most notable exceptions being at road undercrossings, where the trail will be located on top of existing floodwalls or bank protection structures. The Project also includes construction of three pedestrian bridges over the river channel. Construction of the bridges will be completed from the top-of-bank, with the bridges spanning the active river channel, and all Project activities will be conducted above the OHWM.



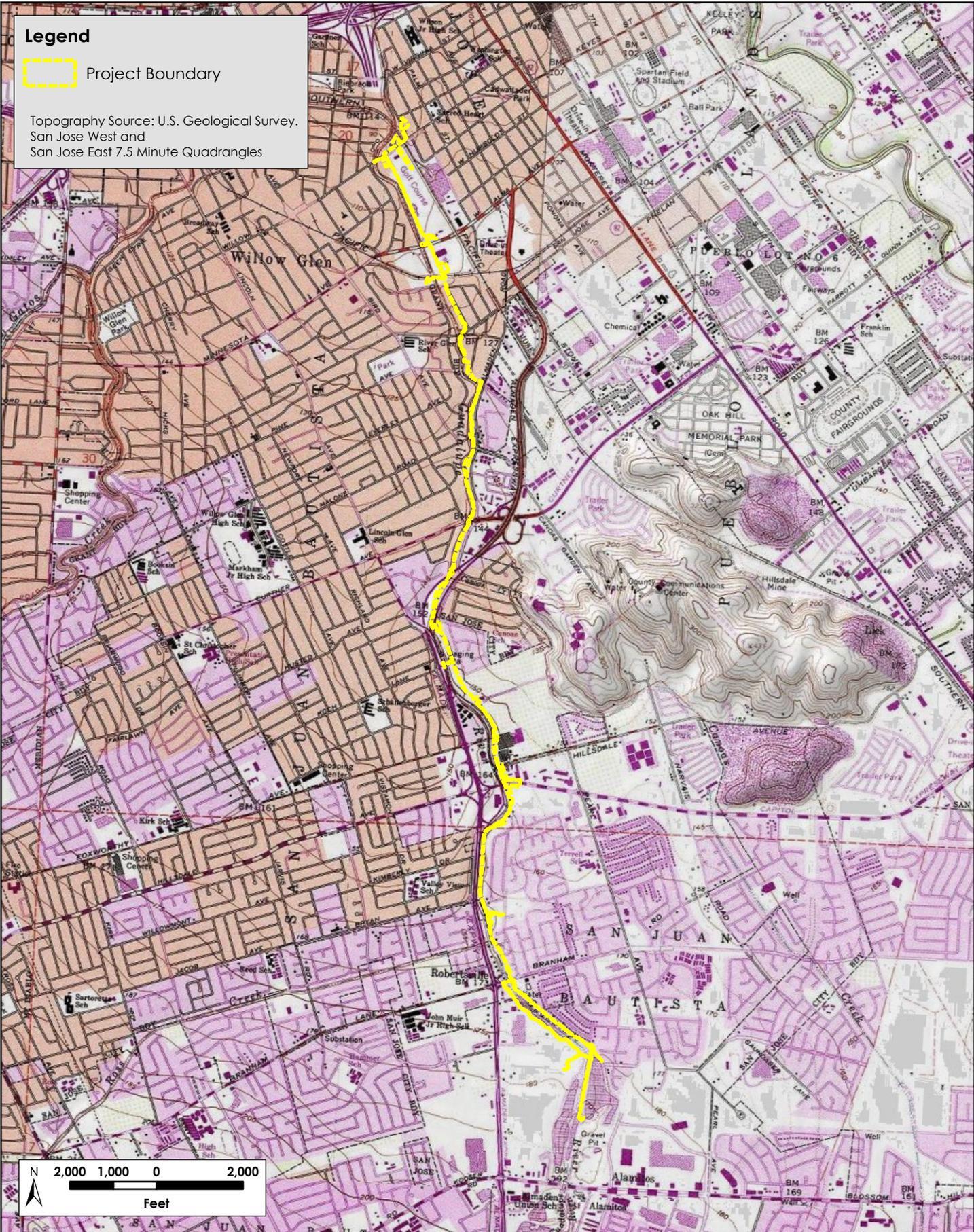
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Figure 1. Vicinity Map

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Figure 2. USGS Topographic Map

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Table 1. Guadalupe River Trail Alignment Reaches

Reach	Description	Approximate Length (feet)	Trail Segment Below 10-year Flood Elevation?	Bridges and River Crossings
1	McLellan to Willow	1,000	No	None
2	Willow to Alma	2,800	No	None
3	Alma to Three Creeks	1,000	No	New 30-foot wide pedestrian bridge over future bypass channel at Three Creeks Trail Re-use/reconstruction of existing railroad bridge over Guadalupe River
4	Three Creeks to Willow Glen	1,500	No	None
5	Willow Glen to Almaden Road	650	No	None
6	Almaden Road to Curtner	3,200	No	None
7	Curtner to Almaden Expressway	1,150	No	None
8	Almaden Expressway to Foxworthy	5,200	Yes, Almaden Expressway undercrossing	New 25-foot wide pedestrian bridge over Guadalupe River at intersection of Almaden Expressway and Koch Lane.
9	Foxworthy to Steval	2,400	Yes, Capitol Expressway undercrossing	None
10	Steval to Thousand Oaks		No	None
11	Branham to Thousand Oaks	2,000	Yes, Branham Lane undercrossing	Use of existing Branham Lane Bridge over Guadalupe River
12	Chynoweth to Branham	5,100	No	New 12-foot wide pedestrian bridge over Guadalupe River

Section 2. Methods

2.1 Background Review

Prior to conducting field work, H. T. Harvey & Associates ecologists reviewed the Project plans and Project description; aerial images (Google Inc. 2016); a USGS topographic map; the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDDB) (2016); the Santa Clara Valley Habitat Plan (VHP) (ICF International 2012); other relevant scientific literature and technical databases; and H. T. Harvey & Associates reports for other projects in the Project vicinity. For the purposes of this report, the "Project vicinity" encompasses a 5-mile radius surrounding the study area (Figure 1).

In addition, for plants, we reviewed all species on current California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B lists occurring in the *San José West, California* USGS quadrangle and surrounding eight quadrangles (*Mountain View, Milpitas, Calaveras Reservoir, San José East, Santa Teresa Hills, Los Gatos, Castle Rock Ridge, and Cupertino*). Quadrangle-level results are not maintained for CRPR 3 and 4 species, so we also conducted a search of the CNPS Inventory records for these species occurring in Santa Clara County (CNPS 2016). In addition, we queried the CNDDDB (2016) for natural communities of special concern that occur within the site region.

2.2 Site Visits

A reconnaissance-level field survey of the study area (i.e., the Project site plus immediately adjacent areas, where access permitted) was conducted by H. T. Harvey & Associates plant ecologist Gregory Sproull, M.S., and wildlife ecologist Matthew Timmer, M.S. on December 19 and 20, 2016. The purpose of this survey was to provide a project-specific impact assessment for development of the proposed activities as described above. Specifically, the survey was conducted to: (1) assess existing biotic habitats, (2) assess the Project site for its potential to support special-status plant and animal species and their habitats, and (3) identify potential jurisdictional habitats, such as Waters of the U.S./State and riparian habitat. Although the level and accuracy of these mapping efforts were sufficient to assess potential impacts to biological resources in the study area, a formal delineation of jurisdictional habitats was not conducted during these site visits. In addition, the wildlife ecologist searched the Project site for signs of burrowing owl (*Athene cunicularia*) presence, examined the large trees and shrubs on the site for nests of raptors, and searched for nests of San Francisco dusky-footed woodrats (*Neotoma fuscipes annectens*).

Section 3. Regulatory Setting

Biological resources on the Project site are regulated by a number of federal, state, and local laws and ordinances, as described below.

3.1 Federal

3.1.1 Clean Water Act

Areas meeting the regulatory definition of “Waters of the U.S.” are subject to the jurisdiction of the USACE under provisions of Section 404 of the 1972 Clean Water Act (CWA). These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), territorial seas, and wetlands adjacent to Waters of the U.S. (33 Code of Federal Regulations [CFR], Part 328). Wetlands on non-agricultural lands are identified using the Corps of Engineers Wetlands Delineation Manual (1987) using an approach that relies on identification of three parameters: hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Areas typically not considered to be jurisdictional waters include nontidal drainage and irrigation ditches excavated in uplands, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions (33 CFR, Part 328).

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must comply with permit requirements of the USACE. No USACE permit will be effective in the absence of Section 401 Water Quality Certification. The State Water Resources Control Board (SWRCB) is the state agency (together with the Regional Water Quality Control Boards [RWQCBs]) charged with implementing water quality certification in California.

Project Applicability: The Guadalupe River is regulated as jurisdictional waters of the U.S. by the USACE. Therefore, the Project site contains jurisdictional aquatic habitats at three locations where the site crosses the main, active channel of the Guadalupe River (although no Project activities are proposed to occur below the OHWM). Although Percolation Pond 3 of the SCVWD’s Guadalupe Percolation Ponds is adjacent to the southern portion of the Project site, the lateral limits of the pond do not overlap with the Project site; it is unknown whether the USACE would consider this pond jurisdictional.

3.1.2 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) protects federally listed wildlife species from harm or “take”, which is broadly defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” Take can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species. An activity can be defined as “take” even if it is unintentional or

accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under the FESA only if they occur on federal lands.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service have jurisdiction over federally listed, threatened, and endangered species under the FESA. The USFWS also maintains lists of proposed and candidate species. Species on these lists are not legally protected under the FESA, but may become listed in the near future and are often included in their review of a project.

Project Applicability: No federally listed plant species occur on the Project site. The only federally listed animal species known or expected to occur on the Project site is the federally threatened Central California Coast steelhead (*Oncorhynchus mykiss*), which occurs in the Guadalupe River. The VHP models the Guadalupe River as primary habitat for the federally threatened California red-legged frog (*Rana draytonii*) as well, but for reasons discussed below, this species is not expected to occur on the Project site.

3.1.3 Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. §703, prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. The MBTA protects whole birds, parts of birds, and bird eggs and nests; and prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction.

Project Applicability: All native bird species that occur on the Project site are protected under the MBTA.

3.2 State

3.2.1 Porter-Cologne Water Quality Control Act

The SWRCB works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect Waters of the State. Their authority comes from the CWA and the State's Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne broadly defines Waters of the State as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because Porter-Cologne applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of Waters of the U.S. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the State include headwaters, wetlands, and riparian areas. Moreover, the San Francisco Bay Region RWQCB's Assistant Executive Director has stated that, in practice, the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, such as may be the case at headwaters, jurisdiction is taken to the top of bank.

Pursuant to the CWA, projects that are regulated by the USACE must also obtain a Section 401 Water Quality Certification permit from the RWQCB. This certification ensures that the proposed project will uphold state water quality standards. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on Waters of the State require Water Quality Certification even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not. Under the Porter-Cologne, the SWRCB and the nine regional boards also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and Waste Discharge Requirements for certain point-source and non-point discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

Project Applicability: Waters of the State include Waters of the U.S. as described above, which were determined to be present in three locations where the Project site crosses the Guadalupe River.

3.2.2 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Chapter 1.5, §§2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, the CDFW has jurisdiction over state-listed species (Fish and Game Code 2070). The CDFW regulates activities that may result in "take" of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code. The CDFW, however, has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification."

Project Applicability: No state-listed plant or animal species occur on the Project site.

3.2.3 California Environmental Quality Act

The CEQA is a state law that requires state and local agencies to document and consider the environmental implications of their actions and to refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. The CEQA requires the full disclosure of the environmental effects of agency actions, such as approval of a general plan update or the projects covered by that plan, on resources such as air quality, water quality, cultural resources, and biological resources. The State Resources Agency promulgated guidelines for implementing CEQA known as the State CEQA Guidelines.

Section 15380(b) of the State CEQA Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in the FESA and the CESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a

significant effect on a species that has not yet been listed by either the USFWS or CDFW or species that are locally or regionally rare.

The CDFW has produced three lists (amphibians and reptiles, birds, and mammals) of “species of special concern” that serve as “watch lists”. Species on these lists are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. Thus, their populations should be monitored. They may receive special attention during environmental review as potential rare species, but do not have specific statutory protection. All potentially rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA §15380(b).

The CNPS, a non-governmental conservation organization, has developed rankings for plant species of concern in California in the CNPS Inventory of Rare and Endangered Plants. Lichens, vascular, and non-vascular plants included in these rankings are defined as follows:

- Rank 1A Plants considered extinct.
- Rank 1B Plants rare, threatened, or endangered in California and elsewhere.
- Rank 2A Plants considered extinct in California but more common elsewhere.
- Rank 2B Plants rare, threatened, or endangered in California but more common elsewhere.
- Rank 3 Plants about which more information is needed - review list.
- Rank 4 Plants of limited distribution-watch list.

These CNPS rankings are further described by the following threat code extensions:

- .1—seriously endangered in California;
- .2—fairly endangered in California;
- .3—not very endangered in California.

Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA’s §15380 criteria, and adverse effects to these species may be considered significant. Impacts on plants that are listed by the CNPS on List 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those on List 1B or List 2, impacts on them are less frequently considered significant.

Compliance with CEQA Guidelines §15065(a) requires consideration of natural communities of special concern, in addition to plant and wildlife species. Vegetation types of “special concern” are tracked in Rarefind (CNDDDB 2016). Further, the CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDDB and using NatureServe’s (2016) standard heritage program methodology. Global rankings (G1–G5) of natural communities reflect the overall condition (rarity

and endangerment) of a habitat throughout its range, whereas S rankings are a reflection of the condition of a habitat within California. If an alliance is marked as a G1–G3, all of the associations within it would also be of high priority. The CDFW provides the Vegetation Classification and Mapping Program’s currently accepted list of vegetation alliances and associations (California Department of Fish and Game [CDFG] 2010).

Project Applicability: All potential impacts on biological resources will be considered during CEQA review of the Project in the context of this Biological Resources Report. Project impacts are discussed below.

3.2.4 California Fish and Game Code

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. A *stream* is defined in Title 14, California Code of Regulations §1.72, as “a body of water that follows at least periodically or intermittently through a bed or channel having banks and that supports fish and other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.” Using this definition, CDFW extends its jurisdiction to encompass riparian habitats that function as a part of a watercourse. California Fish and Game Code §2786 defines *riparian habitat* as “lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source.” The lateral extent of a stream and associated riparian habitat that would fall under the jurisdiction of CDFW can be measured in several ways, depending on the particular situation and the type of fish or wildlife at risk. At minimum, CDFW would claim jurisdiction over a stream’s bed and bank. In areas that lack a vegetated riparian corridor, CDFW jurisdiction would be the same as USACE jurisdiction. Where riparian habitat is present, the outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats.

Pursuant to California Fish and Game Code §1603, CDFW regulates any project proposed by any person that will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds.” California Fish and Game Code §1602 requires an entity to notify CDFW of any proposed activity that may modify a river, stream, or lake. If CDFW determines that proposed activities may substantially adversely affect fish and wildlife resources, a Lake and Streambed Alteration Agreement (LSAA) must be prepared. The LSAA sets reasonable conditions necessary to protect fish and wildlife, and must comply with CEQA. The applicant may then proceed with the activity in accordance with the final LSAA.

Certain sections of the California Fish and Game Code describe regulations pertaining to protection of certain wildlife species. For example, Code §2000 prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code.

The California Fish and Game Code §§3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by the CDFW. Raptors (i.e., eagles, hawks, and owls) and their nests are specifically protected in California under Code §3503.5. Section 3503.5 states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

Bats and other non-game mammals are protected by California Fish and Game Code §4150, which states that all non-game mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the commission. Activities resulting in mortality of non-game mammals (e.g., destruction of an occupied nonbreeding bat roost, resulting in the death of bats), or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), may be considered “take” by the CDFW.

Project Applicability: As described in Section 5.3.3, aquatic and riparian habitats occur on the Project site. As such, a LSAA may be required for the proposed Project activities. Most native bird, mammal, and other wildlife species that occur on the Project site and in the immediate vicinity are protected by the California Fish and Game Code.

3.3 Local

3.3.1 City of San José Tree Ordinance

According to the City of San José’s Municipal Code, Chapter 13.28.220, no person is allowed to unlawfully prune or remove street trees, ordinance-sized trees (on private property), or heritage trees without obtaining a permit. Any tree planted on a street is protected by this ordinance. An ordinance-sized tree is any tree that measures 56 inches or more in circumference at 2 ft above ground. If a tree has multiple trunks, it qualifies as an ordinance-sized tree if the combined measurements of each trunk circumference (at 2 ft above ground) total to more 56 inches. In addition, any tree which, because of factors including but not limited to its history, girth, height, species, or unique quality, has been found by the City Council to have special significance to the community may be designated as a heritage tree (also see Chapter 13.28.220 of the Municipal Code). Property owners can contact the City Arborist’s Office to nominate a tree for heritage status, and the arborist has the authority to accept or deny requests to add trees to the Heritage Tree List. The list is available on the City of San José’s official website (<http://www.sanjoseca.gov/index.aspx?NID=1913>) and includes the unique identification number, species, girth, and location for each tree. For multifamily residences, commercial properties, and industrial properties, a permit is required for the removal of trees of any size. For trees that qualify as ordinance-sized trees in these settings, a Tree Removal Permit from the City of San José’s Department of Planning, Building, and Code Enforcement is required, and for trees that are smaller than ordinance-sized, a Permit Adjustment is required. Ordinance-sized trees that are removed must be replaced with a minimum 15-

gallon tree, if located on a single family/duplex lot. Tree replacement procedures for ordinance-sized trees removed from other types of lots shall be decided upon by the City's Planning Division.

Permits to prune or remove street trees are issued by the City Department of Transportation, whereas permits to impact heritage trees can be obtained from the Department of Planning, Building, and Code Enforcement. Both types of permits will define protection measures that will be required during development and construction activities to limit adverse environmental effects. For instance, heritage tree work must be performed by a certified arborist and must remain in compliance with the trimming, cutting, or pruning standards adopted by the American National Standards Institute.

Project Applicability: We verified that heritage trees do not occur at the Project site; however, street trees and ordinance-sized trees occur throughout the Project site, particularly in residential areas. A permit must be obtained from the City Department of Transportation if the proposed Project activities require pruning or removing street trees. A permit from the City of San José's Department of Planning, Building, and Code Enforcement is required to remove ordinance-sized trees that occur on private property, and as such, tree replacement activities must be implemented accordingly.

3.3.2 Envision San José 2040 General Plan

The Envision San José 2040 General Plan (Envision) (City of San José 2012) was adopted in compliance with the state law requirement that each city and county prepare and adopt a comprehensive and long-range general plan for its physical development (California Government Code Section 65300). Envision is an integrated general plan document, with most elements addressed through goals, policies and implementation actions. Envision provides the City with a consistent framework for its decision-making related to the land use and delivery of municipal services. Under California law, no specific plan, area plan, community plan, zoning, subdivision map, nor public works project may be approved unless the City finds that it is consistent with the adopted general plan. The goals and policies set forth by Envision that pertain to biological resources and are relevant to the Project are summarized below.

“Measurable Sustainability” includes policies related to City's community's forest and water quality that that fulfill the City's Green Vision goal. Community forest goals that are relevant to the Project are described above under *City of San José's Tree Ordinance*. Water quality policies prohibit locating new development or authorizing activities with the potential to negatively impact groundwater quality in areas that have been identified as having a high degree of aquifer vulnerability by the SCVWD, or other public agencies (Goal MS-20.2). Water quality implementation action MS-20.4 protects surface water and groundwater supplies in the City's watershed from pollution and degradation through cooperation of local, regional, and state agencies.

“Environmental Resources” includes policies intended to protect the high-quality ecological habitats and other environmental resources that can be found within the City, such as the urban-natural interface and special-status plants and animals. The following goals preserve, manage, and restore suitable habitat for

special-status species that are known to occur in the City, which are listed under Table ER-4 (City of San José 2012):

- Goal ER-4.1 Preserves and restores, to the greatest extent feasible, habitat areas that support special status species. Avoid development in such habitats unless no feasible alternatives exist and mitigation is provided of equivalent value.
- Goal ER-4.2 Limit recreational uses in wildlife refuges, nature preserves and wilderness areas in parks to those activities which have minimal impact on sensitive habitats.
- Goal ER-4.3 Prohibit planting of invasive non-native plant species in natural habitats that support special-status species.
- Goal ER-4.4 Require that development projects incorporate mitigation measures to avoid and minimize impacts to individuals of special-status species

In addition to goals that protect special-status species, Envision’s lists policies that minimize adverse effects of urbanization on natural lands adjacent to the City’s developed areas under “Environmental Resources” (City of San José 2012). Policies and actions that are relevant to the proposed Project are listed below:

- Policy ER-6.3 Employ low-glare lighting in areas developed adjacent to natural areas. Any high-intensity lighting used near natural areas will be placed as close to the ground as possible and directed downward or away from natural areas.
- Policy ER-6.5 Prohibit use of invasive species within the City limits in required landscaping as part of the discretionary review of proposed development.
- Policy ER-6.6 Encourage the use of native plants in the landscaping of developed areas adjacent to natural lands.
- Policy ER-6.7 Include barriers to animal movement within new development and, when possible, within existing development, to prevent movement of animals (e.g., pets and wildlife) between developed areas and natural habitat areas where such barriers will help to protect sensitive species.
- Policy ER-6.8 Design and construct development to avoid changes in drainage patterns across adjacent natural areas and for adjacent native trees, such as oaks.
- Action ER-6.9 Work with landowners, landscapers, nurseries, and the multi-agency Santa Clara County Weed Management Area to remove and prevent the spread of highly invasive and noxious weeds. Invasive plants are those plants listed in the State’s Noxious Weed List, the California Invasive Plant Council’s list of “Exotic Pest Plants of Greatest Ecological Concern in California,” and other priority species identified by the agricultural commissioner and California Department of Agriculture.

- Action ER-6.10 Update the Riparian Corridor Policy Study and all City design guidelines based on guidance from Responsible Agencies on best practices for lighting to protect sensitive habitats and species, including birds and bats.

Envision also includes policies that protect water resources that are vital to the ecological and economic health of the region and its residents under “Environmental Resources” (City of San José 2012). Policies and actions that are relevant to the proposed project are listed below:

- *Environmental Resource-9.1*: In consultation with the Santa Clara Valley Water District, other public agencies and the SCVWDs Water Resources Protection Guidelines and Standards (2006 or as amended), restrict or carefully regulate public and private development in streamside areas so as to protect and preserve the health, function and stability of streams and stream corridors.

Project Applicability: The Project may require a SCVWD Encroachment Permit to comply with the Envision San José 2040 General Plan’s environmental water resources policies. The Project will not use invasive species in landscaping on the site, and low-glare lighting will be used in areas nearest to the Guadalupe River Trail.

3.3.3 City of San José Riparian Policy

The City of San José has a riparian buffer policy that is in neither the Municipal Code nor the General Plan. The riparian buffer policy is administered through use of a *Riparian Corridor Policy Study* (Policy Study) document that describes suggested buffer widths (City of San José 1999). The Policy Study defines a riparian corridor as any defined stream channel, including the area up to the bank full-flow line, as well as all riparian (streamside) vegetation in contiguous adjacent uplands. Characteristic woody vegetation could include (but is not limited to) willow (*Salix* spp.), alder (*Alnus* spp.), box elder (*Acer negundo*), Fremont cottonwood (*Populus fremontii*), bigleaf maple (*Acer macrophyllum*), California sycamore (*Platanus racemosa*), and oaks (*Quercus* spp.). Stream channels include all perennial and intermittent streams shown as a solid or blue line on USGS topographic maps, and ephemeral streams or “arroyos” with well-defined channels and some evidence of scour or deposition. The Policy Study states that riparian setbacks should be measured 100 ft from the outside edges of riparian habitat or the top of bank, whichever is greater. However, the Policy Study also states that setback distances for individual sites may vary if consultation with the City of San José and a qualified biologist, or other appropriate means, indicates that a smaller or larger setback is more appropriate for consistency with riparian preservation objectives (City of San José 1999).

The *Santa Clara Valley Water Resources Protection Collaborative Guidelines and Standards for Land-Use Near Streams* (*Guidelines and Standards*) document was also reviewed (Santa Clara Valley Water Resources Protection Collaborative [SCVWRP Collaborative] 2007). This document defines the top of bank line as the stream boundary where a majority of normal discharges and channel forming events take place; containing the active channel, active floodplain, and their associated banks. The top of bank along streams with levees should be delineated on the inner edge of the levee (see Chapter 11, SCVWRP Collaborative 2007).

Project Applicability: Streamside trails such as the Project are exempt from riparian setback requirements. As discussed in Section 6.5.11, Exemption 5 in the VHP, recreational trails are exempt from stream setbacks..

3.3.4 Santa Clara Valley Habitat Plan

The Santa Clara Valley Habitat Agency (SCVHA) leads the implementation of the VHP. It is a regional partnership between six local partners, including the County of Santa Clara, Santa Clara Valley Transportation Authority, SCVWD, the Cities of San José, Gilroy, and Morgan Hill), CDFW, and USFWS. In 2013 the VHP was adopted by all local participating agencies, and permits were issued from the USFWS and CDFW. It is both a habitat conservation plan and natural community conservation plan, or HCP/NCCP. The planning document helps private and public entities plan and conduct projects and activities in ways that lessen impacts on natural resources, including specific threatened and endangered species. The VHP identifies regional lands (called reserves) to be preserved or restored to benefit of at-risk species, and describes how reserves will be managed and monitored to ensure that they benefit those species. In providing a long-term, coordinated planning for habitat restoration and conservation, the VHP aims to enhance the viability of threatened and endangered species throughout the Santa Clara Valley.

The VHP defines specific measures to avoid, minimize, and mitigate impacts on covered species and their habitats while allowing for the implementation of certain “covered projects”. The USFWS, a signatory of the VHP, will provide incidental take approval for the project’s impacts to federally listed species via Section 10 of the FESA. In conformance with the VHP, project proponents are required to pay impact fees in accordance with the types and acreage of habitat or “land cover” impacted, and to implement conservation measures specified by the VHP. Land cover impacts are used because it is the best predictor of potential species habitat, and is applicable to all of the covered species (with the exception of the burrowing owl). The SCVHA has mapped three fee zones in the VHP area: (A) rangeland and natural lands, (B), agricultural and valley floor lands, and (C) small vacant sites (SCVHA 2016). The following areas are exempt from land cover fees:

- All development that occurs on land mapped by the VHP as urban-suburban, landfill, reservoir (excluding dams), or agriculture developed land cover types
- Other exempt activities include urban development in fee zones A-C on parcels less than 0.5 acres
- Additions to structures within 50 ft of existing structure that result in less than 5000 ft of impervious surface so long as there is no effect on wetland or serpentine land cover types
- Construction of recreational facilities within the reserve system.

Project Applicability: The Project site is located in the VHP area. Because the Project is a VHP-covered project, it will comply with all applicable VHP conditions. Section 6.1 of this report further explains how the VHP applies to the Project.

3.3.5 State and Local Requirements to Control Construction-Phase and Post-Construction Water Quality Impacts

3.3.5.1 Construction Phase

Construction projects in California causing land disturbances that are equal to one acre or greater must comply with State requirements to control the discharge of stormwater pollutants under the NPDES *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Water Board Order No. 2009-0009-DWQ). Prior to the start of construction/demolition, a Notice of Intent must be filed with the State Water Board describing the project. A Storm Water Pollution Prevention Plan must be developed and maintained during the project and it must include the use of Best Management Practices (BMPs) to protect water quality until the site is stabilized.

Similarly, within the City of San José city limits regardless of size, all construction/demolition projects must comply with the City of San José's Grading Ordinance, which requires the use of erosion and sediment controls to protect water quality while the site is under construction. Prior to the issuance of a permit for grading activity that occurs during the rainy season (October 15 to April 15), an Erosion Control Plan must be submitted to the Department of Public Works detailing Best Management Practices that will prevent the discharge of stormwater pollutants.

Standard permit conditions under both of these permits requires that the applicant utilize various measures including: on-site sediment control best management practices, damp street sweeping, temporary cover of disturbed land surfaces to control erosion during construction, and utilization of stabilized construction entrances and/or wash racks, among other factors. Additionally, the Construction General Permit does not extend coverage to projects if stormwater discharge-related activities are likely to jeopardize the continued existence, or result in take of any federally-listed endangered or threatened species.

Project Applicability: The Project will comply with the requirements of the NPDES permit and the City Grading Ordinance, thus, construction phase activities would not result in detrimental water quality effects upon biological/regulated resources.

3.3.5.2 Post-Construction Phase

In many Bay Area counties, including Santa Clara County, projects must also comply with the *California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit (MRP)* (Water Board Order No. R2-2009-0074). Within the City of San José projects must also comply with the *City Council Policy 6-29, Post Construction Urban Runoff Management* and *City Council Policy 8-14, Post Construction Hydromodification Management Policy and Map*. These policies require that all projects implement Best Management Practices and incorporate Low Impact Development practices into the design that prevents stormwater runoff pollution, promotes infiltration, and holds/slow down the volume of water coming from a site. In order to meet these permit and policy requirements, projects must incorporate the use of green roofs, impervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors.

Project Applicability: The Project will comply with the requirements of the MRP permit and the City Policies, thus, post-construction activities would not result in detrimental water quality effects upon biological/regulated resources.

Section 4. Environmental Setting

4.1 General Project Site Description

The approximately 21.45-acre Project site is located within a dense urban matrix in the downtown area of the City of San José. Businesses and private residences primarily line the Project site's eastern borders. The Project alignment is located primarily along the east side of the northward-flowing Guadalupe River, which bounds the site to the west, although the river lies within the Project alignment at three bridge locations, and the southern portion of the Project site (the Branham to Chynoweth Reach) includes trail improvements on both sides of the river. In addition, a percolation pond (Guadalupe Pond 3 of the SCVWD's Guadalupe Percolation Ponds) abuts the southeastern portion of the Project site. The Project site, situated in a linear fashion, extends northward from the northwest corner of Blossom River Drive to the intersection of Harliss Avenue and Mclellan Avenue, stretching approximately 4.9 miles in length. The majority of the Project site is narrow (12 to 14 ft in width), though it widens to roughly 80 ft in areas that are designated as site access points and in areas that require bank reinforcement. The Project site generally follows previously developed portions of the Guadalupe River Trail. It laterally crosses the Guadalupe River at three locations (near the northern tip of Guadalupe Percolation Pond 3, near the intersection of Blue Jay Drive and Skylark Drive, and near the end of the cul-de-sac on Falcon Place). A dilapidated railway bridge still extends across the Guadalupe River at the latter crossing, whereas the former two crossings do not currently contain bridge structures. The Project site crosses under major roads and highways, including California State Route 85, Branham Lane, and California State Route 87, and over major roads and highways, including the Capitol Expressway, Foxworthy Avenue, Almaden Expressway, Curtner Avenue, Willow Glen Way, and West Alma Avenue. The southern portion of the Project site forms a loop that extends from the southernmost river crossing to Branham Lane. Various staging areas are included in the Study Area and are located adjacent to the Project site. Elevation at the Project site ranges from approximately 100 to 190 ft (Google Inc. 2016).

The Guadalupe River Trail system currently exists as two disconnected trail systems, with the northern and central portions traveling from the San Francisco Bay through Silicon Valley and into the downtown San Jose. The southern portion extends from Chynoweth Avenue to Coleman Road and leads directly to the Lake Almaden and Los Alamitos trail systems. The Project site is situated between these two stretches of trail. The Guadalupe River flows northward from Lake Almaden, at the confluence of Los Alamitos Creek and Guadalupe Creek, to the Alviso Slough in the San Francisco Bay.

Based on a review of historical aerial images (Google Inc. 2016, Nationwide Environmental Title Research 2016), the majority of the surrounding Study Area was developed between 1968 and 1980, including the adjacent percolation pond. Since 1980, various portions of the Study Area have been reapportioned and/or redeveloped. Prior to 1968, much of the Study Area existed as undeveloped orchards and farmland. The Project site is underlain by five soil types: Urban land-Elpaloalto complex, 0 to 2 percent slopes; Urban land-Still complex, 0 to 2 percent slopes; Urban land-Campbell complex, 0 to 2 percent slopes, protected; Urban land-Botella

complex, 0 to 2 percent slopes; and Urban land-Landelspark complex, 0 to 2 percent slopes (Natural Resource Conservation Service 2016). Urban land-Elpaloalto complex has a profile consisting of slightly decomposed plant material up to a depth of 8 inches, clay loam from a depth of 8 to 17 inches, and silty clay loam from a depth of 17 to 94 inches. Urban land-Still complex has a profile comprising sandy loam from 0 to 2 inches, very fine sandy loam from 2 to 12 inches, silt loam from 12 to 33 inches, and loam from 33 to 72 inches. Urban-land-Campbell complex consists of silt loam to a depth of 24 inches, silty clay loam from 24 to 51 inches, and silty clay from 51 to 79 inches. Urban land-Botella complex contains sandy clay loam up to 14 inches and clay loam from 14 to 68 inches. Urban land-Landelspark complex consists of slightly decomposed plant material to a depth of 1 inch, sandy loam from 1 to 4 inches, sandy clay loam from 4 to 19 inches, very gravelly sand from 19 to 23 inches, silty clay loam from 23 to 35 inches, clay loam from 35 to 55 inches, and sandy clay loam from 55 to 79 inches. All soils are well drained and non-saline to very slightly saline or slightly saline. A consideration of the chemical and physical properties of soils is an important consideration when assessing the site’s potential to support wetlands and special-status plant habitats.

4.2 Biotic Habitats (Land Cover Types)

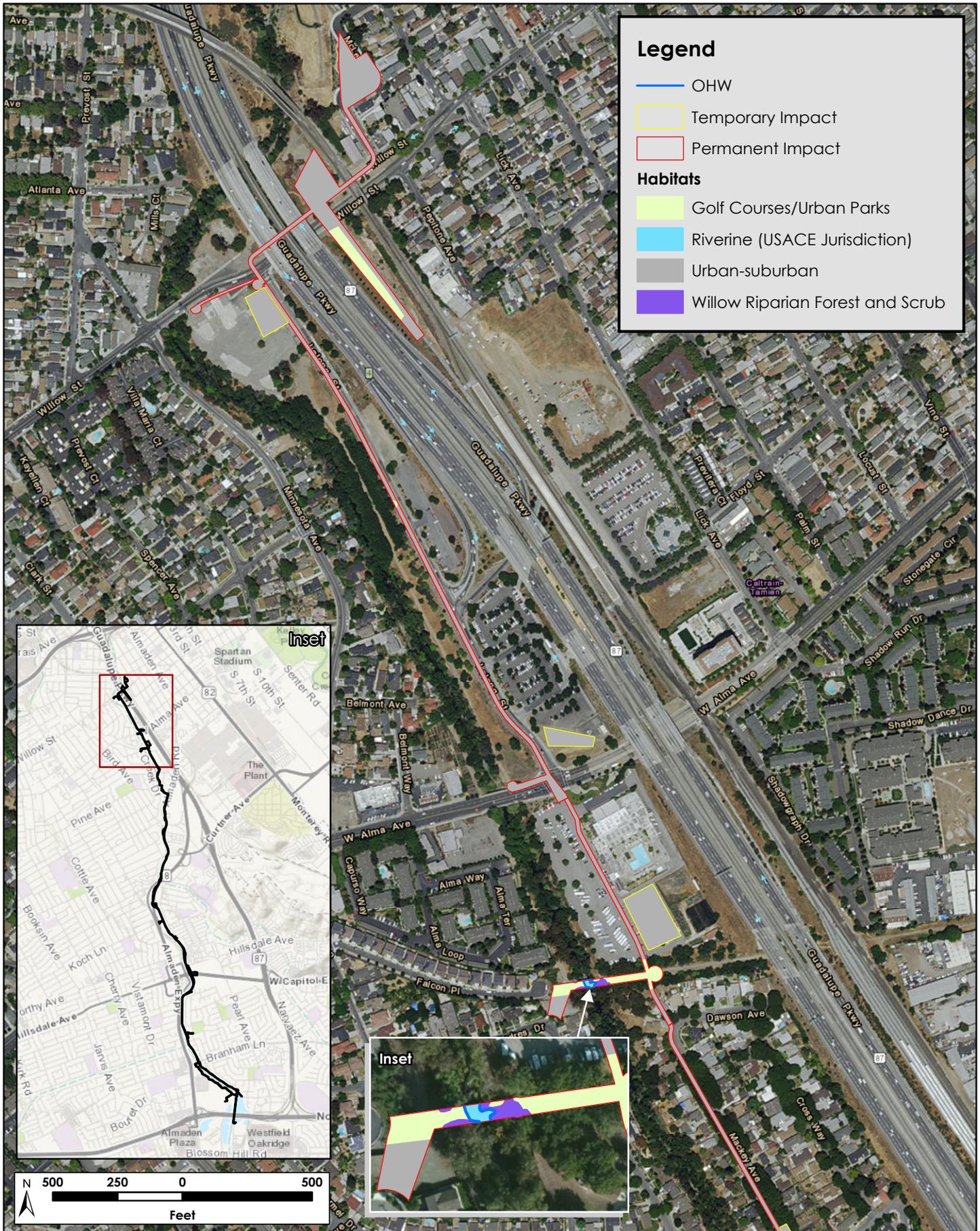
Reconnaissance-level surveys identified six biotic habitat types (called “land cover types” by the VHP) on the Project site: 1) urban-suburban land, 2) golf courses/urban parks, 3) ornamental woodland, 4) willow riparian forest and scrub, 5) mixed riparian forest and woodland, and 6) riverine (Table 2). In addition, a “pond” habitat type is located near the southern portion of the Project site and represented by Pond 3 of the Guadalupe Percolation Ponds. The biotic habitat types that occur on the Project site are depicted in Figure 3. Plant species observed on the Project site during the reconnaissance survey are listed in Appendix A. Photos of the Project site are presented in Appendix B.

Table 2. Biotic Habitat/Land Cover Acreages for the Project Site

Biotic Habitats/Land Cover Types	Approximate Area (acres)
Urban-suburban land	14.33
Golf courses/urban parks	3.10
Ornamental woodland	1.52
Willow riparian forest and scrub	1.29
Mixed riparian forest and woodland	1.15
Riverine	0.06
Total	21.45

4.2.1 Urban-suburban Land

Vegetation. The Project site includes 14.33 acres (66.8% of the Project site) of urban-suburban land that is devoid of vegetation, or contains patches of non-native or cultivated vegetation as a result of the construction of residential, commercial, industrial, transportation, or recreational structures. This area includes portions of

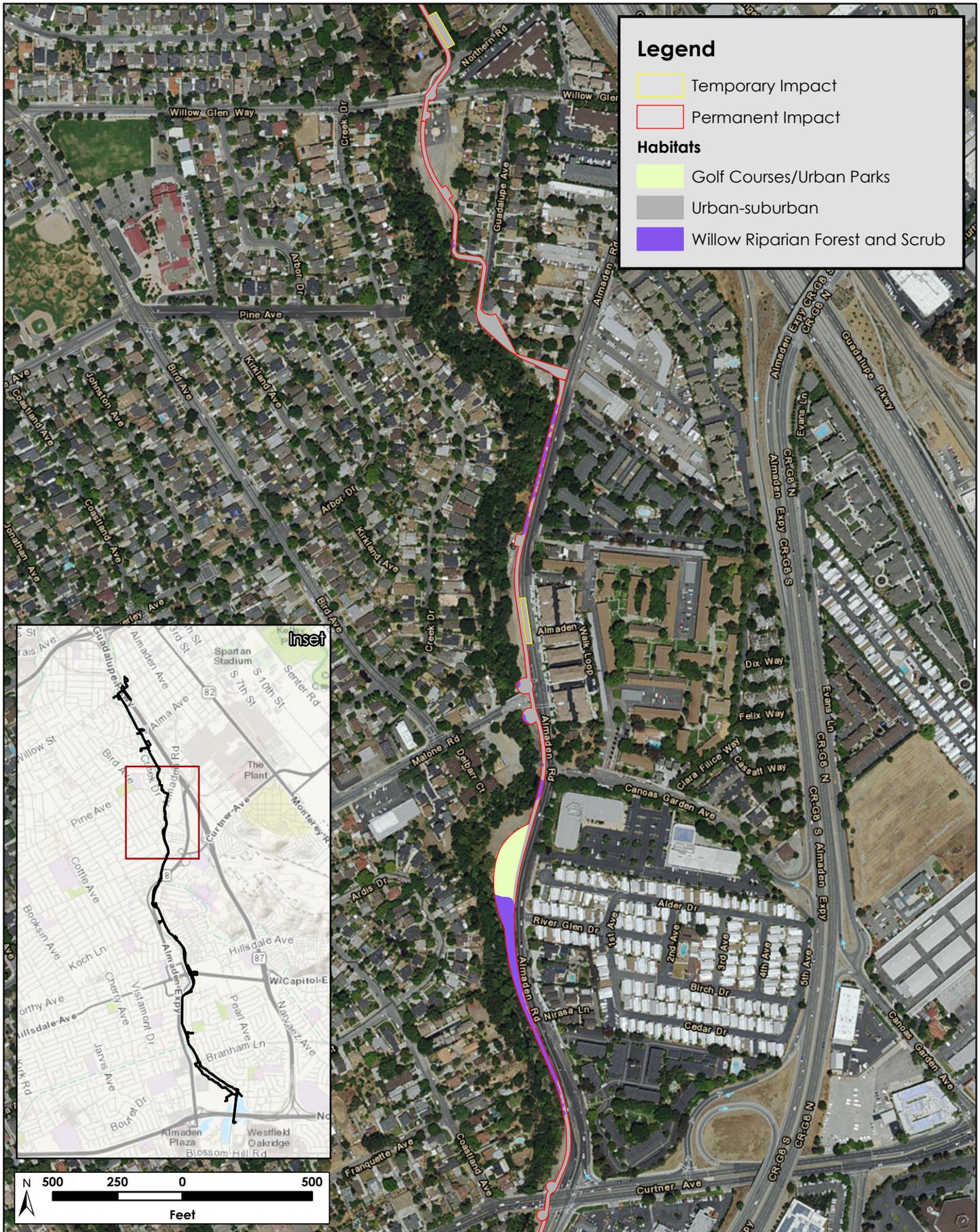


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H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 3a. Biotic Habitats and Impacts Map
Guadalupe River Trail Project Biological Resources Report (7609)
January 2017



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Ecological Consultants

Figure 3b. Biotic Habitats and Impacts Map
Guadalupe River Trail Project Biological Resources Report (7609)
January 2017

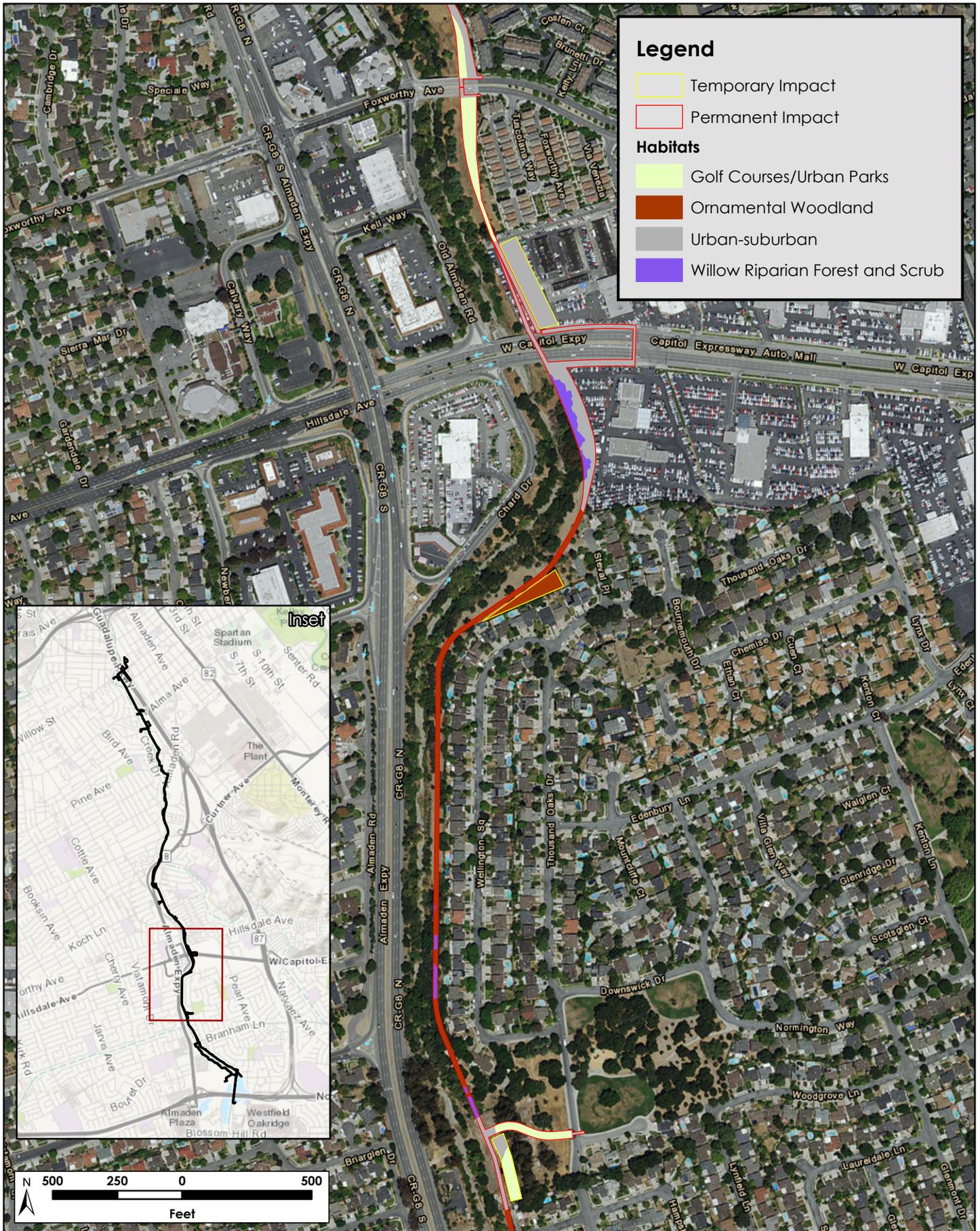


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Ecological Consultants

Figure 3c. Biotic Habitats and Impacts Map
Guadalupe River Trail Project Biological Resources Report (7609)
January 2017

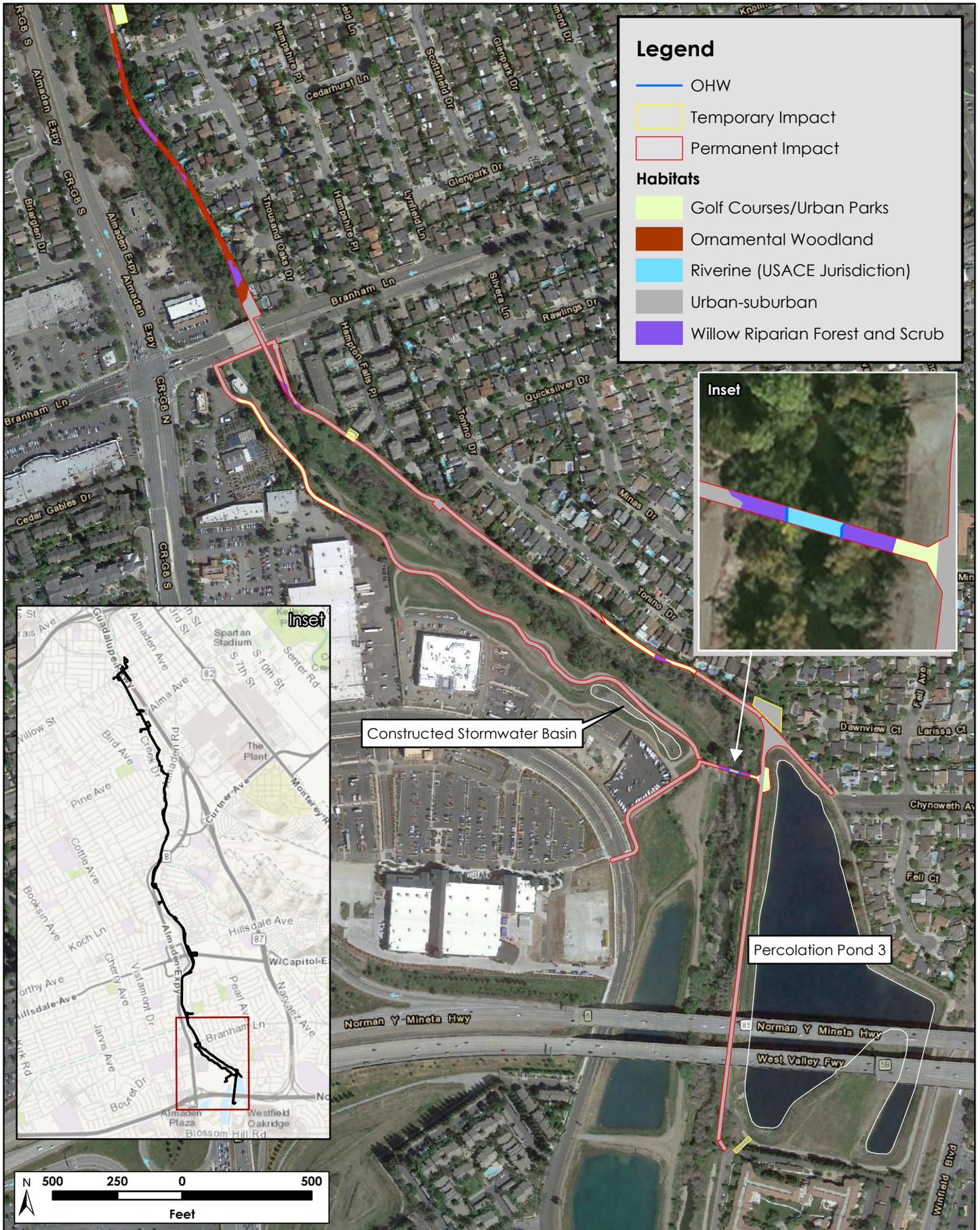


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Figure 3d. Biotic Habitats and Impacts Map
Guadalupe River Trail Project Biological Resources Report (7609)
January 2017



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Figure 3e. Biotic Habitats and Impacts Map
Guadalupe River Trail Project Biological Resources Report (7609)
January 2017

the Project site that contain paved or impermeable surfaces, horticultural plantings or planted street trees, and lawns smaller than 10 acres (Appendix B, Photo 1). Urban-suburban land is located throughout the Project site, as much of the Study Area is developed or disturbed. These lands contain small quantities of ornamental shrubs, including toyon (*Heteromeles arbutifolia*), California coffeeberry (*Frangula californica*), ornamental privet (*Ligustrum* sp.), and ornamental pittosporum (*Pittosporum* sp.), as well as ruderal non-native herbaceous species, such as pearly everlasting (*Anaphalis margaritacea*), spurge (*Euphorbia* sp.), cheeseweed (*Malva parviflora*), and English ivy (*Hedera helix*); the latter species is ranked as “highly invasive” and is common throughout the area (California Invasive Plant Council [Cal-IPC] 2016). Street trees are common in the urban-suburban habitat, and include coast redwood (*Sequoia sempervirens*), big leaf maple (*Acer macrophyllum*), ornamental elm (*Ulmus* sp.), Canary island pine (*Pinus canariensis*), fan palm (*Washingtonia* sp.), and London plane (*Platanus hybrida*), among others.

Wildlife. Gravel and paved areas devoid of vegetation do not provide high-quality wildlife habitat; however, snakes and lizards may bask on these surfaces and a variety of wildlife may cross over or move along the levee roads within the Project site to move between other habitats in the vicinity. Many old cliff swallow (*Petrochelidon pyrrhonota*) mud nests were observed on the underside of the Highway 85 overpass in the southern portion of the Project site during the December 2016 reconnaissance survey. The other bridges over the proposed trail could also support nesting swallows and black phoebes (*Sayornis nigricans*), although no evidence of former nests was observed on these structures. None of the bridges on the Project site provide crevices or other features that are suitable for use by roosting bats. Other species that occur in adjacent golf courses/urban parks, ornamental woodland, and mixed-riparian forest and woodland habitats described below can also be found foraging in the shrubs and trees in this habitat.

4.2.2 Golf Courses/Urban Parks

Vegetation. The Project site includes 3.10 acres (14.4% of the Project site) of habitat that qualify as golf courses/urban parks. At the Project site, the golf courses/urban parks habitat generally includes portions of community or neighborhood parks, as well as non-contiguous patches of urban green space that were mapped by the VHP as being this land cover type. It is generally located adjacent to urban-suburban habitat. Golf courses/urban parks habitat largely comprises non-native plant species that are characteristic of disturbed areas, such as black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), horseweed (*Erigeron canadensis*), smilo grass (*Stipa miliacea*), wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), bindweed (*Convolvulus arvensis*), poison hemlock (*Conium maculatum*), Italian thistle (*Carduus pycnocephalus*), prickly lettuce (*Lactuca serriola*), and Mediterranean barley (*Hordeum murinum*) (Appendix B, Photo 2). Tree species frequently observed in the golf courses/urban parks habitat include silver dollar gum (*Eucalyptus polyanthemos*), eucalyptus (*Eucalyptus* sp.), blue elderberry (*Sambucus nigra* ssp. *caerulea*), Peruvian peppertree (*Schinus molle*), stonefruit (*Prunus* sp.), and coast live oak (*Quercus agrifolia*). Golf courses/urban parks habitat on the Project site are of moderate biological value. Many of the non-native plants species observed on the Project site are ranked as “moderately invasive” and are common throughout the area (California Invasive Plant Council [Cal-IPC] 2016). For instance, moderately invasive species, such as wild oats, Italian thistle, black mustard, poison hemlock, and ripgut brome, have substantial and apparent ecological impacts on plant and animal communities (Cal IPC 2016).

Wildlife. Wildlife use of the golf courses/urban parks habitat on the Project site is limited by the high levels of human disturbance that occur both on the Project site and in nearby areas. As a result, wildlife species associated with extensive grassland habitats in the region, such as the grasshopper sparrow (*Ammodramus savannarum*) and loggerhead shrike (*Lanius ludovicianus*), are absent from the small patches of open habitat within the golf courses/urban parks habitat on the Project site, and many of the species that occur on the site are species that occur in adjacent urban areas and use the site for foraging. Such species include the California towhee (*Melospiza crissalis*), mourning dove (*Zenaida macroura*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Carduelis tristis*), and bushtit (*Psaltriparus minimus*). Likewise, a few species nesting on nearby man-made structures, such as the cliff swallow, barn swallow (*Hirundo rustica*), black phoebe, and the non-native house sparrow (*Passer domesticus*), rock pigeon (*Columba livia*), and European starling (*Sturnus vulgaris*), also forage on or over the ruderal park land on the site. During winter and migration, common nonbreeding species such as the white-crowned sparrow (*Zonotrichia leucophrys*), golden-crowned sparrow (*Zonotrichia atricapilla*), and Lincoln's sparrow (*Melospiza lincolni*) forage in urban areas on the ground or in herbaceous vegetation, primarily for seeds.

Few species of reptiles and amphibians occur on the Project site due to its urban nature and low habitat heterogeneity. Nevertheless, the western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis melanoleucus*), and common garter snake (*Thamnophis sirtalis*) may occur in this type of urban park habitat. Small mammals expected to be present on the site include the western harvest mouse (*Reithrodontomys megalotis*), house mouse (*Mus musculus*), and black rat (*Rattus rattus*). California ground squirrels (*Spermophilus beecheyi*) are also present on the site and several networks of ground squirrel burrows were observed on the slopes of the levees in the southern portion of the of the golf course/urban park habitat during the reconnaissance survey. Larger mammals, such as the striped skunk (*Mephitis mephitis*), feral cat (*Felis catus*), Virginia opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*) also occur in urban parks in the Project vicinity.

Ruderal grassland vegetation and ground squirrel burrows in the golf course/urban park habitats on the Project site provide ostensibly suitable habitat for the burrowing owl. However, the proximity of such open ground to areas with tall trees and shrubs, which are usually avoided by burrowing owls, greatly reduces the potential for burrowing owls to use the site for foraging, roosting, or nesting. No signs of recent burrowing owl presence were observed on the site during a focused survey for burrowing owls in December 2016, and the VHP does not map areas along the Project alignment as providing suitable burrowing owl habitat (ICF International 2012).

4.2.3 Ornamental Woodland

Vegetation. The Project site includes 1.52 acres (7.1% of the Project site) of stands of ornamental trees, which are located in two contiguous patches separated by an urban-suburban area in the mid to southern portion of the Project site, between Steval Place and Branham Lane (Appendix B, Photo 3). The ornamental woodland is situated between urban-suburban residences and willow riparian forest and scrub habitat along the Guadalupe River, and is dominated by mature, planted Northern California black walnut (*Juglans hindsii*), black locust (*Robinia pseudoacacia*), olive (*Olea europaea*), incense cedar (*Calocedrus decurrens*), and common fig (*Ficus carica*) with scattered occurrences of silver dollar gum (*Eucalyptus polyanthemus*), coast live oak (*Quercus agrifolia*), English walnut (*Juglans regia*), and pine (*Pinus* sp.). Ornamental woodlands on the Project site generally lack an

herbaceous and shrub layer due to the presence of a wide dirt trail that is devoid of vegetation, which comprises portions of the ornamental woodland that do not contain mature, planted trees. Tree composition distinguishes the ornamental woodland habitat from the urban-suburban habitat, as Northern California black walnut, black locust, olive, incense cedar, and common fig are largely absent from the urban-suburban habitat. Moreover, trees in the urban-suburban habitat do not grow in contiguous stretches as they do in the ornamental woodland habitat.

Wildlife. The ornamental woodland habitat on the Project site supports a variety of common species of reptiles, birds, and mammals. Oak titmice (*Baeolophus inornatus*), Nuttall's woodpeckers (*Picoides nuttallii*), bushtits (*Psaltriparus minimus*), and chestnut-backed chickadees (*Poecile rufescens*) are year-round residents in the Santa Clara Valley in ornamental woodland habitats. In addition, American robins (*Turdus migratorius*) and American crows (*Corvus brachyrhynchos*), among other bird species, will opportunistically feed on the fruit of trees in the remnant orchards. The proximity of the ornamental woodland habitat to riparian habitats increases the bird species diversity in the ornamental woodland, as a number of birds will move between the two land cover types. The deer mouse (*Peromyscus maniculatus*), California mouse (*Peromyscus californicus*), and introduced eastern gray squirrel (*Sciurus carolinensis*) nest and forage in this habitat and the California myotis (*Myotis californicus*) and long-eared myotis (*Myotis evotis*) may roost in trees with cavities or loose bark.

4.2.4 Willow Riparian Forest and Scrub

Vegetation. The Project site contains 1.29 acres (6.0% of the Project site) of willow riparian forest and scrub habitat, which is located below top of bank along the eastern margins of the active channel of the Guadalupe River (Appendix B, Photo 4). On the Project site, the willow riparian forest and scrub habitat generally exists as a narrow band of closed-canopy willows that support mostly hydrophytic vegetation. Red willow (*Salix laevigata*) and arroyo willow (*Salix lasiolepis*) are the dominant tree species in willow riparian forest and scrub habitat on the Project site, though small mixtures of Fremont cottonwood and black cottonwood (*Populus trichocarpa*) are also relatively common. Herbaceous species in the willow riparian forest and scrub habitat on the Project site include rough cocklebur (*Xanthium strumarium*), tall flatsedge (*Cyperus eragrostis*), curly dock (*Rumex crispus*), smilo grass, and Himalayan blackberry (*Rubus armeniacus*), which is ranked as "high invasive" and is common throughout the area (California Invasive Plant Council [Cal-IPC] 2016). Willow riparian forest and scrub lines much of the Guadalupe River and thus abuts the Project site in many locations throughout the study area; its canopy frequently overhangs urban-suburban habitat or golf courses/urban parks habitat. It is also found along the three channel-crossing sections of the Project site.

Wildlife. Wildlife species associated with the narrow band of willow riparian forest and scrub are similar to those found in the adjacent mixed riparian forest and woodland described below. Willow trees are used by foraging birds such as warblers, flycatchers, and vireos during migration. Common waterfowl, such as mallards (*Anas platyrhynchos*), forage in and along the Guadalupe River year-round, and may nest in riparian habitat adjacent to the river.

4.2.5 Mixed Riparian Forest and Woodland

Vegetation. The mixed riparian forest and woodland habitat is located across 1.15 contiguous acres of the Project site (5.4% of the total) in an area where the site widens along the eastern margin of the active channel of the Guadalupe River (Appendix B, Photo 5). This closed-canopy stretch of habitat is dense with vegetation and is situated on the steep bank with several benches along Almaden Expressway, between Wren Drive and Ironwood Drive. Here, the tree layer is not dominated by a single species, and includes California sycamore (*Platanus racemosa*), coast live oak, red willow, arroyo willow, shamel ash (*Fraxinus uhdei*), valley oak (*Quercus lobata*), and black locust. Trees in the mixed riparian forest and woodland on the Project site grow taller and wider than those in the willow riparian forest and scrub. The herbaceous layer in the mixed riparian forest and woodland is shaded and contains common riparian species, such as Himalayan blackberry, canarygrass (*Phalaris* sp.), cocklebur, tall flatsedge, curly dock, smilo grass, wild radish, and poison hemlock.

Wildlife. The mixed riparian woodland habitat on the Project site, in conjunction with the larger riparian woodland corridor associated with the Guadalupe River, supports a mature tree canopy and understory and a large diversity of wildlife species. The riparian forest and woodland provides suitable nesting habitat for many birds including American crows, chestnut-backed chickadees, downy woodpeckers (*Picoides pubescens*), lesser goldfinches, Anna's hummingbirds (*Calypte anna*), Bewick's wrens (*Thryomanes bewickii*), and American robins, among others. Raptor species, such as the red-shouldered hawk (*Buteo lineatus*), could also nest in the larger trees in this habitat type, although the limited extent of such large trees within the Project footprint reduces this potential, and no raptor nests were observed on the Project site during reconnaissance-level surveys conducted in December 2016. During migration, riparian vegetation provides foraging habitat for numerous species of migrating birds, including a number of species of warblers, vireos, flycatchers, and sparrows.

Leaf litter, downed tree branches, and fallen logs provide cover for amphibians such as the California slender salamander (*Batrachoseps attenuatus*), western toad (*Anaxyrus boreas*), and Sierran chorus frog (*Pseudacris sierra*). Several lizards may also occur here, including the western fence lizard and southern alligator lizard (*Elgaria multicarinata*). Small mammals, such as the ornate shrew (*Sorex ornatus*), house mouse, Norway rat (*Rattus norvegicus*), and brush rabbit (*Sylvilagus bachmani*) reside in these riparian habitats and larger mammals, such as striped skunk, raccoon, and Virginia opossum occur in the Project vicinity and frequently move through the Guadalupe River corridor, including the riparian woodland habitat on the Project site.

4.2.6 Riverine

Vegetation. The riverine habitat within the Project footprint represents approximately 0.06 acres of aquatic habitat (0.3% of the total) in the main perennial channel of the Guadalupe River (Appendix B, Photo 6), although more extensive riverine habitat is present all along the Guadalupe River adjacent to the Project site. Willow riparian forest and scrub habitat and mixed riparian forest and woodland habitat border the riverine habitat. The riverine habitat is devoid of vegetation, as flows are fast-moving and the channel is fairly wide (10 to 30 ft) and deep (2-4 ft).

Wildlife. The Guadalupe River provides habitat for several species of fish. Central California Coast steelhead move through this reach of the Guadalupe River during migration between estuarine/oceanic habitat downstream and spawning or rearing habitat upstream, although this species is not expected to spawn in the reach located adjacent to the Project site. Other fish present in this reach of the river include native species such as the Pacific lamprey (*Entosphenus tridentatus*), prickly sculpin (*Cottus asper*), California roach (*Hesperoleucus symmetricus*), and Sacramento sucker (*Catostomus occidentalis*), and non-natives such as the white catfish (*Ameiurus catus*), largemouth bass (*Micropterus salmoides*), and sunfishes (*Lepomis* spp.). The western pond turtle (*Actinemys marmorata*), Sierran chorus frog, and non-native bullfrog (*Lithobates catesbeiana*) occur in this reach of the Guadalupe River as well. The river provides foraging habitat for several species of waterbirds, including the mallard, Canada goose (*Branta canadensis*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and snowy egret (*Egretta thula*).

4.2.7 Adjacent Habitats

As noted above, the Guadalupe River is represented in the Project footprint in a very limited fashion, as it is outside of the Project area except at the three bridge locations. However, it is important to emphasize that the river runs parallel to, and very close to, the entire Project alignment.

In addition, two notable adjacent habitats are located in the study area but beyond the boundaries of the Project site. Though neither habitat will be directly affected during Project activities, a brief discussion of each is warranted.

- **Percolation Pond 3 (Guadalupe Percolation Ponds)**—Located directly east of the southern portion of the Project site, Percolation Pond 3, is a large (approximately 12-acre), man-made pond that is part of the Guadalupe Ponds system that receives winter stormwater from the Guadalupe Reservoir (Appendix B, Photo 7; Figure 3e). California State Route 85 crosses the pond's midpoint from east to west. The pond, excavated between 1968 and 1980, is approximately 1,500 ft long by 800 ft wide and is surrounded by a band of willow riparian forest and scrub habitat along its banks (Nationwide Environmental Research Title 2016). At the time of December 2016 survey, the pond's banks extended roughly 10 to 20 ft above the ordinary high water mark. The Project site runs north-to-south along a gravel trail situated atop the western bank of the pond. A portion of the Project site, where the site crosses the active channel of the Guadalupe River, extends approximately 30 ft further eastward towards the pond; however, it does not extend into the willow riparian forest and scrub habitat, rather it extends into a black mustard patch located between the gravel trail and the riparian habitat. No vegetation grows in the aquatic habitat of the pond. The percolation pond has limited use to common wildlife species. When the pond has water, it is regularly used by diving ducks, dabbling ducks, and other waterfowl. During the reconnaissance survey, bird species observed in the pond included mallard, ruddy duck (*Oxyura jamaicensis*), double-crested cormorant (*Phalacrocorax auritus*), pied-billed grebe (*Podilymbus podiceps*), Canada goose, and great egret.

- **Upland Stormwater Basin**—A 0.3-acre upland stormwater basin is located near the southeastern portion of the Project site loop in the southern section of the Project site, near Cherry Avenue (Figure 3e). The stormwater basin is a flood control feature that was constructed in 2014 as a means to channel excess stormwater; however, at the time of the December 2016 survey, the basin did not appear to be regulated or maintained, as several inches of standing water were observed (Appendix B, Photo 8). Vegetation in the stormwater basin includes California sagebrush (*Artemisia californica*), Russian thistle (*Salsola tragus*), curly dock, and meadow barley. The Project site runs along the eastern portion of the stormwater basin and sits approximately 5 ft above it. Birds such as sparrows may forage on seeds and insects in the basin, but otherwise the upland stormwater basin has limited value to wildlife because it does not likely retain water long enough for amphibians to breed successfully. Species found in adjacent golf courses/urban parks habitat will also occur in the stormwater basin.

Section 5. Special-Status Species and Sensitive Habitats

CEQA requires assessment of the effects of a project on species that are protected by state, federal, or local governments as “threatened, rare, or endangered”; such species are typically described as “special-status species”. For the purpose of the environmental review of the Project, special-status species have been defined as described below. Impacts to these species are regulated by some of the federal, state, and local laws and ordinances described in Section 3.0 above.

For purposes of this analysis, “special-status” plants are considered plant species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, rare, or a candidate species.
- Listed by the CNPS as CRPR 1A, 1B, 2, 3, or 4.

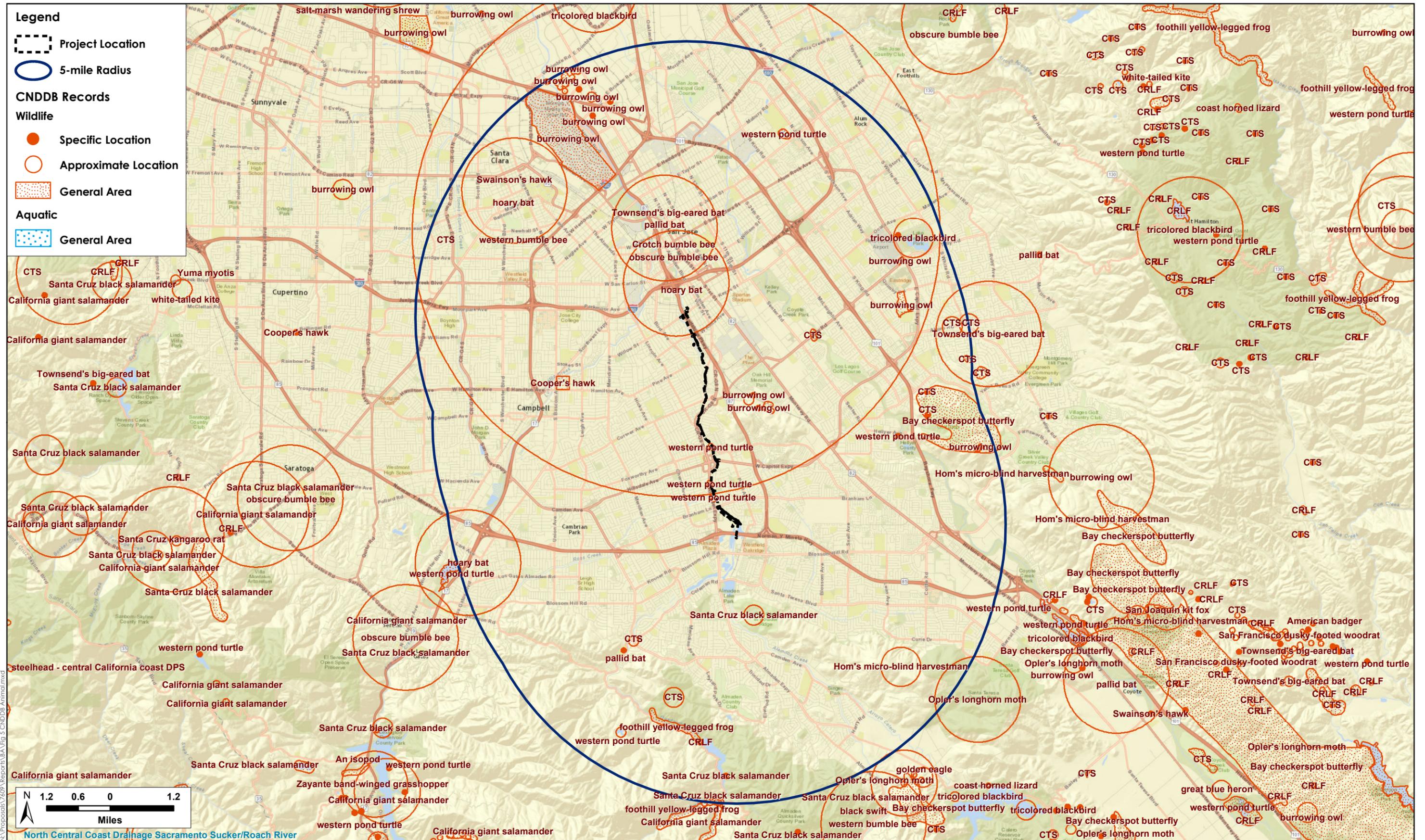
For purposes of this analysis, “special-status” animals are considered animal species that are:

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species.
- Designated by the CDFW as a California species of special concern.
- Listed in the California Fish and Game Code as fully protected species (fully protected birds are provided in §3511, mammals in §4700, reptiles and amphibians in §5050, and fish in §5515).

Information concerning threatened, endangered, and other special-status species that may occur on the Project site and Project vicinity was collected from several sources and reviewed by H. T. Harvey & Associates biologists as described in Section 2.1 above. The specific habitat requirements and the locations of known occurrences of each special-status species were the principal criteria used to determine which species potentially occur on the Project site. Figure 4 depicts CNDDDB records of special-status plant species in the Project vicinity and Figure 5 depicts CNDDDB records of special-status animal species. These generalized maps show areas where special-status species are known to occur or have occurred historically.

5.1 Special-Status Plant Species

The CNPS (2016) and CNDDDB (2016) identify 74 special-status plant species as potentially occurring in at least one of the nine USGS 7.5-minute quadrangles containing or surrounding the Study Area for species in CRPRs 1 and 2, or in Santa Clara County for CRPR 3 and 4 species. In total, all of the 74 potentially occurring



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special-status plant species were determined to be absent from the Study Area for at least one of the following reasons: (1) absence of suitable habitat types; (2) lack of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the elevation range of the species is outside of the range on the Project site; and/or (4) the species is presumed extirpated. Furthermore, none of the land cover types associated with VHP-covered rare plants is present in the Project area. Appendix C lists these plants along with the basis for the determination. The urban-suburban, golf courses/urban parks and ornamental woodland habitat types are not considered to be suitable for special-status plants as a result of the high prevalence of weed infestations on the Project site, and the prior placement of fill soil. Riparian habitats on the Project site do not contain adequate edaphic compositions or microhabitats to support special-status plant species.

5.2 Special-Status Animal Species

Based on our review of recent CNDDDB (2016) records (Figure 5), VHP mapping, and other data sources, coupled with our review of habitat conditions on the Project site, we identified the special-status animal species known to occur in the Project region and those that potentially occur on the Project site. The legal status and likelihood of occurrence on the Project site of these special-status animal species are presented in Table 3. Most of the special-status species listed in Table 3 are not expected to occur on the Project site because the site lacks suitable habitat, is outside the known range of the species, and/or is isolated from the nearest known extant populations by development or otherwise unsuitable habitat. Animal species not expected to occur on the Project site for these reasons include the Bay checkerspot butterfly (*Editha bayensis*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylei*), bank swallow (*Riparia riparia*), nesting Vaux's swift (*Chaetura vauxi*), loggerhead shrike (*Lanius ludovicianus*), nesting yellow-breasted chat (*Icteria virens*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), nesting American peregrine falcon (*Falco peregrinus anatum*), golden eagle (*Aquila chrysaetos*), nesting bald eagle (*Haliaeetus leucocephalus*), burrowing owl, nesting tricolored blackbird (*Agelaius tricolor*), Townsend's big-eared bat (*Corynorhinus townsendii*), and pallid bat (*Antrozous pallidus*). A focused survey of the Project site detected no nests of the San Francisco dusky-footed woodrat, and thus this species is also determined to be absent.

For several of these species, additional discussion regarding absence is warranted, as follows:

- Populations of the California tiger salamander, federally and state listed as threatened, located on the Valley floor have been extirpated due to habitat loss, and the species is now considered absent from the majority of the Valley floor, including the Project site (H. T. Harvey & Associates 1999, 2012; SCVWD 2011). The lone exception is a single population that is considered extant near Communications Hill in south San José, approximately 1 mile east of the Project site (H. T. Harvey & Associates 2012). However, this locality is separated from the Project site by extensive barriers, including urban development and high-volume roadways, including the Guadalupe Freeway (State Route 87). The species has also been recorded 3.0 miles to the southwest of the Project site at Almaden Quicksilver Park in 1983 and 2.7 miles to the southwest of the Project site in a pond along Guadalupe Creek near the Camden Avenue bridge in the 1960's (CNDDDB

Table 3. Special-Status Animal Species, Their Status, and Potential Occurrence on the Project Site

Name	*Status	Habitat	Potential for Occurrence on Site
Federal or State Endangered, Threatened, or Candidate Species			
Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>)	FT	Native grasslands on serpentine soils. Larval host plants are <i>Plantago erecta</i> and/or <i>Castilleja sp.</i>	Absent. The Project site lacks the serpentine habitat and larval host plants on which this species depends. VHP mapping does not indicate that this species is expected to occur on the site.
Central California Coast steelhead (<i>Oncorhynchus mykiss</i>)	FT	Cool streams with suitable spawning habitat and conditions allowing migration between spawning and marine habitats.	Present. Steelhead occur in the Guadalupe River adjacent to the Project site, and in the limited areas where the river flows through the Project site at proposed bridge locations. Spawning in this reach is unlikely, but steelhead occur here during upstream migration of adults to spawning areas and downstream migration of both adults and smolts.
California tiger salamander (<i>Ambystoma californiense</i>)	FT, ST, VHP	Breeds in vernal or temporary pools in annual grasslands or open woodlands. Uses surrounding uplands for dispersal. Uses mammal burrows, especially those of California ground squirrels and valley pocket gophers (<i>Thomomys bottae</i>), and sometimes soil cracks as dry-season refugia.	Absent. Breeding habitat is absent, and no extant populations exist that could serve as a source of California tiger salamanders dispersing onto the Project site. The species is considered to be almost completely extirpated from the northern, urbanized floor of the Santa Clara Valley with the lone exception being a single population that is considered extant near Communications Hill in south San José, 1 mile east of the Project site (H. T. Harvey & Associates 2012). However, this locality is separated from the Project site by extensive barriers, including urban development and high-volume roadways, such as SR 87. Besides the Communications Hill population, there are no other CNDDDB records of extant populations of California tiger salamanders within dispersal distance of the Project site. The Guadalupe River runs adjacent to the Project site; however, California tiger salamanders do not breed in rivers or use them preferentially for dispersal, and the Guadalupe River is not a potential source of California tiger salamanders dispersing onto the Project site. In summary, the site is completely isolated from any potential breeding locations, and VHP mapping does not indicate that this species is expected to occur on the site.

Name	*Status	Habitat	Potential for Occurrence on Site
California red-legged frog (<i>Rana draytonii</i>)	FT, CSSC, VHP	Streams, freshwater pools, and ponds with emergent or overhanging vegetation. Uses grassland and woodland for dispersal and refugia.	Absent. The California red-legged frog is considered to be extirpated from the Valley floor (H. T. Harvey & Associates 1997). California red-legged frogs have not been recorded in the Project vicinity (CNDDDB 2016), and all recent survey evidence from urban streams on the valley floor, such as the Guadalupe River, indicate that this species is absent from such streams. This species cannot reproduce successfully in the Guadalupe River due to the presence of predatory fishes, bullfrogs, and crayfish. Therefore, the Guadalupe River is not a potential source of California red-legged frogs dispersing onto the Project site, and no high-quality breeding habitat is present elsewhere in the Project vicinity. Although the VHP maps the Guadalupe River as primary habitat for California red-legged frogs, the Project site is so far removed from any potential breeding locations that this species is considered absent.
Bank swallow (<i>Riparia riparia</i>)	ST	Colonial nester on vertical banks or cliffs with fine-textured soils near water.	Absent. No recent nesting records from Santa Clara County (CNDDDB 2016), and no suitable nesting habitat occurs in or near the Project site.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	SE, SP	Occurs mainly along seacoasts, rivers, and lakes; nests in tall trees or in cliffs, occasionally on electrical towers. Feeds mostly on fish.	Absent as Breeder. Bald eagles are not known to nest on, or immediately adjacent to, the Project site. This species may forage in habitats near the Project site (possibly in the Guadalupe River or in Percolation Pond 3) only infrequently, if at all, based on the limited extent of suitable habitat and the low number of recorded occurrences in the Project vicinity.
Swainson's hawk (<i>Buteo swainsoni</i>)	ST (nesting)	Nests in trees surrounded by extensive marshland or agricultural foraging habitat.	Absent. Historically nested in small numbers in Santa Clara County; there is a record of this species nesting in the Berryessa area (eastern San José) in 1894 (Bousman 2007b). Currently, the species is known to nest in Santa Clara County only in one location in Coyote Valley; otherwise, it occurs in the Project region only as a very infrequent transient during migration, and the suitable nesting and foraging habitat on the Project site is very limited in extent. Thus, the species is determined to be absent.

California Species of Special Concern

Central Valley fall-run Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	CSSC	Cool rivers and large streams that flow to the ocean and have shallow, partly shaded pools, riffles, and runs.	Present. Chinook salmon occur in the Guadalupe River adjacent to the Project site, and in the limited areas where the river flows through the Project site at proposed bridge locations. Spawning in this reach is unlikely, but individuals occur here during upstream migration of adults to spawning areas and downstream migration of smolts. The Chinook salmon using the Guadalupe River have been recognized as strays from hatchery releases (NMFS 1999, Hedgecock 2002), and they do not represent a native run.
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Name	*Status	Habitat	Potential for Occurrence on Site
Foothill yellow-legged frog (<i>Rana boylei</i>)	CSSC	Partially shaded shallow streams and riffles with a rocky substrate. Occurs in or near streams in a variety of habitats in coast ranges.	Absent. Historically, foothill yellow-legged frogs were probably present in virtually all of the large perennial streams in Santa Clara County with the exceptions of the lower portions of Coyote Creek and the Guadalupe River (Zweifel 1955; H. T. Harvey & Associates 1999). This species has essentially disappeared from the farmed and urbanized lowland areas of the County, as well as many of the perennial streams below major reservoirs (H. T. Harvey & Associates 1999). It appears that the main reason for the reduction in the species' range is the alteration of stream hydrology from dams (Jennings and Hayes 1994; Kupferberg 1996, 2012). Although the VHP models the reach of Guadalupe River on and adjacent to the Project site as secondary habitat for the foothill yellow-legged frog (ICF International 2012), there are no recent records from the vicinity (CNDDDB 2016), and no suitable habitat is present. Therefore, this species is absent from the Project site.
Western pond turtle (<i>Actinemys marmorata</i>)	CSSC	Permanent or nearly permanent water in a variety of habitats.	May be Present. Although breeding populations may have been extirpated from most agricultural and urbanized areas in the Project region, individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley. The VHP maps the Guadalupe River as primary habitat for this species (ICF International 2012), and individuals of this species have been recorded in the reach of the Guadalupe River adjacent to the Project site (CNDDDB 2016). Small numbers of western pond turtles are expected to occur in the Guadalupe River adjacent to the Project site, and in the limited areas where the river flows through the Project site at proposed bridge locations. This species could potentially nest in upland areas along the river, including areas on the Project site (albeit in very low numbers); however, the probability of nesting within the immediate Project footprint is low due to the hard-packed nature of soils in most of the footprint (especially in currently developed areas).
Northern harrier (<i>Circus cyaneus</i>)	CSSC (nesting)	Nests in marshes and moist fields, forages over open areas.	Absent. Not expected to breed or forage on the Project site due to the absence of suitable habitat. The urban park lands on-site provide poor foraging habitat due to the limited extent and urban nature of vegetation on the site.

Name	*Status	Habitat	Potential for Occurrence on Site
Burrowing owl (<i>Athene cunicularia</i>)	CSSC	Open grasslands and ruderal habitats with suitable burrows, usually those made by California ground squirrels.	Absent. There are no known burrowing owl records from the Project site or immediately adjacent areas (CNDDDB 2016). The nearest location currently occupied by burrowing owls is the San José International Airport, 2.7 northwest of the northern terminus of the Project site (CNDDDB 2016). Further, the Project site is not mapped as potential burrowing owl habitat by the VHP (ICF International 2012). A reconnaissance survey in December 2016 found that ground squirrel burrows suitable for burrowing owls are present on the Project site and in immediately adjacent areas along the Guadalupe River corridor. However, the quality of this habitat is only marginal at best, due to the limited extent of foraging habitat, proximity to trees, and influence of urbanization. Therefore, burrowing owls are not expected to occur on the Project site.
Vaux's swift (<i>Chaetura vauxi</i>)	CSSC (nesting)	Nests in snags in coastal coniferous forests or, occasionally, in chimneys; forages aerially.	Absent as Breeder. Not expected to nest within or adjacent to the Project site due to absence of suitable nesting habitat, nor to forage at the Project site due to surrounding development and high levels of human disturbance (e.g., freeways, roadways, urban parks, residential development). Small numbers forage aerially over the site.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	CSSC (nesting)	Nests in tall shrubs and dense trees; forages in grasslands, marshes, and ruderal habitats.	Absent. There are no known breeding records from the Project site or adjacent habitats along the Guadalupe River. Due to the absence of extensive open habitat and the proximity of the entire Project alignment to areas of frequent human disturbance, this species is considered absent from the Project site.
Yellow warbler (<i>Setophaga petechia</i>)	CSSC (nesting)	Nests in riparian woodlands.	May be Present. Riparian vegetation in and immediately adjacent to the Project site provides at least moderately suitable breeding habitat, and several pairs may nest in the riparian habitat within and adjacent to the Project site. This species also occurs on the site as a common migrant.
San Francisco common yellowthroat (<i>Geothlypis trichas sinuosa</i>)	CSSC	Nests in herbaceous vegetation, usually in wetlands or moist floodplains.	Absent. No suitable nesting or foraging habitat is present within the Project site. Herbaceous vegetation in the Project site is sparse and patchy and the Project site lacks wetlands or moist floodplains. Furthermore, the Project site is likely outside of the range of this subspecies, which occurs closer to San Francisco Bay.
Yellow-breasted chat (<i>Icteria virens</i>)	CSSC (nesting)	Nests in dense stands of willow and other riparian habitat.	Absent as Breeder. This species is a rare breeder in willow-dominated riparian habitats in the Project region. Suitably large, dense stands of willow are not present on the Project site or in immediately adjacent areas. May occasionally occur over the Project site as a migrant.

Name	*Status	Habitat	Potential for Occurrence on Site
Tricolored blackbird (<i>Agelaius tricolor</i>)	SC, CSSC	Nests near fresh water in dense emergent vegetation.	Absent as Breeder. Typically nests in extensive stands of tall emergent herbaceous vegetation in non-tidal freshwater marshes and ponds, which are not present on the Project site. Tricolored blackbirds have not been recorded nesting along the Guadalupe River corridor (Rottenborn 2007). The VHP maps all riparian woodland habitats in the Santa Clara Valley as primary breeding habitat for this species, and a tricolored blackbird survey area is mapped along the Guadalupe River adjacent to the Project site (ICF International 2012). However, the riparian corridor along this reach of the Guadalupe River lacks suitable emergent vegetation to support nesting habitat for this species due to the abundance of tall trees and the very limited extent of any emergent vegetation, and extensive open foraging habitat in adjacent upland areas is absent. Therefore, this species is considered absent from the Project site as a breeder. Small numbers of nonbreeding individuals may forage in the Project area.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	CSSC	Roosts in caves and mine tunnels, and occasionally in deep crevices in trees such as redwoods or in abandoned buildings, in a variety of habitats.	Absent. No known extant populations occur on the Santa Clara Valley floor, and no breeding sites are known from the Project vicinity. Suitable breeding habitat is not present on the Project site.
Pallid bat (<i>Antrozous pallidus</i>)	CSSC	Forages over many habitats; roosts in caves, rock outcrops, buildings, and hollow trees.	Absent. Historically, pallid bats were likely present in a number of locations throughout the Project region, but their populations have declined in recent decades. No suitable roosting habitat is present on the Project site, and no known maternity colonies are present on or adjacent to the Project site. This species has been extirpated as a breeder from urban areas in the South Bay and there is a low probability that the species occurs in the Project vicinity at all due to urbanization.
San Francisco dusky-footed woodrat (<i>Neotoma fuscipes annectens</i>)	CSSC	Nests in a variety of habitats including riparian areas, oak woodlands, and scrub.	Absent. Currently, with the exception of records along Coyote Creek and along the edges of the Valley, San Francisco dusky-footed woodrats are not known to occur in the more urbanized portions of Santa Clara County (H. T. Harvey & Associates 2010). No evidence of woodrat presence was observed during reconnaissance level survey conducted in December 2016. Thus, this species is determined to be absent from the Project site.
State Fully Protected Species			

Name	*Status	Habitat	Potential for Occurrence on Site
American peregrine falcon (<i>Falco peregrinus anatum</i>)	SP	Forages in many habitats; nests on cliffs and tall bridges and buildings.	Absent as Breeder. Suitable breeding habitat is not present on, or immediately adjacent to, the Project site. This species occasionally forages in the vicinity of Percolation Pond 3 and the Highway 85 bridge over the Guadalupe River.
Golden eagle (<i>Aquila chrysaetos</i>)	SP	Breeds on cliffs or in large trees (rarely on electrical towers), forages in open areas.	Absent. Suitable breeding and foraging habitat is not present on, or immediately adjacent to, the Project site.
White-tailed kite (<i>Elanus leucurus</i>)	SP	Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.	May be Present. Limited areas of suitable foraging habitat and suitably large trees for nesting are present on the Project site and along the Guadalupe River adjacent to the Project site, and this species has been recorded nesting approximately 2 miles to the east of the site along Coyote Creek (Mammoser 2007). No individuals were detected during the December 2016 reconnaissance-level surveys, and factors such as the limited extent and marginal quality of foraging habitat on site, and the high degree of urbanization surrounding the site, reduce the likelihood that this species will use habitats on the site for foraging or nesting. Therefore, nesting and foraging white-tailed kites are expected to occur at the Project site only in small numbers, if at all.

SPECIAL-STATUS SPECIES CODE DESIGNATIONS

FE =	Federally listed Endangered
FT =	Federally listed Threatened
FC =	Federal Candidate for listing
SE =	State listed Endangered
ST =	State listed Threatened
SC =	State Candidate for listing
CSSC =	California Species of Special Concern
SP =	State Fully Protected Species
VHP =	Santa Clara Valley Habitat Plan Covered-Species

2016). California tiger salamanders are considered extirpated from the latter site. No other records of California tiger salamanders are located within dispersal distance of the Project site (CNDDDB 2016) and the Project site is not mapped as habitat for the California tiger salamander by the VHP. Thus, the species is determined to be absent from the Project site.

- The California red-legged frog, federally listed as threatened and a California species of special concern, has been extirpated from the majority of the Project region, including the entire urbanized Valley floor, due to development, the alteration of hydrology of its aquatic habitats, and the introduction of non-native predators such as non-native fishes and bullfrogs (H. T. Harvey & Associates 1997; SCVWD 2011). The VHP models the Guadalupe River adjacent to the Project site as primary habitat for this species. However, the river does not provide suitable breeding habitat for the California red-legged frog due to the abundance of non-native predators, and there are no high-quality breeding habitats nor any records of California red-legged frogs in the Project vicinity. Therefore, we do not expect red-legged frogs to disperse to the Project site, and California red-legged frogs are determined to be absent from the Project site.
- The foothill yellow-legged frog, a California species of special concern, has been extirpated from the farmed and urbanized lowland areas of Santa Clara County, as well as many of the perennial streams below major reservoirs (H. T. Harvey & Associates 1999). It appears that the main reason for the reduction in the species' range is the alteration of stream hydrology from dams (Jennings and Hayes 1994; Kupferberg 1996, 2012). Although the VHP models the reach of Guadalupe River on and adjacent to the Project site as secondary habitat for the foothill yellow-legged frog, there are no recent records from the vicinity (CNDDDB 2016), and no suitable habitat is present. Therefore, this species is absent from the Project site.
- Although several ground squirrel burrows are present on the Guadalupe River levee within and immediately adjacent to the southernmost portion of the Project site between Branham Lane and Chynoweth Avenue, the high levels of disturbance from pedestrians, bicyclists, and dogs, as well as the proximity of these burrows to taller trees and shrubs, likely precludes the presence of nesting or roosting burrowing owls in this area. We also do not expect burrowing owls to be nesting or roosting in burrows along the SCVWD's levees (e.g., around Pond 3). Albion Environmental (2008) assessed the potential impact of the SCVWD's proposed burrow management under the Stream Maintenance Program on burrowing owls. Because no evidence existed that SCVWD levees provided important burrowing owl nesting or roosting habitat (i.e., used regularly or by a sizeable proportion of the South San Francisco Bay population), Albion Environmental concluded that management of burrows on the SCVWD's levees would not result in a substantial impact on burrowing owl habitat. Furthermore, the VHP does not map any areas within or immediately adjacent to the Project site as suitable burrowing owl habitat (ICF International 2012). Thus, burrowing owls are not expected to occur on the Project site.
- Although the VHP maps the riparian corridor of the Guadalupe River adjacent to the Project site as potential habitat for the tricolored blackbird, a state candidate for listing, this species has not been recorded nesting on the Project site or in adjacent areas (CNDDDB 2016, Rottenborn 2007). Tricolored blackbirds are found primarily in the Central Valley and in central and southern coastal areas of California. The tricolored blackbird is highly colonial in its nesting habits and forms dense breeding colonies that, in some

parts of the Central Valley, may consist of up to tens of thousands of pairs. Colonies occur in emergent vegetation, grain fields, fallow fields, extensive thickets of blackberry, and occasionally in early-successional riparian habitat. Nesting colonies usually are located near fresh water. Tricolored blackbirds form large, often multi-species flocks during the non-breeding period and range more widely than during the breeding season.

Tricolored blackbirds have a patchy distribution in the Santa Clara Valley, reflecting the patchy nature of its breeding habitat (Rottenborn 2007). Because nesting habitat for this species is short-lived, and is often created by disturbance, colonies generally are not present at a given location for more than a few years. The VHP mapped the reach of the Guadalupe River adjacent to the Project site as tricolored blackbird habitat, but this species has never been recorded nesting on the Project site or in adjacent areas before (CNDDDB 2016, Rottenborn 2007). The vast majority of the habitat along the Guadalupe River in the Project vicinity is unsuitable for use by nesting tricolored blackbirds, as the habitat is dominated by tall trees and shrubs, which have not been used for nesting by this species in Santa Clara County. Ostensibly suitable nesting substrate (e.g., cattails) was identified along the Guadalupe River channel to the west of the Project site south of Hillsdale Avenue; however, this patch of habitat was very limited in extent and was not large enough to support a tricolored blackbird colony. In addition, the urban landscape on both sides of the Guadalupe River throughout the Project vicinity does not contain the areas of open space required by foraging flocks of tricolored blackbirds. As a result, the Project site and surrounding study area lacks suitable nesting and foraging habitat for tricolored blackbirds. Although tricolored blackbirds may occur in mixed species flocks in the Project vicinity as occasional foragers during the nonbreeding season, they are expected to do so only occasionally and in small numbers.

- The Project site lacks suitable structures or trees with large cavities that would provide habitat for large roosting or maternity colonies of bats, including the Townsend's big-eared bat, a state candidate for listing, and the pallid bat, a California species of special concern. Furthermore, the Project site lacks extensive open habitat that may be used for foraging by pallid bats. Therefore, these species are determined to be absent.

Several special-status species, including the bald eagle, Vaux's swift, American peregrine falcon, yellow-breasted chat, and tricolored blackbird, may occur on the Project site only as occasional foragers, but they do not breed on or very near the site, nor do they occur regularly or in large numbers.

Special-status animals that may breed on or very close to the site, or that occur within the Guadalupe River itself, include the Central California coast steelhead, Central Valley Fall-Run Chinook salmon (*Oncorhynchus tshawytscha*), western pond turtle, yellow warbler (*Setophaga petechia*), and white-tailed kite (*Elanus leucurus*). These species are discussed in greater detail below.

Central California Coast Steelhead (*Oncorhynchus mykiss*). Federal Listing Status: Threatened; State Listing Status: None. The NMFS has categorized steelhead into Distinct Population Segments (DPS). The Central California Coast DPS consists of all runs from the Russian River in Sonoma County south to Aptos Creek in Santa Cruz County, including all steelhead spawning in streams that flow into the San Francisco Bay.

In 1997, the NMFS published a final rule to list the Central California Coast DPS as threatened under the FESA (NMFS 1997). Critical habitat for this DPS was designated on 2 September 2005 (NMFS 2005). Designated critical habitat for Central California Coast steelhead includes all river reaches and estuarine areas accessible to listed steelhead in coastal river basins from the Russian River to Aptos Creek, California (inclusive), and the drainages of San Francisco and San Pablo Bays (NMFS 2000, 2005).

The steelhead is an anadromous form of rainbow trout that migrates upstream from the ocean to spawn in late fall or early winter, when flows are sufficient to allow them to reach suitable habitat in far upstream areas. In the South Bay, adults typically migrate to spawning areas from late December through early April, and both adults and smolts migrate downstream from February through May. Steelhead typically spawn in gravel substrates located in clear, cool, perennial sections of relatively undisturbed streams, with dense canopy cover that provides shade, woody debris, and organic matter. Steelhead usually cannot survive long in pools or streams with water temperatures above 70 °F, however, they can use warmer habitats if adequate food is available.

Steelhead historically occurred in streams throughout the Santa Clara County, but they are now relatively rare due to urbanization, the presence of barriers to movement, and loss of spawning and rearing habitat (Leidy et al. 2005). Steelhead are known to occur in the reach of the Guadalupe River located adjacent to the Project site, and in the limited areas where the river flows through the Project site at proposed bridge locations. Spawning in this reach is unlikely, but steelhead occur here during upstream migration of adults to spawning areas and downstream migration of both adults and smolts.

Central Valley Fall-run Chinook Salmon (*Oncorhynchus tshawytscha*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The Chinook salmon, also called king salmon, is the largest of the Pacific salmon and the most abundant salmon species in California. California's largest populations of Chinook salmon originate in the Sacramento-San Joaquin River system. The Chinook salmon's life history is characterized by adult migration from the ocean to natal freshwater streams to spawn, and juvenile migration to oceanic habitats for extended periods of feeding and growth. Chinook salmon in San Francisco Bay/Delta exist as four races – winter, spring, fall, and late-fall – as defined by the timing of the adult spawning migration. The Chinook salmon found in South San Francisco Bay are fall-run adults that generally migrate from the ocean to the South Bay tributaries from late September through November. Spawning occurs in November and December. Juvenile migration downstream to the estuary usually occurs between mid-March and early May, though large storm events may displace them downstream in January or February. Juvenile migration into estuaries has been observed to occur at night and during daylight. Juveniles may move quickly through estuaries or reside there for months. Significant growth occurs during estuarine residence as they smolt and prepare for marine existence. Distribution and movement patterns of outmigrating juvenile Chinook salmon are not well understood, but they have been found throughout the San Francisco Bay.

Chinook salmon did not historically spawn in streams flowing into the South San Francisco Bay. This species was first observed in South Bay streams in the mid-1980s, coinciding with a large groundwater pumping operation that resulted in high flows in the Guadalupe River, even during summer and fall (U.S. Environmental

Protection Agency 2005). These artificially high summer and fall flows apparently attracted Chinook salmon into South Bay streams. The homing abilities of the salmon that were initially attracted into the Guadalupe River and Coyote Creek may have been weakened because of mass releases of hatchery fish in Suisun and San Pablo Bays, rather than in the rivers in which the fish were intended to spawn (CDFG and NMFS 2001). Genetic analysis, timing of spawning, and the detection of coded wire-tagged hatchery fish suggest that these fish are derived from Central Valley fall-run stock (Hedgecock 2002). Another study analyzing 28 juveniles in the Guadalupe River determined that 25 individuals keyed to Central Valley fall-run stock and three keyed to Columbia River stocks (Garza and Pearse 2008). Similarly, a study of adult Chinook salmon in the Guadalupe River conducted by SCVWD fisheries biologists found a large number of hatchery clipped and coded wire tagged individuals (Salsbery et al. 2004). Conditions for successful spawning in South Bay streams are marginal, because these fish migrate upstream and spawn during fall (occasionally as early as July), when streamflow is at its lowest. Although Chinook salmon are known to spawn in the Guadalupe River and Coyote Creek, and smolts have been captured in both streams, there is no evidence that adults are successfully returning to spawn in these creeks, and thus there is no evidence that the species has naturalized in South Bay streams (SCVWD 1998-2005, Salsbery 2009). Chinook salmon occur in the Guadalupe River adjacent to the Project site, and in the limited areas where the river flows through the Project site at proposed bridge locations. Spawning in this reach is unlikely, but individuals occur here during upstream migration of adults to spawning areas and downstream migration of smolts.

Western Pond Turtle (*Actinemys marmorata*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The western pond turtle occurs in ponds, streams, and other wetland habitats in the Pacific slope drainages of California and northern Baja California, Mexico (Bury and Germano 2008). The central California population was historically present in most drainages on the Pacific slope (Jennings and Hayes 1994), but streambed alterations and other sources of habitat destruction, exacerbated by frequent drought events, have caused substantial population declines throughout most of the species' range (Stebbins 2003). Ponds or slack-water pools with suitable basking sites (such as logs) are an important habitat component for this species, and western pond turtles do not occur commonly along high-gradient streams. Females lay eggs in upland habitats, in clay or silty soils in unshaded (often south-facing) areas up to 0.25 mi from aquatic habitat (Jennings and Hayes 1994). Juveniles feed and grow in shallow aquatic habitats (often creeks) with emergent vegetation and ample invertebrate prey. Nesting habitat is typically found within 600 ft of aquatic habitat, but if no suitable nesting habitat can be found close by, adults may travel overland considerable distances to nest.

Although breeding populations may have been extirpated from most agricultural and urbanized areas in the Project region, individuals of this long-lived species still occur in urban streams and ponds in the Santa Clara Valley. The Guadalupe River adjacent to the Project site provides suitable aquatic habitat for the western pond turtle, including instream pools (i.e., slack water environments) with available basking sites and shallow aquatic habitat with emergent vegetation and invertebrate prey for juveniles (Jennings and Hayes 1994). The VHP maps the Guadalupe River as primary habitat for this species (ICF International 2012), and three adult western pond turtles were observed in 1997 in the Guadalupe River in the vicinity of Almaden Expressway upstream to the Branham Lane crossing (CNDDDB 2016). Small numbers of western pond turtles are expected to occur in the

Guadalupe River adjacent to the Project site, and in the limited areas where the river flows through the Project site at proposed bridge locations. This species could potentially nest in upland areas along the river, including areas on the Project site (albeit in very low numbers). However, the probability of nesting within the immediate Project footprint is low due to the hard-packed nature of soils in most of the footprint (especially in currently developed areas)

Yellow Warbler (*Dendroica petechia*). Federal Listing Status: None; State Listing Status: Species of Special Concern (Nesting). The yellow warbler is a widespread neotropical migrant that inhabits wet deciduous forests throughout North America (Lowther et al. 1999). In California, yellow warbler occupies wooded riparian habitats along the coast, on both eastern and western slopes of the Sierra Nevada up to approximately 1,700 feet, and throughout the northern portion of the state (Heath 2008). Its range has remained relatively stable over time, but populations have declined substantially in many localities because of habitat loss (Cain et al. 2003, Heath 2008) and expansion of the brood-parasitic, brown-headed cowbird (*Molothrus ater*). As a result, breeding yellow warbler has been largely extirpated from the Santa Clara Valley (Heath 2008). Ideal breeding habitat for yellow warbler consists of riparian corridors with dense, shrubby understory and open canopy (Lowther et al. 1999, Cain et al. 2003, Heath 2008). Yellow warbler breeds from early May through early August, and constructs open-cup nests in upright forks of shrubs or trees in dense willow thickets or other dense vegetation (Lowther et al. 1999).

Yellow warblers are uncommon breeders in the Project vicinity due to loss of riparian habitat, invasion by non-native plants, development along riparian corridors, and the abundance of the brown-headed cowbirds in the San Jose area. However, small numbers of yellow warblers still breed in remnant riparian areas within Santa Clara County (Bousman 2007a). Suitable breeding habitat consists of riparian corridors, often with an overstory of mature cottonwoods and sycamores, a midstory of box elder and willow, and a substantial shrub understory (Bousman 2007a). Riparian areas with reduced understory because of grazing or disturbance generally are not used by this species, and riparian corridors lacking open ruderal or herbaceous vegetation along the edges of the corridors or with development up to the corridor edge often are avoided as well. The riparian woodland habitat along the Guadalupe River adjacent to the Project site provides at least moderately suitable breeding conditions for a few pairs of yellow warblers. Yellow warblers are also an abundant migrant throughout the Santa Clara Valley during the spring and fall.

White-tailed Kite (*Elanus leucurus*). Federal Listing Status: None; State Listing Status: Fully Protected. In California, white-tailed kites can be found in the Central Valley and along the coast, in grasslands, agricultural fields, cismontane woodlands, and other open habitats (Zeiner et al. 1990, Dunk 1995, Erichsen et al. 1996). White-tailed kites are year-round residents of the state, establishing nesting territories that encompass open areas with healthy prey populations, and snags, shrubs, trees, or other nesting substrates (Dunk 1995). Nonbreeding birds typically remain in the same area over the winter, although some movements do occur (Polite 1990). The presence of white-tailed kites is closely tied to the presence of prey species, particularly voles, and prey base may be the most important factor in determining habitat quality for white-tailed kites (Dunk and Cooper 1994, Skonieczny and Dunk 1997). Although the species recovered after population declines during

the early 20th century, its populations may be exhibiting new declines as a result of recent increases in habitat loss and disturbance (Dunk 1995, Erichsen et al. 1996).

Suitable foraging habitat and suitably large trees for nesting are present on the Project site and along the Guadalupe River adjacent to the Project site, and this species has been recorded nesting approximately 2 miles to the east of the site along Coyote Creek (Mammoser 2007). However, no individuals were observed during the surveys conducted in December 2016, and factors such as the limited extent and marginal quality of foraging habitat on site, and the high degree of urbanization surrounding the site, reduce the likelihood that this species will use habitats on the site for foraging or nesting. Therefore, nesting and foraging white-tailed kites are expected to occur at the Project site only in small numbers, if at all.

5.3 Sensitive Natural Communities, Habitats, and Vegetation Alliances

5.3.1 CNDDDB Sensitive Natural Communities.

A query of sensitive habitats in Rarefind (CNDDDB 2016) identified three sensitive habitats as occurring within the Project site region: northern coastal salt marsh (Rank G3/S3.2), serpentine bunchgrass (Rank G2/S2.2), and north central coast drain Sacramento Sucker/Roach River (Rank GNR/SNR). Northern coastal salt marsh is characterized by Holland (1986) as occurring along sheltered inland margins of bays, often co-dominated by pickleweed (*Salicornia* spp.), cordgrass (*Spartina* spp.), and sometimes saltgrass (*Distichlis spicata*). This habitat type is not present on the Project site. Because the Project site is not underlain by serpentine parent material, serpentine bunchgrass is also absent from the site. North central coast drain Sacramento Sucker/Roach River habitat is a potentially diverse aquatic habitat found along the San Lorenzo River and tributaries in the Town of Santa Cruz, Santa Cruz County. As north central coast drain Sacramento Sucker/Roach River habitat is not within the vicinity of the Study Area, and is connected with a different river system, this habitat type is not present on the Project site. As discussed above in Section 3.2.5, California sycamores trees occur on the Project site, but this species is not dominant in the mixed riparian forest and woodland habitat. As such, California sycamore alluvial woodland, a natural community of special concern, was not mapped on the Project site, and further, there was no evidence of the fluvial processes (such as braided stream channels) that are characteristic of California sycamore alluvial woodlands.

5.3.2 CDFW Sensitive Alliances and Associations.

In addition to tracking sensitive natural communities, the CDFW also ranks vegetation alliances, defined by repeating patterns of plants across a landscape that reflect climate, soil, water, disturbance, and other environmental factors (Sawyer et al. 2009), and maintains a list of vegetation alliances and associations within the state of California (CDFG 2010). This list includes global (G) and state (S) rarity ranks for associations and alliances. If an alliance is marked G1-G3, all of the vegetation associations within it will also be of high priority. Alliances and associations currently ranked as S1-S3 are considered highly imperiled. Sensitive alliances do occur on the Project site, as the willow riparian forest and scrub habitat is consistent with *Salix laevigata* (Red willow

thickets) Alliance in Holland (1986), which is an S3 ranked alliance. The mixed riparian forest and woodland is consistent with the Central Coast cottonwood-sycamore riparian forest, a S3.2 ranked alliance, and *Quercus agrifolia* (coast live oak woodland) Alliance in Holland (1986), an S4 alliance. Thus, both the willow riparian forest and scrub and mixed riparian forest and woodland are considered imperiled and sensitive habitat types. Urban-suburban habitat has exceptionally little vegetation and does not conform to a CDFW vegetation category nor does it have an associated rarity rank. Golf courses/urban parks and ornamental woodland habitats are both highly variable in composition and contain common compositional configurations, which do not conform to a specific CDFW vegetation category or rarity rank.

5.3.3 Jurisdictional Habitats

Areas subject to the jurisdiction of the USACE as waters of the U.S. are present in the Project area below the OHWM along the Guadalupe River. No other potentially USACE-jurisdictional areas were observed in the Project footprint; outside of the Project footprint, whether or not Percolation Pond 3 is regulated by the USACE is subject to the USACE's determination.

The same areas that are considered USACE-jurisdictional are also regulated by the RWQCB as waters of the State. In addition, the RWQCB may regulate impacts to areas within the banks of the Guadalupe River (i.e., from top of bank to top of bank), potentially extending to the outer limits of the riparian canopy.

The CDFW is expected to regulate the bed and banks of the Guadalupe River, upslope to the outer limits of the riparian canopy.

Section 6. Impacts and Mitigation Measures

CEQA and the State CEQA Guidelines provide guidance in evaluating impacts of projects on biological resources and determining which impacts will be significant. The Act defines “significant effect on the environment” as “a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” Under State CEQA Guidelines §15065, a project's effects on biotic resources are deemed significant where the project would:

- A. “substantially reduce the habitat of a fish or wildlife species”
- B. “cause a fish or wildlife population to drop below self-sustaining levels”
- C. “threaten to eliminate a plant or animal community”
- D. “reduce the number or restrict the range of a rare or endangered plant or animal”

In addition to the §15065 criteria that trigger mandatory findings of significance, Appendix G of State CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. The impacts listed in Appendix G may or may not be significant, depending on the level of the impact. For biological resources, these impacts include whether 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 Game or U.S. Fish and Wildlife Service”
- B. “have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service”
- C. “have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act”
- D. “interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites”
- E. “conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance”
- F. “conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan”

Impacts to biological resources were assessed as described in Section 1.1.2 above.

6.1 Santa Clara Valley Habitat Plan

As described in Section 3.3.4, the Project site is located entirely inside the VHP permit area. The Project site includes urban areas with no land cover fee and areas Fee Zone B (Agricultural and Valley Floor Lands) (SCVHA 2016). The proposed Project is considered a “covered project” under the VHP. The Project site is located along the Guadalupe River, which is mapped as a Category 1 stream; owing to the nature of Project activities, the Project would be exempt from riparian setback requirements. As discussed in Chapter 6, Item 5, Condition 11, Exemption 5 in the VHP, recreational trails are exempt from stream setbacks. There is no serpentine habitat on the Project site, and therefore, fees in lieu of mitigation for impacts to this habitat type would not be required. Because the proposed Project entails new development, nitrogen deposition fees may apply.

This impact assessment summarizes the applicable fees and conservation measures that are required by the VHP and that would reduce impacts to biological resources resulting from the proposed Project. Chapter 6 of the VHP includes conditions on all covered activities. Condition 1 pertains to all covered activities. The remaining conditions are segregated by activity type, natural community, and species. Table 4 below includes all conditions of the VHP and their applicability to the Project.

Table 4. Santa Clara Valley Habitat Plan Conditions and Project Applicability

Condition	Project Applicability and Justification
Conditions on all covered activities	
Condition 1. Avoid direct impacts on legally protected plant and wildlife species	Applicable. Applies to all projects.
Conditions on specific covered activities	
Condition 2. Incorporate urban-reserve system interface design requirements	Not applicable. Project is outside urban-reserve areas.
Condition 3. Maintain hydrologic conditions and protect water quality	Applicable. Applies to all projects.
Condition 4. Avoidance and minimization for in-stream projects	Applicable. Project is within stream banks and riparian corridor.
Condition 5. Avoidance and minimization measures for in-stream operations and maintenance	Not applicable. Project is not for operations and maintenance.
Condition 6. Design and construction requirements for covered transportation projects	Not applicable. Project is not for transportation.
Condition 7. Rural development design and construction requirements	Not applicable. Project is not in rural area.
Condition 8. Implement avoidance and minimization measures for rural road maintenance	Not applicable. Project is not for rural road work.
Condition 9. Prepare and implement a recreation plan	Not applicable. Project is not a reserve.
Condition 10. Fuel buffer	Not applicable. Project would not construct a dwelling or structure.
Conditions to minimize impacts on natural communities	

Condition	Project Applicability and Justification
Condition 11. Stream and riparian setbacks	Not applicable. Project is exempt due to the linear nature of the design.
Condition 12. Wetland and pond avoidance and minimization	Not applicable. Project would not impact wetlands.
Condition 13. Serpentine and associated covered species avoidance and minimization	Not applicable. No serpentine habitat exists on the site.
Condition 14. Valley oak and blue oak woodland avoidance and minimization	Not applicable. No valley or blue oak woodland exists on the site.
Conditions to minimize impacts on specific covered species	
Condition 15. Western burrowing owl	Not Applicable. Site is not within a mapped occupied habitat area and fee zone for this species.
Condition 16. Least Bell's vireo	Not applicable. Absent from site and no suitable habitat occurs.
Condition 17. Tricolored blackbird	Applicable. Site is within 250 ft of a mapped survey area for this species.
Condition 18. San Joaquin kit fox	Not applicable. Absent from project site and no suitable habitat present.
Condition 19. Plant salvage when impacts are unavoidable	Not applicable. No covered plants occur.
Condition 20. Avoid and minimize impacts to covered plant occurrences	Not applicable. No covered plants occur.

Following are expanded descriptions of specific VHP conditions applicable to the Project.

6.1.1 Condition 1- Avoid Direct Impacts on Legally Protected Plant and Wildlife Species

Several wildlife species that occur in the proposed Project vicinity are protected under state and federal laws. Some of these animal species are listed as fully protected under the California Fish and Game Code (e.g., American peregrine falcon and white-tailed kite), and eagles are protected under the Bald and Golden Eagle Protection Act. Further, all native bird species and their nests are protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Actions conducted under the VHP must comply with the provisions of the MBTA and California Fish and Game Code.

6.1.2 Condition 3. Maintain Hydrologic Conditions and Protect Water Quality

Condition 3 applies to all projects and identifies a set of programmatic best management practices (BMPs), performance standards, and control measures to minimize increases of peak discharge of storm drain waters and to reduce runoff of pollutants to protect water quality, including during project construction. These requirements include pre-construction, construction site, and post-construction actions. Pre-construction conditions are site design planning approaches that protect water quality by preventing and reducing the adverse impacts of storm drain water pollutants and increases in peak runoff rate and volume. They include hydrologic

source control measures that focus on the protection of natural resources. Construction site conditions include source and treatment control measure to prevent pollutants from leaving the construction site and minimizing site erosion and local stream sedimentation during construction. Post-construction conditions include measures for storm drain water treatment and flow control.

6.1.3 Condition 4 – Avoidance and Minimization for In-Stream Projects

Condition 4 applies to in-stream projects and identifies design requirements and construction practices to minimize impacts on riparian and aquatic habitat (see Table 6-2 of the VHP). In-stream projects are defined as work in the streambed, banks, and riparian corridor adjacent to a stream. In-stream projects must be designed to minimize impacts on stream morphology, habitats, and flow conditions. The design requirements and construction avoidance and minimization measures are required unless the measures are not appropriate for the activity or field data from the site suggests that the measures would not benefit wildlife or reduce impacts in to natural communities. The avoidance and minimization measures address construction staging, dewatering, sediment management, vegetation management, bank protection, drainage, trail construction, and ground disturbance.

6.1.4 Condition 17 – Tricolored Blackbird

Condition 17 calls for surveys of project areas within 250 ft of any riparian, coastal and valley freshwater marsh (perennial wetlands), or pond land cover types for potential tricolored blackbird nesting substrate. A qualified biologist is required to conduct a field investigation to identify and map potential nesting substrate. If potential nesting substrate is found, the project proponent may revise the project to avoid all areas within a 250-foot buffer around the potential nesting habitat. If the project proponent chooses not to avoid potential nesting habitat and the 250-foot buffer, additional nesting surveys are required. Avoidance and minimization measures are required for covered activities in tricolored blackbird nesting habitat that is currently occupied or has been used in the past 5 years. Based on our assessment, suitable nesting habitat for tricolored blackbirds is absent from the Project site and all areas within 250 ft of the site, and therefore, further surveys related to this species (e.g., preconstruction surveys for nesting tricolored blackbirds) should not be necessary.

6.2 Impacts Found to be Less than Significant

6.2.1 Impacts on Upland Habitats (Golf Courses/Urban Parks, Ornamental Woodland, and Urban-Suburban) and Associated Common Plant and Wildlife Species

Based on an overlay of the proposed Project footprint on existing land cover types, construction activities related to the proposed Project elements may permanently impact up to approximately 2.91 acres of golf courses/urban parks habitat, 1.24 acres of ornamental woodland, and 11.50 acres of urban-suburban land (for a total of approximately 15.65 acres of upland habitat) (Figures 3a-e). The Project would temporarily impact (in construction staging areas) approximately 0.19 acres of golf courses/urban parks habitat, 0.28 acres of ornamental woodland, and 2.83 acres of urban-suburban land (for a total of approximately 3.30 acres of upland habitat). Actual impacts would be determined by future environmental review once Project site boundaries are

better defined and once it is known whether various segments of the Project will be constructed before or after completion of an associated USACE project.

Under the current Project, permanent impacts to these habitats may occur from Project activities associated with the construction of the 12-foot Guadalupe River Trail with 2-foot shoulders atop the levee. Many upland areas impacted by trail development would be converted from golf courses/urban parks habitat and ornamental woodland habitat to urban-suburban habitat due to the removal of vegetation and installation of an impervious trail surfaces. Indirect impacts from nighttime lighting would also occur on upland areas located immediately adjacent to the site.

Impacts on these habitats may, in turn, also result in impacts on the common (non-special-status) plant and animal species that reside there. These species may experience a direct loss of habitat caused by the Project, and the Project could potentially result in the mortality, injury, disturbance, and displacement of individuals of some of these species. Project implementation is expected to lead to increased human activity on the trail, thus increasing disturbance of plants and animals as a result of use of the trail by pedestrians, dogs, and cyclists. Additionally, loss of habitat and displacement of individuals could have indirect effects on populations and habitats outside of the Project site by increasing concentrations of individuals, leading to increases in intra- and interspecific competition and increased pressure on available resources, and lighting could disturb individuals of nocturnal species on areas adjacent to the site.

However, the common wildlife and plant species that occur on upland portions of the Project site are regionally abundant and are present in myriad habitats throughout the region. Many of these species would likely continue to be present on some portions of the site following construction. Additionally, the proposed Project would impact only a small proportion of their regional populations, and the number of individuals likely to be displaced by habitat disturbance and loss would be quite small with respect to the amount of suitable habitat available in the area. Therefore, impacts to upland habitats and the common species inhabiting them do not meet the CEQA standard of having a substantial adverse effect, and would be considered less than significant under CEQA.

The Branham to Chynoweth Reach of the Project would permanently impact approximately 0.45 acre of golf courses/urban parks habitat and 2.58 acres of urban-suburban land (for a total of approximately 3.03 acres of upland habitat) (Figure 3e). Project implementation in this reach would temporarily impact approximately 0.01 acre of golf courses/urban parks habitat and 0.20 acre of urban-suburban land (for a total of approximately 0.21 acre of upland habitat). For the reasons discussed in the programmatic analysis above, impacts to upland habitats and the common species inhabiting along the Branham to Chynoweth Reach would be considered less than significant under CEQA.

Although no mitigation is necessary to reduce Project impacts on these non-sensitive habitats and associated plant and animal species to less-than-significant levels under CEQA, these species will benefit from the conservation program of the VHP (e.g., preservation, enhancement, and management of numerous habitat

types throughout the VHP Reserve System) to which the City would contribute via payment of VHP impact fees (also, see *Impacts to Nesting Birds*).

6.2.2 Impacts on Nonbreeding Special-Status Birds

Several special-status bird species occur in the study area as non-breeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers in the Project area; these include the tricolored blackbird, American peregrine falcon, bald eagle, Vaux's swift, and yellow-breasted chat. Due to the absence of suitable breeding habitat and/or the ranges of these species, they are not expected to nest in the Project area or in immediately adjacent areas. These species may occur within the Project area only as nonbreeding foragers, and they would occur only in limited numbers due to the absence of high-quality foraging habitat.

The proposed Project would have some potential to impact foraging habitats and/or individuals of these species. Construction activities associated with the Project might result in a temporary direct impact through the alteration of foraging patterns (e.g., avoidance of work sites because of increased noise and activity levels during maintenance activities) but would not result in the loss of individuals. Further, the study area does not provide important foraging habitat used regularly or by large numbers of individuals of any of these species. Therefore, this impact would be less than significant, both programmatically and within the Branham to Chynoweth Reach.

Although no mitigation is necessary to reduce Project impacts on these nonbreeding special-status birds to less-than-significant levels under CEQA, these species will benefit from the conservation program of the VHP (e.g., preservation, enhancement, and management of numerous habitat types throughout the VHP Reserve System) to which the City would contribute via payment of VHP impact fees.

6.2.3 Impacts on the Western Pond Turtle

The VHP mapped the Guadalupe River as primary habitat for the western pond turtle (ICF International 2012), and individual western pond turtles have been recorded in the reach of the Guadalupe River adjacent to the Project site (CNDDDB 2016). Implementation of the proposed Project would not result in any permanent or temporary impacts to aquatic foraging or dispersal habitat for this species, as all work will be performed outside of the Guadalupe River channel. In addition, owing to the small populations in this reach of the Guadalupe River and the hard-packed nature of soils on most of the Project site (on and around the levees), the probability of nesting within the Project footprint is low, and therefore it is unlikely that the Project will impact this species' nests.

As described in Section 6.2.1, Project implementation will result in permanent impacts on approximately 2.91 acres of golf courses/urban parks habitat and 1.24 acres of ornamental woodland and temporary impacts on approximately 0.19 acres of golf courses/urban parks habitat and 0.28 acres of ornamental woodland that provide potential upland dispersal habitat for pond turtles. However, turtles are expected to occur in the Project

vicinity primarily in the immediate vicinity of the river; due to surrounding urbanization, they cannot disperse overland between the Guadalupe River and other aquatic habitats. Therefore, there is a very low potential for habitat impacts to adversely affect turtle populations in the river, or for individual turtles to be impacted (e.g., being crushed by personnel or equipment) during Project implementation. Therefore, potential Project impacts on western pond turtle do not meet the CEQA standard of having a *substantial* adverse effect and would not be considered significant under CEQA.

The Branham to Chynoweth Reach of the Project would permanently impact approximately 0.45 acre of golf courses/urban parks habitat and 2.58 acres of urban-suburban land and temporarily impact approximately 0.01 acre of golf courses/urban parks habitat and 0.20 acre of urban-suburban land that provide potential upland dispersal habitat for pond turtles. For the reasons discussed in the programmatic analysis above, impacts to western pond turtles inhabiting along the Branham to Chynoweth Reach would be considered less than significant under CEQA.

Although no mitigation is necessary to reduce Project impacts on the western pond turtle to less-than-significant levels under CEQA, this species is a VHP covered species. Therefore, it will benefit from the conservation program of the VHP (e.g., preservation, enhancement, and management of numerous habitat types throughout the VHP Reserve System) to which the City would contribute via payment of VHP impact fees.

6.2.4 Impacts on Wildlife Movement

Environmental corridors are segments of land that provide a link between suitable habitats across the landscape, while also providing cover. Development that fragments natural habitats (i.e., breaks them into smaller, disjunct pieces) can have a twofold impact on wildlife: first, as habitat patches become smaller they are unable to support as many individuals (patch size); and second, the area between habitat patches may be unsuitable for wildlife species to traverse (connectivity).

The Guadalupe River corridor provides an important movement corridor, connecting upper reaches of the river and its watershed to the open waters of the southern San Francisco Bay. Fish, as well as several species of reptiles, amphibians, birds, and mammals use aquatic habitat in the Guadalupe River for dispersal, and terrestrial reptiles, birds, and mammals use upland areas along the river's banks for dispersal. Wildlife species moving through the Guadalupe River corridor are likely to use habitats within the Project site for cover, refugia, or foraging, where habitat conditions are suitable for these uses. Most dispersal by wildlife species along the Guadalupe River likely occurs through wooded and vegetated portions of the corridor, and less likely across developed areas, access roads, and unpaved pathways in the Project site, although these areas are often crossed by mammals and reptiles while in transit between more suitable habitat types. Therefore, animals moving along the Guadalupe River corridor may use the Project site but would not rely heavily on the resources of the Project site for movement. As a result, development of a paved trail through this Project site would not block movement along the Guadalupe River corridor. Construction of three bridges would also not block wildlife movement along the corridor. One of these bridges would simply replace an existing bridge, and all three would

span the creek channel. As a result, wildlife moving along the Guadalupe River corridor would be able to continue to move under these bridges.

Similarly, the Guadalupe River and its riparian habitats provide habitat for migratory birds. Mature trees and shrubs in the Project site may provide food and cover for some migrant songbirds. In addition, because of the location of the Project site within the Guadalupe River corridor, the vegetation on the site may be more important to migratory birds than similarly vegetated areas farther from an aquatic resource and movement corridor. The relatively high quality of riparian habitat along the Guadalupe River, as compared to the lower-quality habitat in surrounding urban-suburban lands, further emphasizes the importance of the Guadalupe River and its riparian habitats to migratory birds. Migratory birds flying over the site or along the edges of the south San Francisco Bay may use the area as a stopover site for refueling and deposition of fat reserves to continue migration. Due to the limited nature of impacts to riparian habitat along the Guadalupe River, however, the Project is not expected to adversely affect such stopover habitat to the point of resulting in a significant impact.

Because the Guadalupe River in the vicinity of the Project site is lined on both sides by dense urban-suburban land uses, overland wildlife movement between the Project site and other high-quality habitats (i.e., movement perpendicular to the river) is limited. Species that are able to move through the urban areas along the river are all regionally abundant species that can easily move across the paved trail that the Project will construct. Therefore, the Project will not result in substantial adverse effects on wildlife movement between the Guadalupe River corridor and other high-quality habitat areas.

Project activities may result in a temporary, and very small-scale and localized, impediment to wildlife movement. If animals try to avoid equipment and activity along the trail alignment, they may attempt to cross the roads in the Project area, increasing their risk of road mortality. However, such impacts would occur only during construction. Overall, the Project site would retain its value for wildlife movement after Project completion, as no new, substantial barriers to wildlife movement would be constructed. Therefore, the proposed Project would not substantially impact wildlife movement through the area, and this impact would be less than significant under CEQA.

Impacts on wildlife movement from construction of the Branham to Chynoweth Reach of the Project would be similar to those described in the programmatic impact analysis above, and thus such impacts along the Branham to Chynoweth Reach would be considered less than significant.

6.3 Impacts Found to be Less than Significant with Mitigation

6.3.1 Impacts on Aquatic Habitats and Species

Aquatic habitats provide important habitat for plants and animals. Contamination of these habitats with pollutants and sediment can adversely affect ecosystem health and reduce habitat quality for plant and animal species. Loss of these habitats may adversely affect plant and wildlife communities dependent upon water sources and these valuable habitats.

Though no technical wetland delineation was conducted at the Project site, reconnaissance surveys conducted in December 2016 identified aquatic habitat in the Project footprint only in three locations where the Project site crosses the Guadalupe River (i.e., at the proposed bridge locations). The aquatic habitat on the Project site is considered jurisdictional by the USACE, RWQCB, and CDFW.

The aquatic habitat in the Guadalupe River supports a number of species of fish, including two special-status fish; the Central California Coast steelhead and Central Valley fall-run Chinook salmon are known to occur in the reach of the Guadalupe River located adjacent to the Project site during migration between marine habitats and upstream spawning habitats. The western pond turtle is also present in this reach of the Guadalupe River.

No direct impacts of the Project on aquatic habitats within the Guadalupe River, or in Percolation Pond 3, are proposed. The only areas where the Project alignment includes aquatic habitats are at the bridge locations, and in these locations, construction will occur from the banks and over, but not within, the river. In some areas, the proposed Project alignment overlaps very steep banks; under current conditions, the trail could not feasibly be constructed on those banks without retaining walls or other structures that (a) are not currently proposed, and (b) would necessitate some work within the river. As described in Section 1.1, we have assumed that such extreme measures to construct the trail will not occur as a result of the current Project. Rather, the trail segments on such steep banks would either be constructed on top of other structures/surfaces that will have been built by the USACE's project, or those trail segments would be realigned. Either way, additional environmental review of those segments will be needed.

Increased hardscape associated with the Project could lead to an increase in runoff and a decrease in infiltration and groundwater recharge. Project activities such as bridge construction, bank reinforcement, tree and herbaceous plant removal, and other soil disturbances could increase the potential for soil erosion and sedimentation into the Guadalupe River. Although all construction activities would occur above OHWM and would not require dewatering, they could facilitate indirect impacts, such as an increase in the amount of soils and sediments entering waterways (via sediment sliding downslope into the channel), thereby adversely affecting aquatic habitats and water quality. Short-term increases in turbidity and suspended sediment may disrupt feeding activities of fish or result in temporary displacement from preferred habitats. Juvenile salmonids could be directly affected because they depend on sight to feed. Accidental hazardous spill events could kill or injure fish, or cause temporary losses of prey. Any potential contamination has the potential to migrate farther downstream through the Guadalupe River's main perennial channel. These adverse effects on water quality could eventually have an indirect impact on aquatic species residing in the Guadalupe River, including special-status species such as the Central California Coast steelhead, Central Valley fall-run Chinook salmon, and western pond turtle.

The construction process for the three proposed bridges involves working from either bank, above the OHWM, without any work occurring in the river itself. As a result, there is little potential for fish or other animals in the creek to be killed or injured as a result of the Project. However, construction materials falling

into the river during the construction of the bridges could potentially result in short-term behavioral changes of special-status species or their prey.

Implementation of the BMPs required by two NPDES permits, including a SWPPP, and the City's regulations will reduce the potential for Project impacts on water quality and aquatic species. However, in the absence of additional measures, such impacts, including both programmatic impacts occurring over the entire Project alignment and project-specific impacts occurring in the Branham to Chynoweth Reach, are potentially significant due to the ecological importance of aquatic life in the Guadalupe River. Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts on the Guadalupe River, water quality, and aquatic species to less-than-significant levels.

Mitigation Measure BIO-1. Compliance with VHP Conditions. The Project will comply with Conditions 3 and 4 of the VHP. VHP Condition 3 requires implementation of design phase, construction phase, and post-construction phase measures, including programmatic BMPs, performance standards, and control measures, to minimize increases of peak discharge of storm drain water and to reduce runoff of pollutants to protect water quality, including during Project construction. VHP Condition 4 requires design phase and construction practices to minimize impacts on riparian and aquatic habitats such that the Project would avoid or minimize adverse impacts on stream morphology, aquatic and riparian habitat, and flow conditions. Compliance with Condition 4 addresses construction staging, sediment management, vegetation management, bank protection, drainage, trail construction, and ground disturbance.

Mitigation Measure BIO-2. Special-Status Fish Avoidance. During the construction and installation of the pedestrian bridges over the Guadalupe River, netting, plastic sheeting, or other forms of containment will be installed under the bridge when construction activities will occur above the active river channel to prevent debris from the bridge surface from entering the river. Activities that could result in debris and/or pollutants entering the river include but are not limited to grinding, welding, cutting, painting, and application of solvents. When feasible, such activities will occur prior to bridge installation and in a designated work area (i.e., fabrication yard or Project staging area). However, some construction activities are expected to occur on the bridges after installation. Therefore, construction activities at each of the bridge crossing locations will implement this measure as appropriate to prevent debris or pollutants from entering aquatic habitat in the Guadalupe River.

6.3.2 Impacts on Trees and Riparian Habitats

According to the current Project design, a number of trees on the Project site would require removal or pruning. While there are no heritage trees on the Project site, there are many street trees and ordinance-sized trees located throughout the Project site. Due to the removal of these trees, which are protected by the City of San José's tree ordinance, during Project activities, these impacts would meet the threshold of having a substantial adverse effect, and would be considered potentially significant under CEQA (Appendix G, Item E). Implementation of Mitigation Measure BIO-3 would reduce this impact to a less-than-significant level.

Many of the trees that would be pruned, and in some cases, removed from the Project site are located in sensitive riparian habitat (willow riparian forest and scrub and mixed riparian forest and woodland). Trees in riparian habitat on the Project site include red willow, arroyo willow, Fremont cottonwood, black cottonwood, California sycamore, coast live oak, shamel ash, valley oak, and black locust. Riparian communities are considered sensitive habitats and provide a wide range of biological functions for wildlife, such as nesting habitat for birds. The riparian habitat along this reach of the Guadalupe River is regionally important to bird diversity. The removal of riparian trees at this site would have a substantial impact on wildlife because the trees are mature native species in an extensive riparian setting, and because riparian habitat along the active channel of the Guadalupe River is known to support high densities of nesting, wintering, and migrant birds. Thus, these impacts would meet the threshold of having a substantial adverse effect, and would be considered potentially significant under CEQA (Appendix G, Item B).

As currently proposed, the Project would result in permanent impacts to approximately 1.15 acres of existing mixed riparian forest and woodland and 1.29 acres of existing willow riparian forest and scrub on the Project site (2.34 acres of total riparian impacts) as a result of trail construction activities, including bank reinforcement (Figure 3a-e). As discussed in Section 1.1, these acreages are estimates based on the current scope and design of the Project, which is subject to change, and as such, actual impacts to riparian habitat from the overall Project cannot be quantified at this time. Quantification of such impacts would need to occur considering the conditions present after USACE project implementation and robust field examination of the site. Impacts to trees, including riparian trees, could occur not only from direct tree removal and pruning, but also from impaired health if paving occurs over the roots of such trees, necessitating an evaluation of individual trees that are to remain on the site to determine whether they will be impacted.

Generally, construction and storage of equipment, vehicles, or materials should not occur within a tree's protection zone (TPZ), defined as a designated area around the base of a tree that is to be protected with fencing during construction activities in order to avoid soil compaction and damage to tree roots. For example, in the City of San Jose, excavation within the TPZ shall occur only after consultation with the City arborist (San Jose Municipal Code 13.32.130). Best practices for determining an optimum TPZ consider species tolerance to specific construction impacts as well as tree age, health, and condition rather than relying solely on the tree canopy's dripline projected onto the ground; for example, an over-mature tree with a poor-tolerance to grade changes could have a substantially larger optimum TPZ than its canopy dripline (Matheny and Clark 1998). Arborists typically consider for removal prior to construction those trees with low vigor and more than a 25% disturbance within their critical root zones, or excavation that impacts the structural root plates (Coder 1996). Through the minimization of clearance pruning (ANSI 2001) or excavation and soil compaction within TPZs wherever possible and the incorporation of infrastructure-based strategies aimed at reducing impacts to individual riparian trees, the effects of Project activities on trees (and thus riparian habitats) could be reduced. However, this would need to be assessed in the future by an arborist, taking into consideration the actual baseline site conditions (e.g., after USACE project implementation).

Within the Branham to Chynoweth Reach, the Project would result in permanent impacts to approximately 0.06 acres of existing willow riparian forest and scrub (Figure 3e). Trees that will require removal in the Branham to Chynoweth Reach include several riparian trees, one of which is located at the stream crossing and several others that extend onto the Project site near Branham Lane, as well as approximately 10 trees in the golf courses/urban parks habitat along the western portion of the Reach's loop. Due to the ecological importance of riparian habitat along the Guadalupe River, this project-specific impact from construction of the Branham to Chynoweth Reach is also significant.

Implementation of Mitigation Measures BIO-1 and BIO-2 above will reduce impacts to trees, and particularly riparian trees, by reducing impacts to areas very close to the Guadalupe River and reducing potential indirect impacts to trees resulting from erosion and sedimentation. In addition, implementation of Mitigation Measures BIO-3 to BIO-5 would reduce Project impacts to trees and riparian habitats to less-than-significant levels.

Mitigation Measure BIO-3. Tree Removal and Protection Plan. Prior to tree removal, a certified arborist will prepare a Tree Removal and Protection Plan that identifies which trees are to be removed, and which are to be protected, during Project implementation. This Plan will account for site conditions existing at the time a given segment of trail is to be constructed (thus one Tree Removal and Protection Plan may be prepared for the Branham to Chynoweth Reach and one or more separate Tree Removal and Protection Plans may be prepared in the future for other trail segments). For trees that are to be retained, the Plan will identify specific measures to protect the health of individual trees. The Tree Removal and Protection Plan will be approved by the City of San Jose prior to tree removal.

Mitigation Measure BIO-4: Compliance with San Jose Tree Ordinance. A permit from the City of San José will be obtained prior to the removal of any ordinance-sized trees. Compliance with any permit conditions is also necessary. For example, if permit conditions include tree replacement, then trees will be planted in accordance with the permit conditions.

Mitigation Measure BIO-5: VHP Fee Payment. An impact fee specific to the riparian habitat impacts will be calculated based on the acreage of riparian habitat impacts, as determined by overlaying the impact footprint on riparian habitat mapping that represents actual baseline conditions, and including the canopy of any additional riparian trees that are predicted to be lost based on the Tree Removal and Protection Plan described in Mitigation Measure BIO-3. This fee will then be paid to the SCVHA, which will use these fees to provide compensatory mitigation for permanent impacts to riparian forest/woodland canopy.

6.3.3 Impacts from Invasive Weeds

The Project could potentially have a substantial adverse effect due to the spread of noxious and invasive weeds. The introduction or spread of noxious and invasive species is a special concern for native plant and animals. Noxious and invasive weeds pose a threat to the natural processes of plant community succession, fire frequency, biological diversity, and species composition. Noxious and invasive weeds can affect the persistence of some populations of special-status species by replacing the foraging base, altering habitat structure, or

excluding a species through vegetative growth. Invasive weeds occur in all habitat types and can be difficult to eradicate. Many non-native, invasive plant species produce seeds that germinate readily following disturbance. Further, disturbed areas are highly susceptible to colonization by non-native, invasive species that occur locally, or whose propagules are brought in by personnel, vehicles, and other equipment.

A local propagule source of three weed species with “high” impact ratings (Cal-IPC 2016) was observed on the Project site, and several other were ranked with “moderate” impact ratings. Himalayan blackberry, English ivy, and giant reed (*Arundo donax*) are present in small quantities on the Project site. Himalayan blackberry and English ivy are present in larger quantities in the immediate Study Area, while only one individual of giant reed was documented in the Study Area (located near the Almaden Road and Alameda Expressway junction). These species could potentially invade and/or spread into additional areas of the Project site. Introduction or spread of invasive weeds could degrade sensitive riparian habitats, and/or reduce or eliminate their ability to support special-status plant or wildlife species in and downstream of the Project site, and as such would qualify as a significant impact. Also, Himalayan blackberry and English ivy could be spread from the Project site to other Project sites via equipment. Due to the potential impact on sensitive aquatic and riparian habitats, and the species they support, along the Guadalupe River, such an impact would be considered significant under CEQA.

One highly invasive herbaceous species, Himalayan blackberry, was present in small quantities along the western banks of the stream crossing in the Branham-Chynoweth Reach. Other highly invasive species observed in other sections of the Project site, including English ivy and giant reed, were not present in the Branham-Chynoweth Reach. However, there is potential for the spread of these species into or within the Branham to Chynoweth Reach. As a result, the programmatic impact analysis above applies to the Branham to Chynoweth Reach as well, and the potential for the spread of invasive plants in the Branham to Chynoweth Reach is significant.

Implementation of Mitigation Measure BIO-6 will reduce this impact, both programmatically for the entire Project alignment and on a project-specific basis for the Branham to Chynoweth Reach, to a less-than-significant level.

Mitigation Measure BIO-6: Invasive Species Measures. The following measures will be implemented to minimize the potential for and/or magnitude of the spread of invasive plant species:

- During construction of the proposed Project, all straw materials used on site will be weed-free rice straw (or similar material acceptable to the City), and all gravel and fill material will be certified weed free to the satisfaction of the City; any deviation from this will be approved by the City.
- During construction of the proposed Project, vehicles and all equipment will be washed or cleaned with compressed air (including wheels, undercarriages, and bumpers) before and after entering the proposed Project site. Vehicles will be cleaned at existing construction yards or legally operating car washes.

- Following construction of the proposed Project, a standard erosion control seed mix (acceptable to the City) from a local source will be planted within the temporary impact zones on any disturbed ground that will not be under hardscape, landscaped, or maintained. This will minimize the potential for the germination of the majority of seeds from non-native, invasive plant species.

6.3.4 Impacts on Nesting Birds

Large numbers of birds, of numerous species, nest along the Project alignment. Despite the urban setting, the high-quality riparian habitat in and adjacent to the Project footprint supports numerous nesting bird species. Although the ornamental woodland and the vegetation within the urban-suburban areas is of lower value to nesting birds, the proximity of the trees in these two land cover types to the river and to high-quality riparian habitat increases the potential use of trees, shrubs, and other vegetation by nesting birds. While the majority of these birds are relatively common, several pairs of the yellow warbler (a California species of special concern) and possibly one or two pairs of the white-tailed kite (a state fully protected species) may nest in or very close to the Project alignment. In addition, several species of non-special-status birds that are regionally uncommon or that are riparian-associated species, such as the song sparrow (*Melospiza melodia*), warbling vireo (*Vireo gilvus*), black-chinned hummingbird (*Archilochus alexandri*), and Pacific-slope flycatcher (*Empidonax difficilis*), as well as raptors such as the red-shouldered hawk and Cooper's hawk (*Accipiter cooperii*), may nest along this reach of the Guadalupe River.

Permanent impacts to 11.50 acres of urban-suburban habitat, 2.91 acres of golf courses/urban parks, 1.29 acres of willow riparian forest and scrub, 1.24 acres of ornamental woodland, and 1.15 acres of mixed riparian forest and woodland will reduce nesting habitat for native birds along this reach of the Guadalupe River. Implementation of Mitigation Measures BIO-3 and BIO-4 will minimize impacts to trees and riparian habitat that provide the highest-quality nesting bird habitat, and Mitigation Measures BIO-4 and BIO-5 will compensate for permanent loss of trees and riparian habitat.

Following Project construction, increased human user of the trail, including use by people walking dogs, will subject nesting birds to increased disturbance. However, given the urban setting, most nesting birds would be habituated to some level of human activity even in the absence of the Project.

In addition, Project construction can result in direct and indirect impacts on nesting birds. Removal of vegetation during the breeding season (generally February 1 through August 31) can result in the destruction of nests, including eggs and young. Heavy ground disturbance, noise, and vibrations caused by proposed Project construction could also disturb nests in nearby areas that are not subject to direct disturbance. Given the proximity of the Project alignment to the riparian habitat along the Guadalupe River, large numbers of nests, of numerous species, could potentially be disturbed in this way. Although the number of pairs of any one species that could be impacted by the Project is low, relative to the regional abundance of these species, the riparian bird community along the entire 4.9-mile length of the Project could potentially be adversely affected if construction were to occur during the breeding season without appropriate mitigation measures. This impact is potentially significant given the large numbers of nests and the diversity of species that could be affected.

Along the Branham to Chynoweth Reach, permanent impacts will occur to 2.58 acres of urban-suburban habitat, 0.45 acre of golf courses/urban parks, and 0.06 acre of willow riparian forest and scrub. These impacts will reduce nesting habitat for native birds, though to a far lower extent than on the overall Project as a whole. Nevertheless, there is potential for indirect impacts to numerous birds nesting in riparian habitat along this reach of the Guadalupe River, particularly because this is the only reach in which trail construction will occur on both sides of the river. Therefore, potential impacts to nesting birds resulting from trail construction along the Branham to Chynoweth Reach are significant.

Implementation of Mitigation Measures BIO-3 and BIO-4 will minimize impacts to trees and riparian habitat that provide the highest-quality nesting bird habitat, and Mitigation Measures BIO-4 and BIO-5 will compensate for permanent loss of trees and riparian habitat. Implementation of Mitigation Measures BIO-7 through BIO-9 will reduce impacts to nesting birds to less-than-significant levels. In addition, implementation of these measures will ensure compliance with VHP Condition 1, which pertains to protected bird species.

Mitigation Measure BIO-7: Seasonal Avoidance. To the extent feasible, construction activities should be scheduled to avoid the nesting season (February 1 through August 31). If construction activities are scheduled to take place outside the nesting season, impacts on nesting birds will be avoided.

Mitigation Measure BIO-8: Pre-construction/Pre-disturbance Surveys. If it is not possible to schedule construction activities between September 1 and January 31, then pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no nests will be disturbed during Project implementation. These surveys shall be conducted no more than seven days prior to the initiation of construction activities. During these surveys, the biologist will inspect all potential nesting habitats (e.g., trees, shrubs, ruderal grasslands, buildings, and bridges) in and immediately adjacent to the impact areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the biologist will determine the extent of a construction-free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for other species) to ensure that no nests of protected birds will be disturbed during Project implementation.

Mitigation Measure BIO-9: Nest Deterrence. If construction activities will not be initiated until after the start of the nesting season, nesting deterrence can be implemented to reduce the potential for active nests to become established in areas to be disturbed by Project activities. For example, potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by the Project could be removed prior to the start of the nesting season (e.g., prior to February 1).

6.4 Cumulative Impacts

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. The proposed Project, in combination with other projects in the area and other activities that impact the species that are affected by this Project, could contribute to cumulative effects on special-status

species. Other projects in the area include both development and maintenance projects that could adversely affect these species and restoration projects that will benefit these species. Reasonably foreseeable future projects in the Project vicinity include the USACE's Upper Guadalupe River Flood Control Project and the SCVWD's Stream Maintenance Program. These projects will impact the same types of species and habitats that will be affected by the Guadalupe River Trail project. However, these projects also employ (or are expected to employ) numerous impact avoidance and minimization measures, and they are required by CEQA and/or NEPA mitigation measures and conditions of resource agency permits to provide compensatory mitigation for certain impacts.

Other projects in the region will also impact the same types of species and habitats that will be affected by the Guadalupe River Trail project. However, those projects that are covered by the VHP will be required to implement VHP conditions, and through impact fees paid by covered projects the VHP will help to ensure the conservation of covered species and their habitats throughout the Project region through habitat restoration and conservation.

Further, the Guadalupe River Trail Project will comply with VHP conditions and implement additional measures to mitigate its impacts, thus reducing Project impacts on sensitive habitats and both common and special-status species, as described above. Thus, provided that this Project successfully incorporates the mitigation measures described in this biological resources report, the Project will not make a cumulatively considerable contribution to any significant cumulative impacts on biological resources.

Section 7. References

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Appendix A. List of Existing Vegetation

Family	Scientific Name	Common Name
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry
Anacardiaceae	<i>Schinus molle</i>	Peruvian pepper tree
Apiaceae	<i>Conium maculatum</i>	poison hemlock
Apocynaceae	<i>Nerium oleander</i>	oleander
Araliaceae	<i>Hedera helix</i>	English ivy
Arecaceae	<i>Washingtonia</i> sp.	fan palm
Asteraceae	<i>Anaphalis margaritacea</i>	pearly everlasting
Asteraceae	<i>Artemisia californica</i>	California sagebrush
Asteraceae	<i>Baccharis pilularis</i>	coyote brush
Asteraceae	<i>Carduus pycnocephalus</i>	Italian thistle
Asteraceae	<i>Cirsium vulgare</i>	bull thistle
Asteraceae	<i>Dittrichia graveolens</i>	stinkwort
Asteraceae	<i>Erigeron canadensis</i>	horseweed
Asteraceae	<i>Helminthotheca echioides</i>	bristly ox-tongue
Asteraceae	<i>Lactuca serriola</i>	prickly lettuce
Asteraceae	<i>Silybum marianum</i>	blessed milkthistle
Asteraceae	<i>Xanthium strumarium</i>	rough cocklebur
Betulaceae	<i>Alnus rhombifolia</i>	white alder
Brassicaceae	<i>Brassica nigra</i>	black mustard
Brassicaceae	<i>Raphanus sativus</i>	wild radish
Cactaceae	<i>Opuntia</i> sp.	pricklypear
Chenopodiaceae	<i>Atriplex prostrata</i>	fat hen
Chenopodiaceae	<i>Beta vulgaris</i>	common beet
Chenopodiaceae	<i>Salsola tragus</i>	Russian thistle
Convolvulaceae	<i>Convolvulus arvensis</i>	bindweed
Cupressaceae	<i>Calocedrus decurrens</i>	incense cedar
Cupressaceae	<i>Sequoia sempervirens</i>	coast redwood
Cyperaceae	<i>Cyperus eragrostis</i>	tall flatsedge
Euphorbiaceae	<i>Euphorbia</i> sp.	spurge
Fabaceae	<i>Robinia pseudoacacia</i>	black locust
Fabaceae	<i>Trifolium</i> sp.	clover
Fagaceae	<i>Quercus agrifolia</i>	coast live oak
Fagaceae	<i>Quercus ilex</i>	interior live oak

Family	Scientific Name	Common Name
Fagaceae	<i>Quercus lobata</i>	valley oak
Geraniaceae	<i>Geranium molle</i>	crane's bill geranium
Juglandaceae	<i>Juglans hindsii</i>	Northern California black walnut
Juglandaceae	<i>Juglans regia</i>	English walnut
Liliaceae	<i>Lilium</i> sp.	ornamental lily
Malvaceae	<i>Malva neglecta</i>	common mallow
Malvaceae	<i>Malva nicaeensis</i>	bull mallow
Malvaceae	<i>Malva parviflora</i>	cheeseweed
Moraceae	<i>Ficus carica</i>	common fig
Myrtaceae	<i>Eucalyptus polyanthemos</i>	silver dollar gum
Myrtaceae	<i>Eucalyptus</i> sp.	eucalyptus
Oleaceae	<i>Fraxinus uhdei</i>	shamel ash
Oleaceae	<i>Ligustrum</i> sp.	ornamental privet
Oleaceae	<i>Olea europaea</i>	olive
Oxalidaceae	<i>Oxalis</i> sp.	woodsorrel
Pinaceae	<i>Pinus canariensis</i>	Canary island pine
Pinaceae	<i>Pinus</i> sp.	ornamental pine
Pittosporaceae	<i>Pittosporum</i> sp.	pittosporum
Platanaceae	<i>Platanus hybrida</i>	London plane
Platanaceae	<i>Platanus racemosa</i>	California sycamore
Poaceae	<i>Arundo donax</i>	giant reed
Poaceae	<i>Avena</i> sp.	wild oats
Poaceae	<i>Bromus diandrus</i>	ripgut brome
Poaceae	<i>Festuca perennis</i>	Italian rye grass
Poaceae	<i>Festuca</i> sp.	fescue
Poaceae	<i>Hordeum murinum</i>	meadow barley
Poaceae	<i>Phalaris</i> sp.	canarygrass
Poaceae	<i>Stipa miliacea</i>	smilo grass
Polygonaceae	<i>Rumex crispus</i>	curly dock
Rhamnaceae	<i>Ceanothus thyrsiflorus</i> var. <i>griseus</i>	Carmel ceanothus
Rhamnaceae	<i>Frangula californica</i>	California coffeeberry
Rosaceae	<i>Heteromeles arbutifolia</i>	toyon
Rosaceae	<i>Prunus</i> sp.	stonefruit
Rosaceae	<i>Rubus armeniacus</i>	Himalayan blackberry
Rosaceae	<i>Rubus ursinus</i>	California blackberry
Salicaceae	<i>Populus fremontii</i>	Fremont cottonwood

Family	Scientific Name	Common Name
Salicaceae	<i>Populus trichocarpa</i>	black cottonwood
Salicaceae	<i>Salix laevigata</i>	red willow
Salicaceae	<i>Salix lasiolepis</i>	arroyo willow
Sapindaceae	<i>Acer macrophyllum</i>	big leaf maple
Sapindaceae	<i>Acer negundo</i>	box elder
Ulmaceae	<i>Ulmus</i> sp.	non-native, ornamental elm

Appendix B. Photos of Guadalupe River Trail Project Site



Photo 1. Paved walkway on the Project site in the urban-suburban land cover



Photo 2. Ruderal grasses, bindweed, and dead black mustard in golf courses/urban parks land cover



Photo 3. Ornamental woodland land cover in the mid to southern portion of the Project site



Photo 4. Willow riparian forest and scrub land cover at the central channel crossing on the Project site. The eastern side of the crossing is dominated by red willow, whereas the western portion of the crossing contains a manmade grassy terrace.



Photo 5. Mixed riparian forest and woodland land cover along Almaden Expressway containing California sycamore, coast live oak, red willow, and shamel ash on multiple benches leading up to the top of bank



Photo 6. Riverine land cover at the southern channel crossing on the Project site



Photo 7. Adjacent habitat (percolation pond) abutting the southern end of the Project site



Photo 8. Adjacent habitat (stormwater basin) located near the southeastern portion of the Project site

Appendix C. Special-Status Plant Species Considered but Rejected for Occurrence

Scientific Name	Common Name	Suitable habitat absent	Lack of Ecaphic Requirements	Outside Elevation Range for Species	Presumed Extirpated
<i>Acanthomintha lanceolata</i>	Santa Clara thorn-mint	X	X		
<i>Androsace elongata</i> ssp. <i>acuta</i>	California androsace	X			
<i>Arctostaphylos silvicola</i>	Bonny Doon manzanita	X			
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch	X	X	X	
<i>Atriplex depressa</i>	brittlescale	X			
<i>Atriplex minuscula</i>	lesser saltscale	X			
<i>Azolla microphylla</i>	Mexican mosquito fern	X			
<i>Balsamorhiza macrolepis</i>	big-scale balsamroot	X			
<i>Calandrinia breweri</i>	Brewer's calandrinia	X			
<i>California macrophylla</i>	round-leaved filaree	X			
<i>Calochortus umbellatus</i>	Oakland star-tulip	X			
<i>Calyptridium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws	X			
<i>Calystegia collina</i> ssp. <i>venusta</i>	South Coast Range morning-glory	X		X	
<i>Campanula exigua</i>	chaparral harebell	X	X	X	
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	X	X		
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes bird's-beak	X		X	
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	Ben Lomond spineflower	X			
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	X			
<i>Cirsium fontinale</i> var. <i>campylon</i>	Mt. Hamilton fountain thistle	X			
<i>Clarkia breweri</i>	Brewer's clarkia	X	X	X	
<i>Clarkia concinna</i> ssp. <i>automixa</i>	Santa Clara red ribbons	X			

Scientific Name	Common Name	Suitable habitat absent	Lack of Edaphic Requirements	Outside Elevation Range for Species	Presumed Extirpated
<i>Collinsia multicolor</i>	San Francisco collinsia	X			
<i>Cypripedium fasciculatum</i>	clustered lady's-slipper	X			
<i>Dirca occidentalis</i>	western leatherwood	X			
<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	Santa Clara Valley dudleya	X	X		
<i>Eriastrum tracyi</i>	Tracy's eriastrum	X		X	
<i>Eriogonum argillosum</i>	clay buckwheat	X			
<i>Eriogonum umbellatum</i> var. <i>bahiiforme</i>	bay buckwheat	X	X	X	
<i>Eriophyllum jepsonii</i>	Jepson's woolly sunflower	X		X	
<i>Eryngium aristulatum</i> var. <i>hooveri</i>	Hoover's button-celery	X		X	
<i>Erysimum franciscanum</i>	San Francisco wallflower	X	X		
<i>Extriplex joaquinana</i>	San Joaquin spearscale	X			
<i>Fritillaria agrestis</i>	stinkbells	X			
<i>Fritillaria liliacea</i>	fragrant fritillary	X			
<i>Galium andrewsii</i> ssp. <i>gatense</i>	phlox-leaf serpentine bedstraw	X			
<i>Hoita strobilina</i>	Loma Prieta hoita	X	X		
<i>Iris longipetala</i>	coast iris	X			
<i>Isocoma menziesii</i> var. <i>diabolica</i>	Satan's goldenbush	X			
<i>Lasthenia conjugens</i>	Contra Costa goldfields	X			
<i>Leptosiphon acicularis</i>	bristly leptosiphon	X			
<i>Leptosiphon ambiguus</i>	serpentine leptosiphon	X	X		
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	X			
<i>Lessingia hololeuca</i>	woolly-headed lessingia	X			
<i>Lessingia micradenia</i> var. <i>glabrata</i>	smooth lessingia	X	X		
<i>Lessingia tenuis</i>	spring lessingia	X		X	
<i>Malacothamnus arcuatus</i>	arcuate bush-mallow	X			

Scientific Name	Common Name	Suitable habitat absent	Lack of Edaphic Requirements	Outside Elevation Range for Species	Presumed Extirpated
<i>Malacothamnus hallii</i>	Hall's bush-mallow	X			
<i>Malacothrix phaeocarpa</i>	dusky-fruited malacothrix	X			
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed	X			
<i>Microseris sylvatica</i>	sylvan microseris	X			
<i>Mielichhoferia elongata</i>	elongate copper moss	X			
<i>Monardella antonina</i> ssp. <i>antonina</i>	San Antonio Hills monardella	X		X	
<i>Monolopia gracilens</i>	woodland woollythreads	X			
<i>Navarretia cotulifolia</i>	cotula navarretia	X			
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	X	X		
<i>Pedicularis dudleyi</i>	Dudley's lousewort	X			
<i>Penstemon rattanii</i> var. <i>kleei</i>	Santa Cruz Mountains beardtongue	X			
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	X			
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah	X			
<i>Piperia candida</i>	white-flowered rein orchid	X			
<i>Piperia leptopetala</i>	narrow-petaled rein orchid	X		X	
<i>Piperia michaelii</i>	Michael's rein orchid	X			
<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	Hickman's popcornflower	X			
<i>Plagiobothrys glaber</i>	hairless popcornflower	X			X
<i>Psilocarphus brevissimus</i> var. <i>multiflorus</i>	Delta woolly-marbles	X			
<i>Puccinellia simplex</i>	California alkali grass	X			
<i>Senecio aphanactis</i>	chaparral ragwort	X			
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	X			
<i>Streptanthus albidus</i> ssp. <i>albidus</i>	Metcalf Canyon jewelflower	X	X		
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewelflower	X	X		
<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	slender-leaved pondweed	X		X	

Scientific Name	Common Name	Suitable habitat absent	Lack of Edaphic Requirements	Outside Elevation Range for Species	Presumed Extirpated
<i>Suaeda californica</i>	California seablite	X		X	
<i>Trifolium hydrophilum</i>	saline clover	X			
<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum	X			
