BIOLOGICAL RESOURCES REPORT

ATTACHMENT B

to the
Fa Yun Chan Temple Project Initial Study / Mitigated Negative Declaration

H. T. HARVEY & ASSOCIATES

Ecological Consultants

Fa Yun Chan Temple Project
Biological Resources Report

Project #4565-01

Prepared for:

Rebecca Auld
Lamphier-Gregory
4100 Redwood Road, Suite 20A - #601
Oakland, CA 94619

Prepared by:

H. T. Harvey & Associates

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List of Abbreviated Terms

BMPs	best management practices
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EFH	Essential Fish Habitat
FESA	Federal Endangered Species Act
FMP	Fisheries Management Plan
HMMP	habitat mitigation and monitoring plan
LSAA	Lake and Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
OHW	ordinary high water
Porter-Cologne	Porter-Cologne Water Quality Control Act
RWQCB	Regional Water Quality Control Board
SCVHA	Santa Clara Valley Habitat Agency
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VegCAMP	Vegetation Classification and Mapping Program

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List of Preparers

Steve Rottenborn, Ph.D., Principal/Senior Wildlife Ecologist
Kelly Hardwicke, Ph.D., Principal/Senior Plant/Wetland Ecologist
Jane Lien, B.S., Senior Wildlife Ecologist
Katherine Marlin, M.S., Plant Ecologist

Section 1. Introduction

This report describes the biological resources present in the area of the proposed Fa Yun Chan Temple project, the potential impacts of the proposed project on biological resources, and measures necessary to reduce project impacts to less-than-significant levels under the California Environmental Quality Act (CEQA). This assessment is based on the project plans and description provided to H. T. Harvey & Associates by Milani & Associates through May 2023.

1.1 Project Location

The project is located at 7825 Crow Canyon Road, Castro Valley, California, in unincorporated Alameda County (Figures 1 and 2). The study area is generally bounded by Crow Canyon Road to the west, rural residential development to the north and south, and the open habitats of the East Bay Hills to the east. The study area is located on the *Hayward*, *California* 7.5-minute United States Geological Survey (USGS) quadrangle.

1.2 Project Description

The proposed project (project) entails the redevelopment of a Buddhist temple compound consisting of multiple facilities for various functions. The project includes demolition of six existing structures, concrete and pavement removal, tree removal, grading, and construction of four new buildings and four Buddha statues on the 17-acre study area. The sizes of the statues are approximately 40 feet x 40 feet x 44 feet tall for the three main statues and 8 feet x 8 feet x 20 feet for the smaller statue. Grading, construction, and other project activities will occur within the "Limits of Impacts" delineated on Figure 3.

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Figure 1. Vicinity Map
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Figure 2. Study Area
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Figure 3. Biotic Habitats and Impacts Map
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Section 2. Methods

2.1 Background Review

Prior to conducting field work, H. T. Harvey & Associates ecologists reviewed the project description, project plans, and maps provided by Milani & Associates through May 2023; aerial images (Google Inc. 2023); a USGS topographic map; the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) (2023); and other relevant reports, scientific literature, and technical databases. For the purposes of this report, the *project vicinity* is defined as the area within a 5-mile radius surrounding the study area; the *study area* refers to the portion of the property in which we conducted surveys and assessed habitats; and the *project footprint* refers to the areas to be permanently or temporarily impacted by the proposed project (the "Limits of Impacts" on Figure 3).

In addition, for plants, we reviewed all species on current California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1A, 1B, 2A, 2B, 3, and 4 lists occurring in the *Hayward, California* USGS 7.5-minute quadrangle and surrounding eight quadrangles (*Oakland East, Las Trampas Ridge, Diablo, Dublin, Niles, Newark*, *Redwood Point,* and *San Leandro*). We also queried the CNDDB (2023) for natural communities of special concern that occur in the study area, and we perused records of birds reported in nearby areas, such as Cull Canyon Reservoir, Bishop Ranch Regional Open Space, and Las Trampas Regional Wilderness, on eBird (Cornell Lab of Ornithology 2023). Finally, we consulted iNaturalist for records of common and select special-status species in the project region (iNaturalist 2023).

2.2 Site Visits

H. T. Harvey & Associates senior wildlife ecologist Jane Lien, B.S. and plant/wetlands ecologist Katherine Marlin, M.S. conducted a reconnaissance-level survey of the study area on May 16, 2023. The purpose of the survey was to provide an impact assessment specific to the proposed construction of the project, as described above. Specifically, surveys were conducted to (1) assess existing biotic habitats and plant and animal communities in the study area, (2) assess the study area for its potential to support special-status species and their habitats, and (3) identify potential jurisdictional and sensitive habitats, such as waters of the U.S./state and riparian habitat. J. Lien also conducted a focused survey for (1) suitable burrowing owl (*Athene cunicularia*) roosting and nesting habitat (i.e., burrows of California ground squirrels [*Otospermophilus beecheyi*]), (2) evidence of previous raptor nesting activity (i.e., large stick nests), (3) potential bat roosting habitat, and (4) nests of the San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) on and adjacent to the study area. In addition to assessing habitat suitability for special-status plants, K. Marlin conducted a focused survey for potentially occurring special-status plant species that would have been detectable at the time of the survey, including bent-flowered fiddleneck (*Amsinckia lunaris*), California androsace (*Androsace elongata ssp. acuta*), Diablo helianthella (*Helianthella castanea*), bristly leptosiphon (*Leptosiphon auerus*), Santa Clara red ribbons (*Clarkia concinna ssp. automixa*), and Michael's rein orchid (*Piperia michaelii*).

K. Marlin mapped biotic habitats within the project study area using a combination of field observations (recorded via the Apple iPad Field Maps application) and aerial imagery signatures. Habitat types were distinguished using natural community descriptions discussed in Holland (1986), Sawyer et al. (2009), and CDFW's Vegetation Classification and Mapping Program (VegCAMP) (CDFW 2023). Plant species within each habitat were identified in accordance with the taxonomy of Baldwin et al. (2012). Habitat acreages were calculated using geographic information systems and aerial imagery interpretation.

Section 3. Regulatory Setting

Biological resources in the study area are regulated by a number of federal, state, and local laws and ordinances, as described below.

3.1 Federal Regulations

3.1.1 Clean Water Act

The Clean Water Act (CWA) functions to maintain and restore the physical, chemical, and biological integrity of waters of the U.S., which include, but are not limited to, tributaries to traditionally navigable waters currently or historically used for interstate or foreign commerce, and adjacent wetlands. Historically, in non-tidal waters, U.S. Army Corps of Engineers (USACE) jurisdiction extends to the ordinary high water (OHW) mark, which is defined in Title 33, Code of Federal Regulations, Part 328.3. If there are wetlands adjacent to channelized features, the limits of USACE jurisdiction extend beyond the OHW mark to the outer edges of the wetlands. Wetlands that are not adjacent to waters of the U.S. are termed "isolated wetlands" and, depending on the circumstances, may be subject to USACE jurisdiction. In tidal waters, USACE jurisdiction extends to the landward extent of vegetation associated with salt or brackish water or the high tide line. The high tide line is defined in 33 Code of Federal Regulations Part 328.3 as "the line of intersection of the land with the water's surface at the maximum height reached by a rising tide." If there are wetlands adjacent to channelized features, the limits of USACE jurisdiction extend beyond the OHW mark or high tide line to the outer edges of the wetlands.

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: An unnamed ephemeral stream flows westward for approximately 240 feet in the study area from the site's eastern boundary. This on-site stream may be considered waters of the U.S. based on the presence of an OHW mark, regular flow, and hydrologic connectivity to Crow Creek which flows into San Lorenzo Creek. However, due to recent changes in how waters of the U.S. are defined, based on the U.S. Supreme Court decision in *Sackett v. EPA*, it is unclear whether the USACE would claim this ephemeral stream as waters of the U.S.; a determination would need to be made by the USACE if the project were to impact this stream. However, although this stream occurs within a portion of the subject property, no project activities are proposed within the bed and banks of the unnamed creek. As a result, a permit from the USACE would not be required for the project.

3.1.2 Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 prohibits the creation of any obstruction to the navigable capacity of waters of the U.S., including discharge of fill and the building of any wharfs, piers, jetties, and other structures without Congressional approval or authorization by the Chief of Engineers and Secretary of the Army (33 U.S.C. 403).

Navigable waters of the U.S., which are defined in 33 CFR, Part 329.4, include all waters subject to the ebb and flow of the tide, and/or those which are presently or have historically been used to transport commerce. The shoreward jurisdictional limit of tidal waters is further defined in 33 CFR, Part 329.12 as "the line on the shore reached by the plane of the mean (average) high water." It is important to understand that the USACE does not regulate wetlands under Section 10, only the aquatic or open waters component of bay habitat, and that there is overlap between Section 10 jurisdiction and Section 404 jurisdiction. According to 33 CFR, Part 329.9, a waterbody that was once navigable in its natural or improved state retains its character as "navigable in law" even though it is not presently used for commerce as a result of changed conditions and/or the presence of obstructions. Historical Section 10 waters may occur behind levees in areas that are not currently exposed to tidal or muted-tidal influence, and meet the following criteria: (1) the area is presently at or below the mean high water line; (2) the area was historically at or below mean high water in its "unobstructed, natural state"; and (3) there is no evidence that the area was ever above mean high water.

As mentioned above, Section 404 of the CWA authorizes the USACE to issue permits to regulate the discharge of dredged or fill material into waters of the U.S. If a project also proposes to discharge dredged or fill material and/or introduce other potential obstructions in navigable waters of the U.S., a Letter of Permission authorizing these impacts must be obtained from the USACE under Section 10 of the Rivers and Harbors Act.

Project Applicability: No current or historic Section 10 waters occur in the study area. Crow Creek (which flows southward along Crow Canyon Road opposite the study area) and Norris Creek (which flows from the northeast to within approximately 80 feet of the northwestern corner of the study area, where it passes under Crow Canyon Road and joins with Crow Creek) both have downstream connectivity to current Section 10 waters where they are subject to tidal influence. However, neither Crow Creek nor Norris Creek are current or historical Section 10 Waters. Therefore, a Letter of Permission from the USACE is not required.

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

Project Applicability: No suitable habitat for any federally listed or proposed plant species is present in the study area. The Alameda whipsnake (*Masticophis lateralis euryxanthus*), a federally threatened species, has the potential to occur in the study area, and could be directly or indirectly impacted by project activities. The federally threatened California red-legged frog (*Rana draytonii*) and California tiger salamander (*Ambystoma californiense*), and the western pond turtle (*Actinemys pallida/marmorata*[1]), a candidate for federal listing, have a low potential to occur in the study area. The monarch butterfly (*Danaus plexippus*), a federal candidate species, may occur as an occasional forager in the study area. FESA take approval from USFWS (no species regulated by NMFS would be impacted by the project) would be necessary before any take of federally listed species occurs.

3.1.4 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act governs all fishery management activities that occur in federal waters within the United States' 200-nautical-mile limit. The Act establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans (FMPs) to achieve the optimum yield from U.S. fisheries in their regions. These councils, with assistance from NMFS, establish Essential Fish Habitat (EFH) in FMPs for all managed species. Federal agencies that fund, permit, or implement activities that may adversely affect EFH are required to consult with NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to recommendations by NMFS.

Project Applicability: The Pacific Fisheries Management Council has designated EFH for the Pacific Coast Salmon FMP within Crow Creek and Norris Creek adjacent to the study area due to the presence of the Chinook salmon (*Oncorhynchus tshawytscha*) and coho salmon (*Oncorhynchus kisutch*). However, a 1600-foot box culvert on Crow Creek approximately 3.5 miles downstream of the study area creates a complete barrier to upstream migration of these regulated fishes. Thus, no EFH is present in these creeks, and no consultation with NMFS is necessary.

3.1.5 Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. Section 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 it 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

[1] "Western" pond turtle is thought to consist of two species, southwestern pond turtle (*Actinemys pallida*) and northwestern pond turtle (*Actinemys marmorata*). Identification criteria and the ranges of these two species are still being elucidated, and it is yet unknown whether western pond turtles occurring in the study area represent southwestern or northwestern pond turtles, both species, or a hybrid population. In this document, "western pond turtle" refers to the native, freshwater turtle (of whichever species) occurring in the study area.

described by the USFWS in its June 14, 2018 memorandum "Destruction and Relocation of Migratory Bird Nest Contents". Nest starts (nests that are under construction and do not yet contain eggs) and inactive nests are not protected from destruction.

Project Applicability: All native bird species that occur in the study area, with the exception of the California quail (*Callipepla californica*), whose family is explicitly excluded from MBTA protection, are protected under the MBTA.

3.2 State Regulations

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 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.

On April 2, 2019, the SWRCB adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. In these new guidelines, as revised April 6, 2021, riparian habitats are not specifically described as waters of the state but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The *Procedures* describe riparian habitat buffers as important resources that may both be included in required mitigation packages for permits for impacts to waters of the state, as well as areas requiring permit authorization from the RWQCBs to impact.

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 a 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: The unnamed ephemeral stream in the eastern portion of the study area is expected to be regulated by the RWQCB, regardless of whether the USACE regulates the stream. In addition, the RWQCB would also consider the banks above OHW, up to top of bank, and the riparian vegetation rooted below top of bank, to be important buffers to waters of the state associated with the creek. Some of the limited area of riparian vegetation within the proposed impact area is rooted below top of bank and therefore would be considered jurisdictional by the RWQCB. Waste Discharge Requirements from the RWQCB would therefore be necessary if this riparian habitat is impacted.

3.2.2 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Chapter 1.5, Sections 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 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 CESA-listed, proposed, or candidate plant species have the potential to occur in the study area. The Alameda whipsnake, a state threatened species, has the potential to occur in the study area, and could be directly or indirectly impacted by project activities. The California tiger salamander, a state threatened species, has a low potential to occur in the study area. The Crotch's bumble bee (*Bombus crotchii*), a candidate for listing under CESA, may occur in the study area in small numbers and could potentially breed there. The project may affect these species, if they are present. The mountain lion (*Puma concolor*), a candidate for listing under CESA, may occur in the study area occasionally as a nonbreeder, and the bald eagle (*Haliaeetus leucocephalus*) may occasionally fly over the study area, but the project is expected to affect these species very little, if at all. No suitable habitat for additional state-listed or candidate plant or animal species occurs on or near the study area.

3.2.3 California Environmental Quality Act

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. 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 Section 15380(b). The CNPS, a non-governmental conservation organization, has developed CRPRs for plant species of concern in California in the CNPS Inventory of Rare and Endangered Plants. The CRPRs include lichens, vascular, and non-vascular plants, and are defined as follows:

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

The CRPRs 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 as CRPR 1B or 2 are, in general, considered to meet CEQA's Section 15380 criteria, and adverse effects to these species may be considered significant. Impacts on plants that are listed by the CNPS on CRPR 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those of CRPR 1B or 2, impacts on them are less frequently considered significant.

Compliance with CEQA Guidelines Section 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 (CNDDB 2022). Further, the CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDB. 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 VegCAMP's currently accepted list of vegetation alliances and associations (CDFW 2022).

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 in Section 6 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 Section 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 Section 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. 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 Section 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 Section 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 Section 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 Sections 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 (e.g., eagles, hawks, and owls) and their nests are specifically protected in California under Code Section 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 Section 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: The bed and banks of the unnamed ephemeral stream in the eastern portion of the study area would fall under CDFW jurisdiction under Section 1602 of the California Fish and Game Code up to the top of bank or to the outer edge of the riparian canopy (whichever is greater). No project impacts within the banks of the unnamed ephemeral stream are proposed; however, the project footprint overlaps the edge of the riparian canopy associated with the ephemeral stream. If impacts to these small areas of riparian habitat can be avoided, a CDFW LSAA would not be required for the project. If, however, impacts such as ground disturbance or the conversion of natural habitats to hardscape occur within these jurisdictional habitats, a CDFW LSAA would be required.

Most native bird, mammal, and other wildlife species that occur in the study area and in the immediate vicinity are protected under the California Fish and Game Code. Project impacts on these species are discussed in Section 6.

3.2.5 State Water Resources Control Board Stormwater Regulation

Construction Phase. Construction projects in California causing land disturbances that are equal to 1 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, as amended and administratively extended). Prior to the start of construction/demolition, a Notice of Intent must be filed with the SWRCB 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.

Standard permit conditions under the Construction General Permit requires that the applicant utilize various measures including: on-site sediment control BMPs, 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.

Post-Construction Phase. In many Bay Area counties, including Alameda County, projects must also comply with the California RWQCB, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit (Water Board Order No. R2-2015-0049, as amended). This permit requires that all projects implement BMPs and incorporate Low Impact Development practices into the design that prevent stormwater runoff pollution, promote infiltration, and hold/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 NPDES Statewide Storm Water Permit and Statewide General Construction Permit. Therefore, construction-phase activities would not result in detrimental water quality effects on biological or regulated resources.

3.3 Local Regulations

3.3.1 Alameda County Regulation of Trees in County Right-of-Way

Alameda County promotes the health, safety, and welfare of the city by preserving trees located within the right-of-way and to control the planting, maintenance, and removal of those trees. The County defines a "tree" as a woody perennial plant with single or multiple trunks which typically develop a mature size of over 7 inches in diameter and 10 or more feet in height. The County provides tree protection under County Ordinance No: O-2016-66, Chapter 12.11.110 (Protection of Trees) and 12.11.120 (Tree Planting, Maintenance, and Removal Responsibilities and Requirements). If construction, repair work or other similar activity is proposed in an area adjacent to or in the County's right-of-way, the property owner shall take all necessary measures prior to and during the work to protect any tree located in the right of way. The planting, maintaining, or removing of any trees in the right-of-way, and all associated facilities, are encroachments subject to permitting and in conformance with standards and procedures provided by the Director of the Alameda County Public Works Agency.

Project Applicability: Trees growing along Crow Canyon Road are potentially located within the Alameda County right-of-way and may be subject to the Alameda County tree regulations. Preliminary development plans indicate that no trees within the County right-of-way will be removed. However, if any project-related construction takes place where it could affect any regulated tree, the project will comply with the outlined guidelines and policies.

3.3.2 Alameda County Watercourse Protection

Measures to protect watercourses are established in the Alameda County General Ordinances Title 13 – Public Services, Chapter 13.12 – Watercourse Protection (Alameda County 2022). The ordinance identifies conditions under which a written permit must be obtained from the Director of Public Works for impacts to watercourses, including the carrying out of development within a setback, which is defined in Section 13.12.320 of Chapter 13.12 as a minimum of 20 feet landward from either the top of bank or the 100-year flood elevation, whichever is greater.

"Watercourse" is defined in Section 13.12.030 as follows:

> …any conduit or appurtenant structure or any natural or man-made channel through which water flows continuously or intermittently in a definite direction and course or which is used for the holding, delay or storage of water. Natural channels shall generally be limited to those designated by a solid line or dash and three dots as shown in blue on the most recent U.S. Geological Survey 7.5 minute series of topographic maps. At the discretion of the director of public works, the definition of natural channel may be limited to those channels having a watershed area of fifty (50) acres or more, and this definition will be commonly used in the administration of this chapter except for those cases in which the director of public works determines that the definition must be extended to a natural channel with a watershed area smaller than fifty (50) acres in order to prevent a condition which is a menace to life and limb, endangers property, is a hazard to public safety, adversely affects the safety, use or serviceability of adjacent property, public way or drainage channel, or could adversely affect the water quality of any water body or watercourse were the definition not extended to a particular natural channel with a watershed area below fifty (50) acres.

Project Applicability: The unnamed ephemeral stream in the eastern portion of the study area does not meet the Alameda County definition of a "watercourse" for several reasons: 1) it does not flow continuously or intermittently, but rather flows ephemerally (for only short durations during and/or after precipitation events), 2) it is not mapped in the most recent (2021) *Hayward, California* USGS 7.5-minute topographic map, and 3) this channel has a watershed that is historically less than 50 acres. Because this ephemeral stream does not meet the definition of a waterway, it is not subject to the setback requirements outlined in Section 13.12.320. While Crow Creek and Norris Creek meet the County's definition of a waterway, no project impacts will occur within 20 feet of the top of bank of these streams. Therefore, no encroachment permit for development within the 20-foot setback would be required.

Section 4. Environmental Setting

4.1 General Project Area Description

The study area is located northeast of the Castro Valley, in unincoporated Alameda County, California (Figure 1). The climate in the project vicinity is coastal Mediterranean, with most rain falling in the winter and spring. Mild cool temperatures are common in the winter. Hot to mild temperatures are common in the summer. Climate conditions in the vicinity include a 30-year average of 2.1 inches of annual precipitation with a monthly average temperature range from 48.4ºF to 67.8ºF (PRISM Climate Group 2023). Elevations in the study area range from 405–639 feet above mean sea level (Google Inc. 2023). The Natural Resource Conservation Service (NRCS) has mapped four soil units in the study area: (1) 61.4% Diablo clay, 30 to 45 percent slopes, eroded (2) 18.8% Los Osos silty clay loam, 45 to 75 percent slopes, eroded, (3) 15.2% Los Osos silty clay loam, 30 to 45 percent slopes, eroded, and (4) 4.6% Danville silty clay loam, 3 to 10 percent slopes (NRCS 2023). The Diablo series is a member of the fine, smectitic, thermic family of Aridic Haploxererts, typically with neutral and mildly alkaline upper A horizons, and calcareous, silty clay lower A horizons. The Los Osos series consists of moderately deep, well drained soils that formed in material weathered from sandstone and shale (NRCS 2023).

4.2 Biotic Habitats

The reconnaissance-level survey identified six habitats/land cover types in the study area: California annual grassland, coyote brush scrub, developed/landscaped, mixed oak woodland, riparian woodland, and ephemeral stream (Figure 3). These biotic habitats are described in detail below. Plant species observed during the reconnaissance-level survey are listed in Appendix A.

4.2.1 California Annual Grassland

Vegetation. California annual grassland (4.85 acres) is present throughout the study area (Photo 1). Nonnative grasses such as wild oat (*Avena* sp.), ripgut brome (*Bromus diandrus*), Italian rye grass (*Festuca perennis*) and Harding grass (*Phalaris aquatica*) as well as weedy nonnative forbs such as poison hemlock (*Conium maculatum*), Italian thistle (*Carduus pycnocephala*), black mustard (*Brassica nigra*), greenstem filaree (*Erodium moschatum*), rose clover (*Trifolium hirtum*) and tocalote (*Centaurea melitensis*) are present within this habitat. Native California poppies (*Eschscholzia californica*) are widely distributed throughout this habitat, and sparsely distributed native miniature lupine

Photo 1. California annual grassland in northwest portion of study area.

(*Lupinus bicolor*) are present among the annual grasses. In the lower-elevation portions of the study area, the California annual grassland habitat is dominated by nonnatives (Photo 1), but portions of the study area with higher elevation and steeper slopes contain more abundant native species such as California sage (*Artemesia californica*), naked buckwheat (*Eriogonum nudum*), California everlasting (*Pseudognaphalium californicum*), and yarrow (*Achillea millefolium*). The annual grassland land cover in the study area contains a number of plant species ranked by the California Invasive Plant Council (Cal-IPC) as being high and moderately invasive (Cal-IPC 2023); these species are discussed further in Section 5.3.5 below.

Wildlife. Wildlife use of the lower-elevation California annual grassland habitats in the study area is limited due to their limited extent, human disturbance, and the predominance of weedy, nonnative vegetation. As a result, truly grassland-associated species are not expected to occur in abundance in these areas. However, in the higher-quality, higher elevation grasslands in the study area, a number of truly grassland-associated animals are expected occur. These include grassland-associated bird species, such as the western meadowlark (*Sturnella neglecta*), which may nest here in small numbers. A number of resident bird species associated with surrounding developed and woodland areas also forage in the California annual grassland habitats throughout the study area. These include the California towhee (*Melozone crissalis*), mourning dove (*Zenaida macroura*), lesser goldfinch (*Spinus psaltria*), and dark-eyed junco (*Junco hyemalis*). Several other species of birds use the California annual grassland habitat in the study area during the nonbreeding season, including the white-crowned sparrow (*Zonotrichia leucophrys*) and golden-crowned sparrow (*Zonotrichia atricapilla*), which forage on the ground or in herbaceous vegetation.

Native mammals, including the black-tailed deer (*Odocoileus hemionus*), coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), and striped skunk (*Mephitis mephitis*), as well as the nonnative feral pig (*Sus scrofa*), utilize grassland habitats throughout the study area for foraging. Common bats, such as the Mexican free-tailed bat (*Tadarida brasiliensis*), may also forage aerially over the grasslands in the study area. Burrows of Botta's pocket gophers (*Thomomys bottae*) are present in moderate numbers throughout the study area, and these fossorial mammal species provide a prey base for diurnal raptors and terrestrial predators. Other rodent species that can potentially occur in the grassland habitat in the study area include the California vole (*Microtus californicus*) and deer mouse (*Peromyscus maniculatus*). Diurnal raptors such as red-tailed hawks (*Buteo jamaicensis*) and white-tailed kites (*Elanus leucurus*) forage for these small mammals over grasslands during the day, and at night nocturnal raptors, such as barn owls (*Tyto alba*), forage for nocturnal rodents. While California ground squirrels are often abundant in grassland communities, no evidence of this species' presence was observed in the study area during the May 2023 focused surveys. Reptiles such as western fence lizards (*Sceloporus occidentalis*) and gopher snakes (*Pituophis catenifer*) are abundant in these habitats in the study area.

4.2.2 Coyote Brush Scrub

Vegetation. Coyote brush scrub (3.87 acres) is the dominant habitat type on dry, southwest-facing slopes throughout the northern portions of the study area, and on terraced slopes in the western portion of the study area (Photo 2). The dominant overstory species is coyote brush (*Baccharis pilularis*), with non-native understory grasses such as Harding grass, wild oats, fountain grass (*Pennisetum setaceum*), rattail sixweeks grass (*Festuca myuros*), and non-native forbs such as Italian thistle, common vetch (*Vicia sativa*), and hairy vetch (*Vicia villosa*). A larger component of native species, including California sagebrush, California poppy and sticky monkeyflower (*Mimulus aurantiacus*) are present in this habitat type along higher-elevation and steeper slopes in the northeast portion of the study area.

Photo 2. Coyote brush scrub in the northeastern portion of the study area.

Wildlife. Scrub habitats on steep slopes typically are dry and provide relatively low and homogeneous structure. Amphibians are usually absent or scarce in chaparral habitats because of their very dry conditions, and many other wildlife species occurring here either derive moisture directly from food or synthesize their water metabolically from seeds (e.g., the California pocket mouse [*Chaetodipus californicus*]). Mammals that use chaparral and coastal scrub habitats in the study area for foraging and cover include the native coyote, bobcat (*Lynx rufus*), and brush rabbit (*Sylvilagus bachmani*), and the nonnative feral pig. Nests of dusky-footed woodrats (*Neotoma fuscipes*) often are present where oaks and/or poison oak are mixed with coyote brush scrub, but no nests of this species were detected during focused surveys in May 2023. Bird species that nest in chaparral and coastal scrub habitats in the study area include the California towhee, spotted towhee (*Pipilo maculatus*), California quail, wrentit (*Chamaea fasciata*), lesser goldfinch, orange-crowned warbler (*Leiothlypis celata*), and Anna's hummingbird. Rufous-crowned sparrows (*Aimophila ruficeps*) may nest where these habitats are dominated by California sagebrush. Reptiles that occur in these habitats include the northern Pacific rattlesnake (*Crotalus oreganus*) and southern alligator lizard (*Elgaria multicarinata*), as well as the western fence lizard and the gopher snake, which were observed to be abundant in this habitat type during the May 2023 site visit.

4.2.3 Developed/Landscaped

Vegetation. A 6.67-acre portion of the study area consists of developed/landscaped areas (Photo 3). These areas include a concrete driveway, gravelly, compacted roads and staging lots, as well as terraced and landscaped areas in the study area. Landscape vegetation present within these areas includes overstory species such as coast redwood (*Sequoia sempervirens*), common oleander (*Nerium oleander*), spineless yucca (*Yucca elephantipes*), Canary Island palm (*Phoenix canariensis*), blue gum (*Eucalyptus globulus*) and bristly locust (*Robinia hispida*). In addition to ornamental forbs such as rock purslane *(Cistanthe grandiflora*), non-native understory species includes fennel (*Foeniculum vulgare*), iceplant (*Carpobrotus edulis*), goose grass (*Galium aparine*), white ramping fumitory (*Fumaria capreolata*) and Harding grass.

Photo 3. Developed/landscaped habitat in western portion of the study area.

Wildlife. Developed portions of the study area serve as wildlife habitat only in a limited capacity due to the predominance of nonnative vegetation, the low structural diversity of the vegetation, and frequent human disturbance. Common wildlife species that are associated with developed portions of the study area include the nonnative house mouse (*Mus musculus*) and black rat (*Rattus rattus*), as well as the native western fence lizard, raccoon, and a variety of birds, including the Anna's hummingbird, house finch (*Haemorhous mexicanus*), mourning dove, and California towhee. The buildings in the study area provide attractive nesting sites to bird species that nest on buildings, including as the black phoebe (*Sayornis nigricans*), Bewick's wren (*Thryomanes bewickii*), barn swallow (*Hirundo rustica*), mourning dove, and house finch. Open buildings in the study area also provide roosting habitat for bats, such as the Mexican free-tailed bat and Yuma myotis (*Myotis yumamensis*), and evidence of bat presence (i.e., urine staining, guano) was observed in several abandoned structures during the May 2023 focused survey. Because several of the buildings in the study area appear to be disused and abandoned, large numbers of bats could potentially roost there. In addition, the large, open, barn-like structure in the upper portion of the study area provides suitable roosting habitat for the pallid bat (*Antrozous pallidus*), a California species of special concern. During the May 2023 site visit, at least two crevice-roosting bats were determined to be present in this structure based on audible vocalizations, urine staining, and accumulations of guano below their roosts. The size of the guano pellets (approximately 0.25 inches long) indicates that these roosting individuals were larger-bodied bats, such as the pallid bat.

4.2.4 Mixed Oak Woodland

Vegetation. Mixed oak woodland is present on 1.47 acre of the study area (Photo 4), with patches of this habitat located along Crow Canyon Road and in the southeastern corner of the study area. The dominant overstory species is native coast live oak (*Quercus agrifolia*), with co-dominant species composition varying slightly between east and west patches. The west mixed oak woodland patch, along Crow Canyon Road, includes ornamental common oleander in the overstory and patchily distributed understory species similar to those in the adjacent California annual grassland. In the eastern portion of the study area, coast live oaks are co-dominant with California buckeye (*Aesculus californica*) and California bay laurel (*Umbellularia californica*). Many of the non-native understory species common in the California annual grassland and also common here, but the understory also includes species such as poison oak (*Toxicodendron diversilobum*), miniature lupine, common fiddleneck (*Amsinckia intermedia*), yarrow, and blue-eyed grass (*Sisyrinchium bellum*).

Photo 4. Mixed oak woodland (background) surrounding developed habitats in the southeastern corner of the study area.

Wildlife. Woodlands dominated by oaks typically support diverse animal communities in California. Coast live oaks provide abundant food resources, including acorns and invertebrates, as well as substantial shelter for animals in the form of cavities, crevices in bark, and complex branching growth. The oak woodlands in the study area are contiguous with extensive off-site oak woodlands and support large numbers of a variety of woodland-associated species. Leaf litter and fallen logs provide cover and foraging habitat for California slender salamanders (*Batrachoseps attenuatus*) and western fence lizards, and reptiles such as the northern alligator lizard also occur in this habitat. The trees and shrubs provide habitat for breeding birds such as the Bewick's wren, chestnut-backed chickadee (*Poecile rufescens*), Anna's hummingbird, dark-eyed junco, California scrub-jay (*Aphelocoma californica*), Steller's jay (*Cyanocitta stelleri*), oak titmouse (*Baeolophus inornatus*), Hutton's vireo (*Vireo huttoni*), and western screech-owl (*Megascops kennicottii*), as well as wintering birds including the hermit thrush (*Catharus guttatus*), ruby-crowned kinglet (*Regulus calendula*), yellow-rumped warbler (*Setophaga coronata*), and Townsend's warbler (*Setophaga townsendi*). Mammals, including the native raccoon (*Procyon lotor*), nonnative eastern gray squirrel (*Sciurus carolinensis*) and the native black-tailed deer were observed in this habitat during the May 2023 site visit. Additionally, a large number of oak trees in and adjacent to the study area support suitable day roost habitat for crevice-roosting bats including pallid bat, Yuma myotis (*Myotis yumanensis*), and California myotis (*Myotis californicus*).

4.2.5 Riparian Woodland

Vegetation. A 0.17-acre portion of the study area consists of riparian woodland along an unnamed ephemeral stream (Photo 5). This woodland is similar in composition to the surrounding mixed oak woodland, but has less vegetative cover in the understory, and some species with higher water requirements. The dominant overstory species include coast live oak, California buckeye, and California bay laurel. Understory species include miner's lettuce (*Claytonia parviflora*), California man-root (*Marah fabacea*), hedge-nettle (*Stachys bullata*), thick-stemmed sanicula (*Sanicula crassicaulis*), and wood fern (*Dryopteris arguta*). Patches of stinging nettle (*Urtica dioica*) and curly dock (*Rumex crispus*) are present along the margins of a concrete culvert structure where moisture collects during wet weather.

Photo 5. Riparian woodland along an unnamed ephemeral stream near the eastern boundary of the study area.

Wildlife. The riparian woodland in the study area is very similar in vegetation and structure to the mixed oak woodlands that occur in the study area, and wildlife use of this woodland is expected to be similar to that described in Section 4.2.4 for mixed oak woodland above.

4.2.6 Ephemeral Stream

Vegetation. In the far eastern portion of the study area, an unnamed ephemeral stream (<0.01 acre) flows in a westerly direction from the eastern boundary of the study area and into a concrete box structure, where it is directed underground (Photo 6). Ephemeral streams are defined by flowing water only during and for a short duration after precipitation events in a typical year. Shallow, steady surface flow approximately 6-8 inches wide and 1-3 inches deep was present in the unnamed ephemeral stream during the May 16, 2023 survey. Stream substrate is mostly fine and silty soil mixed with some gravel and larger cobblestones (2-3 inch diameter). Rilling up to 3 feet is present 30-40 feet upstream from the concrete box structure. Slopes on either side of the ephemeral stream are steep (approximately 15-20 percent), becoming flat towards the concrete box. Most of the ephemeral stream habitat is shaded by large overstory riparian woodland canopy, and the understory ground cover along the banks is mostly leaf litter and exposed tree roots.

Photo 6. Ephemeral stream leading to a concrete culvert in east portion of study area.

After entering the concrete box/culvert structure, this waterway appears to continue to flow westward through an underground drainage system under the adjacent developed areas. The outlet was not apparent in the study area, but it is presumed to drain into Crow Creek to the west via an off-site outlet

Wildlife. Wildlife use of the ephemeral stream is limited by the very brief duration of flow and lack of submerged, emergent, or streamside vegetation. Wildlife that use the adjacent riparian and mixed oak woodland habitats may occasionally forage in, drink from, or move along the ephemeral drainage, but no aquatic wildlife species are expected to occur here. Lack of persistent flows preclude the presence of fishes, and no pools or other features hold water long enough to support successful breeding by amphibians.

4.3 Wildlife Movement

Wildlife movement within and in the vicinity of the study area takes many forms and is different for the various suites of species associated with these lands. Bird and bat species move readily over the landscape in the project vicinity, foraging over and within both natural lands and landscaped areas. Mammals of different species move within their home ranges, but also disperse between patches of habitat. Generally, reptiles and amphibians similarly settle within home ranges, sometimes moving to central breeding areas, upland refugia, or hibernacula in a predictable manner, but also dispersing to new areas. Some species, especially among the birds and bats, are migratory, moving into or through the project vicinity during specific seasons. Aside from bats, there are no other mammal species in the project vicinity that are truly migratory. However, the young of many mammal species disperse from their natal home ranges, sometimes moving over relatively long distances in search of new areas in which to establish.

Movement corridors are segments of habitat that provide linkage for wildlife through the mosaic of suitable and unsuitable habitat types found within a landscape while also providing cover. On a broader level, corridors also function as paths along which wide-ranging animals can travel, populations can move in response to environmental changes and natural disasters, and genetic interchange can occur. In California, environmental corridors often consist of riparian areas along streams, rivers, or other natural features.

The study area is located along Crow Canyon Road, which comprises a narrow band of low intensity rural residential and agricultural development within the larger open habitats of the East Bay Hills. In much of the immediate area, agricultural activities, residential development, and narrow (two-lane) roads do not pose substantial constraints to wildlife movement. Animals may move between the study area and adjacent/nearby agricultural, residential, or natural lands individually (for larger, more mobile species), and genes may be passed between animals in the study area and populations in nearby developed or natural lands over generations in the case of smaller, less mobile species. To the east and west of the development along Crow Canyon Road, the open habitats of the East Bay Hills provide extensive natural habitats that support somewhat longer-range movements by more mobile animals such as black-tailed deer, bobcats, coyotes, and mountain lions. Riparian corridors associated with streams, including Crow Creek and Norris Creek, adjacent to the study area, support these movements by providing cover and foraging resources within the rural residential and agricultural

landscapes along the Crow Canyon Road corridor. However, urbanization along the San Francisco Bay and I-580 to the west and the I-680 corridor to the east form a nearly impassable barrier to long-range, east-west movements by these mobile animals that may move through the study area. Similarly, long-range north-south movements southward are curtailed by I-580 between Castro Valley and Dublin to the south and California State Route 24 to the north. Nevertheless, we expect some movement by larger animals through the study area as part of larger scale movement within the Diablo Range.

Because much of the study area is already developed, there are currently no well-defined or important movement corridors for mammals, amphibians, or reptiles on or through the study area. Most larger animals that stray onto the study area during long-range dispersal events are not likely to remain there for long, as many of these species, such as bobcats, coyotes, and mountain lions, are averse to interaction with humans. In contrast, wildlife residing in or near the study area is accustomed to human disturbance, and many of these species will navigate readily through the rural-residential landscape of the study area. Thus, while small-scale, local movement of wildlife may occur throughout the study area, we do not expect animals to use the study area frequently during regionally important, landscape-level dispersal movements.

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 on these species are regulated by some of the federal, state, and local laws and ordinances described in Section 3 above.

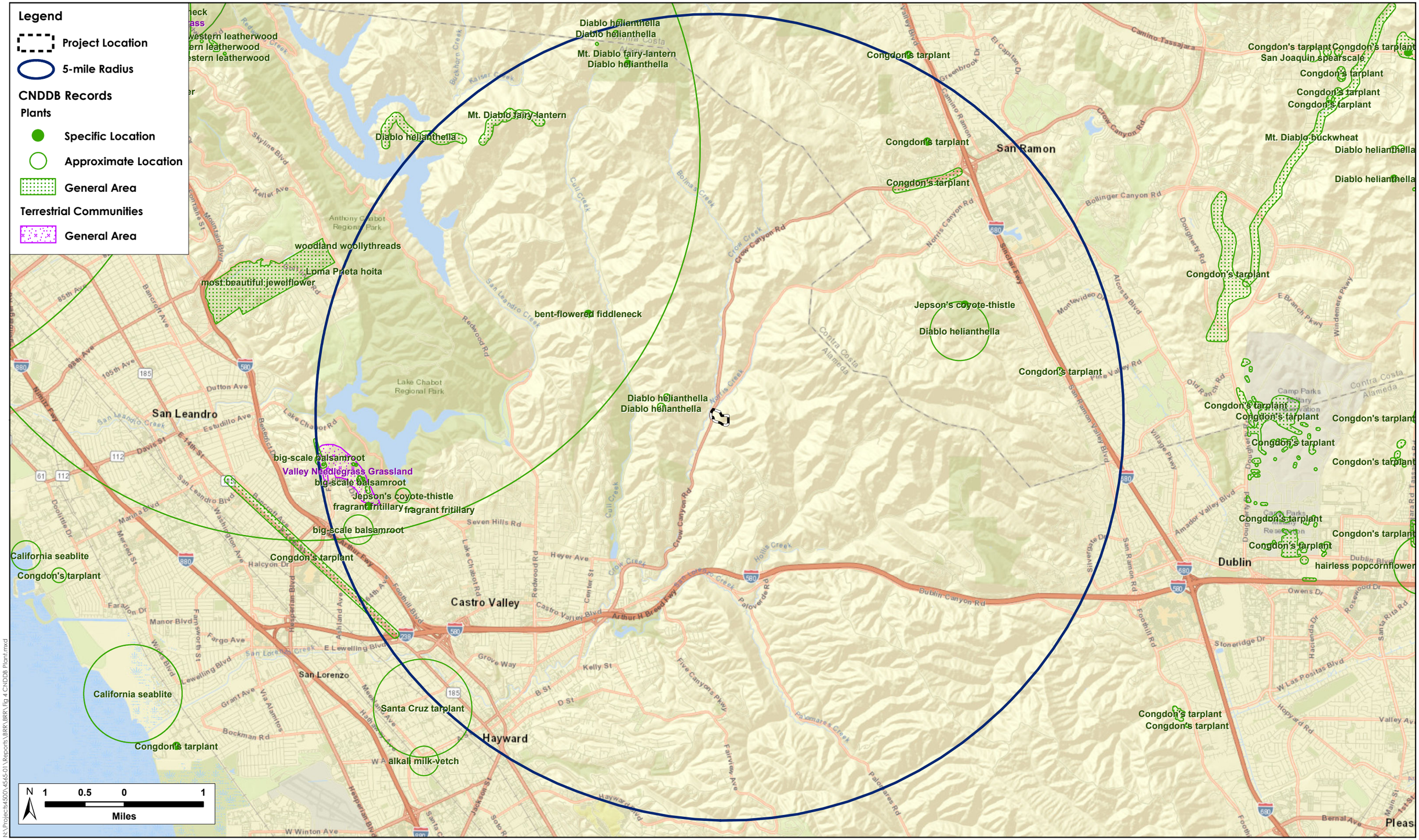
For purposes of this analysis, "special-status" plants are considered plant species that meet one or more of the following criteria:

- 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 meet one or more of the following criteria:

- 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 Section 3511, mammals in Section 4700, reptiles and amphibians in Section 5050, and fish in Section 5515).

Information concerning threatened, endangered, and other special-status species that potentially occur in the study area was collected from several sources and reviewed by H. T. Harvey & Associates biologists as described in Section 2.1 above. Figure 4 depicts CNDDB records of special-status plant species in the general vicinity of the study area and Figure 5 depicts CNDDB records of special-status animal species. These generalized maps show areas where special-status species are known to occur or have occurred historically.



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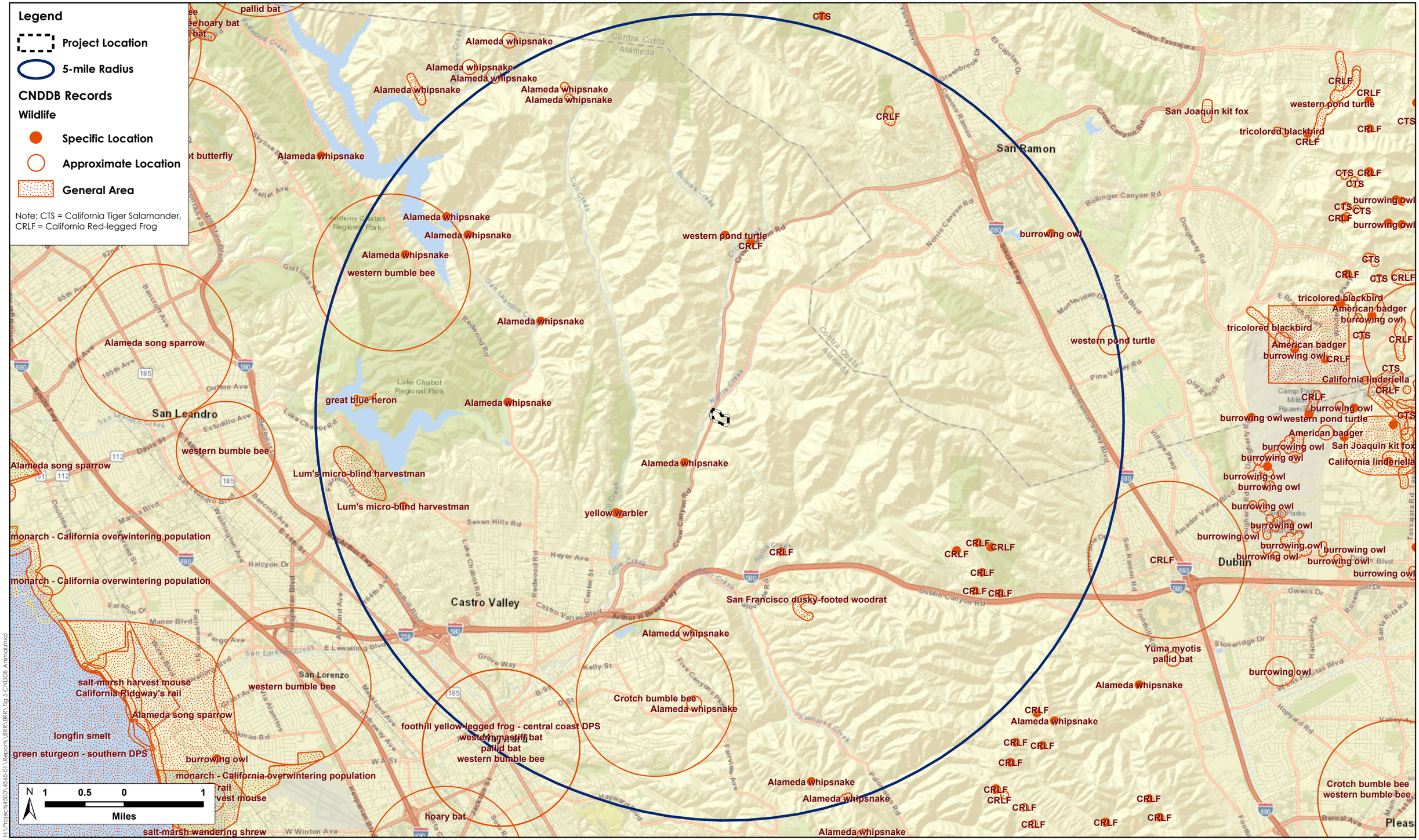
H. T. HARVEY & ASSOCIATES
Ecological Consultants

Figure 4. CNDDB-Mapped Records of Special-Status Plants
Fa Yun Chan Temple - Biological Resources Report (4565-01)
July 2023



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Ecological Consultants

Figure 5. CNDDB-Mapped Records of Special-Status Animals
Fa Yun Chan Temple - Biological Resources Report (4565-01)
July 2023

5.1 Special-Status Plant Species

The CNPS (2023) and CNDDB (2023) identify 65 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 CNPS) or within the project vicinity (for CNDDB) (Appendix B). Of the 65 potentially occurring special-status plant species, 59 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, (3) the elevation range of the species is outside of the range of the study area, and/or (4) the study area is outside the species' known geographic range and/or there are no nearby extant records (Appendix B).

Suitable habitat, edaphic requirements, and elevation range are present in the study area for the remaining six special-status plant species; these species are addressed in greater detail in Table 1 below. Of the six special-status plant species for which suitable habitat is present in the study area, focused surveys conducted in May 2023 determined that bent-flowered fiddleneck, Diablo helianthella, bristly leptosiphon, Santa Clara red ribbons, Michael's rein orchid, and California androsace, all of which would have been detectable in the study area in mid-May, are absent from the study area. Therefore, no special-status plants are expected to occur in the project study area.

Table 1. Special-Status Plant Species, Their Status, and Potential for Occurrence in the Study Area

Name	*Status	Habitat and Blooming Period	Potential for Occurrence in the Study Area
CNPS-Listed Plant Species			
Bent-flowered fiddleneck (*Amsinckia lunaris*)	CRPR 1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland/oak woodland and chaparral (blooming period March to June).	**Absent.** Suitable grassland habitat to support this species is present in the study area, and the closest extant population is two miles northwest of the study area (CNDDB 2023). However, no individuals were observed during a survey conducted during the May 2023 site visit, which was sufficiently thorough to have detected the species had it been present. Determined to be absent.
California androsace (*Androsace elongata* ssp. *acuta*)	CPPR 4.2	Chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, valley and foothill grassland (blooming period March to June).	**Absent.** Potentially suitable scrub and grassland habitat is present in the study area; however, suitable microhabitat (very poor, thin, dry, exposed soils) is present only in the extreme northwest corner of the study area, approximately 50 feet outside of (and upslope from) the project footprint. The nearest occurrence of this species is near Mt. Diablo, approximately 10 miles to the northeast, and it is not known in western Alameda County. California androsace was not observed during the May 2023 site visit, within the later part of its blooming period. Determined to be absent.
Diablo helianthella (*Helianthella castanea*)	CRPR 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Azonal soil, often partial shade. Usually rocky (blooming period March to June).	**Absent.** Suitable habitat is present, but soils are not suitable to support this species in the study area. Soils are neither azonal nor rocky. Though exposed bedrock is present in the east portion of the study area, the soils are silty clay. In addition, no individuals were observed during a survey conducted during the May 2023 site visit, which was sufficiently thorough to have detected the species had it been present. Determined to be absent.
Bristly leptosiphon (*Leptosiphon aereus*)	CRPR 4.2	Chaparral, cismontane woodland, coastal prairie, Valley and foothill grassland (blooming period April to July).	**Absent.** Suitable chaparral and grassland habitat to support this species is present in the study area, and the species is known approximately 6 miles to the west, and along the Pleasanton ridge to the south (Calflora 2023). However, bristly leptosiphon was not observed during the May 2023 site visit, which was sufficiently thorough to have detected the species had it been present. Determined to be absent.

Name	*Status	Habitat and Blooming Period	Potential for Occurrence in the Study Area
Santa Clara red ribbons (Clarkia concinna ssp. automixa)	CRPR 4.3	Chaparral, cismontane woodland (blooming period May to June).	**Absent** Suitable chaparral habitat to support this species is present in the study area, but this species is unlikely to occur on a small site at the northern extent of its range (Calflora 2023). Additionally, no individuals were observed during a survey conducted during the May 2023 site visit, which was sufficiently thorough to have detected the species had it been present. Determined to be absent.
Michael's rein orchid (Piperia michaelii)	CRPR 4.2	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal scrub, Lower montane coniferous forest (blooming period April to August).	**Absent** Suitable chaparral habitat to support this species is present in the study area, but its closest observations (Calflora 2023) are near Mt. Diablo and Pleasanton Ridge, approximately 10 miles northwest of the study area. Additionally, no individuals were observed during a survey conducted during the May 2023 site visit, which was sufficiently thorough to have detected the species had it been present. Determined to be absent.

*Key to Status Abbreviations: Federally Endangered (FE); State Threatened (ST); California Rare Plant Rank (CRPR).

CRPR 1B = Rare, Threatened, or Endangered in California and elsewhere

CRPR 4 = Plants of limited distribution - Watch list

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% of occurrences threatened)

.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

5.2 Special-Status Animal Species

The legal status and likelihood of occurrence in the study area of special-status animal species known to occur, or potentially occurring, in the surrounding region are presented in Table 2. Many of the special-status species listed in Table 2 are not expected to occur in the study area because it 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.

The following special-status species that are present in less urbanized settings in the East Bay or in specialized habitats in the East Bay, or that occurred in the East Bay historically but are no longer present, are absent from the study area due to a lack of suitable habitat and/or isolation of the study area from populations by urbanization or other barriers to dispersal: the Callippe silverspot butterfly (*Speyeria callippe callippe*), western bumble bee (*Bombus occidentalis*), Central California coast steelhead (*Oncorhynchus mykiss*), foothill yellow-legged frog (*Rana boylii*), burrowing owl, and Townsend's big-eared bat (*Corynorhinus townsendii*). No nests of San Francisco dusky-footed woodrats were observed in the study area during a focused survey conducted on May 16, 2023, and this species is determined to be absent from the study area. The American peregrine falcon (*Falco peregrinus anatum*), which may forage occasionally in the project study area, was recently removed from the list of California fully-protected species and is therefore not addressed as a special-status species in this report.

The bald eagle may occasionally fly over the study area, and the golden eagle (*Aquila chrysaetos*), grasshopper sparrow (*Ammodramus savannarum*), mountain lion (*Puma concolor*), American badger (*Taxidea taxus*), and monarch butterfly may occasionally occur there as nonbreeding foragers. As discussed in Table 2, these species are not expected to nest, roost, or breed in or immediately adjacent to the study area due to a lack of suitable nesting, roosting, or breeding habitat.

The Crotch's bumble bee, California tiger salamander, California red-legged frog, western pond turtle, Alameda whipsnake, loggerhead shrike (*Lanius ludovicianus*), yellow warbler (*Setophaga petechia*), white-tailed kite, and pallid bat are addressed in greater detail in this report because these species can potentially breed, or occur more regularly, in the study area and/or may be significantly impacted by the proposed project (see Section 6 *Impacts and Mitigation Measures* below).

Table 2. Special-Status Animal Species, Their Status, and Potential for Occurrence in the Study Area

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Federal or State Endangered, Threatened, or Candidate Species			
Callippe silverspot butterfly (*Speyeria callippe callippe*)	FE	Grasslands of the northern San Francisco Bay region. Larval host plant is *Viola pedunculata*.	**Absent.** Extant populations of *Speyeria callippe* butterflies in Contra Costa and Alameda County are genetically most consistent with the Comstock's silverspot butterfly and are not considered members of the *Speyeria callippe callippe* subspecies (USFWS 2020). While ostensibly suitable grassland habitat is present in the study area, members of this subspecies are not expected to occur due to their absence from the project vicinity.
Monarch butterfly (*Danaus plexippus*)	FC	Requires milkweeds (*Asclepias* spp.) for egg-laying and larval development, but adults obtain nectar from a wide variety of flowering plants in many habitats. Individuals congregate in winter roosts, primarily in Mexico and in widely scattered locations on the central and southern California coast.	**May be Present as Nonbreeder.** No milkweeds are currently present in the study area to provide breeding habitat for this species, but flowers in the grassland, scrub, and landscaped habitats in the study area provide foraging habitat for this species. While a few known overwintering sites are present along the lowlands of the San Francisco Bay in Alameda County, there are no current or historical overwintering sites as far inland in the county as the study area (Xerces Society 2023). The monarch butterfly occurs throughout the region as a migrant, and small numbers of individuals may forage in the study area, especially during migration.
Crotch's bumble bee (*Bombus crotchii*)	SC	Open grassland and scrub habitats with abundant flowers providing nectar and pollen and with subterranean nest sites (such as animal burrows).	**May be Present.** Although this species was historically found throughout the southern two-thirds of California, including the project vicinity, population declines and range contractions (25% relative to its historical range) have made this species very scarce in the region (CDFW 2019). Recent records (e.g., since 2015) of a number of individuals in Santa Clara County to the south and in Berkeley, in Alameda County (Bumble Bee Watch 2023), indicate that the species is still extant in the region. The grassland, scrub, and landscaped portions of the study area provide flowers that furnish suitable foraging habitat for this species. Individuals may occur occasionally and in small numbers as foragers, and it is possible that nesting could occur in the study area (e.g., in a small mammal burrow), though given the scarcity of the species, nesting in the study area is unlikely.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Western bumble bee (*Bombus occidentalis*)	SC	Occurs in a variety of grassland, scrub, and open woodland habitats.	**Absent.** Although the species was historically found throughout much of central and northern California, including the project vicinity, it has been extirpated from much of its former range, and there are no recent records from Alameda County or nearby areas (CDFW 2019, Bumble Bee Watch 2023, iNaturalist 2023). Therefore, this species is absent from the study area.
Central California Coast steelhead (*Oncorhynchus mykiss*)	FT	Cool streams with suitable spawning habitat and conditions allowing migration between spawning and marine habitats.	**Absent.** No aquatic habitats are present in the study area to provide suitable habitat for steelhead, and this species is absent from the study area. Ostensibly suitable spawning and rearing habitat for the species is present in Crow Creek, which flows parallel to the western boundary of the study area on the opposite side of Crow Canyon Road, and in Norris Creek, a tributary that flows into Crow Creek just outside the northwest corner of the study area. However, a 1600-foot box culvert on Crow Creek approximately 3.5 miles downstream of the study area forms a complete barrier to upstream migration of anadromous individuals (Leidy 2005). Thus, this species is absent from reaches of Crow Creek and Norris Creek near the study area.
California tiger salamander (*Ambystoma californiense*)	FT, ST	Vernal or temporary pools in annual grasslands or open woodlands.	**Unlikely to be Present.** California tiger salamanders are not known to occur in the project vicinity, with the closest record of the species approximately 5.1 miles north of the study area in a pond on Las Trampas Ridge (CNDDB 2023). Suitable breeding habitat is absent from the study area, but potentially suitable breeding habitat is present nearby. Approximately 0.3 mile south of the study area, a disturbed agricultural pond surrounded by open woodlands, rural residential development, and open grasslands provides low-quality breeding habitat. A less disturbed potential breeding pond surrounded by open grasslands is located approximately 1.1 miles to the east, near the upper limit of the species' dispersal capabilities. While no records of the species are present in these locales, the possibility that successful breeding occurs in these nearby ponds cannot be ruled out, and there is a low probability that individuals could disperse from these nearby ponds to the study area, where they could occupy refugial habitats, such as small mammal burrows in the study area.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
California red-legged frog (*Rana draytonii*)	FT, CSSC	Streams, freshwater pools, and ponds with emergent or overhanging vegetation.	**Unlikely to be present.** Known to occur in the project vicinity in Hollis Creek, approximately 1.9 miles south of the study area; in Crow Creek, approximately 2.2 miles north of the study area; and in a cluster of seasonal ponds approximately 3.5 miles southeast of the study area. These known occurrences in the project vicinity are near the upper limits of the species' dispersal capabilities, but it is possible that individuals from upstream populations in Crow Creek could disperse downstream to reaches of Crow Creek and its tributary, Norris Creek, just outside the western and northwestern boundaries of the study area. No breeding habitat is present in the study area, but individuals, if present, could disperse from these nearby aquatic habitats through woodland or grassland habitats in the study area, or take refuge in small mammal burrows, rock walls, or under vegetative or human-made debris in the study area.
Foothill yellow-legged frog (*Rana boylii*)	SC	Partially shaded shallow streams and riffles with a rocky substrate. Occurs in a variety of habitats in coast ranges.	**Absent.** With the exception of a single historical (1960) record approximately 5 miles southwest of the study area, this species is not known to occur in the project vicinity (CNDDB 2023), and no suitable aquatic habitat for foothill yellow-legged frogs is present in the study area. Ostensibly suitable habitat is present in nearby reaches of Crow Creek and Norris Creek; however, this species is closely associated with aquatic and streamside habitats and, if present, would not be expected to disperse across the Crow Canyon Road or other upland habitats and onto the study area. Determined to be absent.
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	FT, ST	Primarily associated with scrub and chaparral habitats, but may occur in any inner Coast Range plant community.	**May be Present.** Suitable foraging, dispersal, and refugial habitat for the Alameda whipsnake is present throughout much of the study area, and there are numerous records of the species in the project vicinity, including a 2017 record approximately 0.8 mile southeast of the study area. Prey species (e.g., western fence lizards) are abundant in the study area, and refugial habitats are widespread in both the scrub habitats, which have numerous rock and/or concrete block retaining walls and natural rock outcroppings, and the developed habitats, where concrete block retaining walls are widespread. Additionally, thermally favorable refugial habitats are present beneath and among the abundant stone sculpture components that are staged on hillside terraces and in open storage buildings throughout the study area.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Western pond turtle (*Actinemys pallida/marmorata*)	FC, CSSC	Permanent or nearly permanent water in a variety of habitats. Nests in uplands surrounding aquatic habitats, typically within 600 feet, but up to 0.25 miles away, depending on habitat conditions.	**Unlikely to be Present.** Known to occur in the project vicinity, in Bolinas Creek, a tributary to Crow Creek, approximately 2.3 miles north of the study area. While there are no records of western pond turtles in reaches of Crow Creek or Norris Creek adjacent to the study area, suitable habitat is present in both creeks, and it is possible that individuals from nearby populations could disperse into these aquatic habitats. If individuals were present in the creeks, there is also a small possibility that these individuals could attempt to nest in grasslands surrounding these creeks in the study area.
Bald eagle (*Haliaeetus leucocephalus*)	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.** Known to nest (or to have recently nested) in the project vicinity at Lake Chabot and San Leandro Reservoir (Cornell Lab of Ornithology 2023). However, no suitable nesting or foraging habitat for bald eagles is present in the study area. Determined to be absent.
Mountain lion (Southern California/Central Coast ESU) (*Puma concolor*)	SC	Has a large home range size and occurs in a variety of habitats. Natal dens are typically located in remote, rugged terrain far from human activity. May occasionally occur in areas near human development, especially during dispersal.	**May be Present as Nonbreeder.** In the project region, there are verified sightings reported on BAPP.org (2023) and numerous unpublished reports. Occurs widely, though at low densities, throughout the project vicinity. Mountain lions are not expected to establish a den in the study area due to high levels of human activity and a lack of suitable denning habitat, but individuals may occur in the study area as occasional dispersants or foragers due to the close proximity of extensive open lands to the north, east, and south of the study area.
California Species of Special Concern			
Burrowing owl (*Athene cunicularia*)	CSSC	Nests and roosts in open grasslands and ruderal habitats with suitable burrows, usually those made by California ground squirrels.	**Absent.** Burrowing owls are not known to nest in, nor have they been recorded at all in the project vicinity (CNDDB 2023, Cornell Lab of Ornithology 2023, Richmond et al. 2011). Further, no burrows of California ground squirrels were observed in the study area during focused surveys in May 2023. Therefore, this species is determined to be absent.
Coast horned lizard (*Phrynosoma blainvillii*)	CSSC	Open habitats with sandy, loosely textured soils, such as chaparral, coastal scrub, annual grassland, and clearings in riparian woodlands with the presence of native harvester ants (*Pogonomyrmex barbatus*).	**Absent.** Coast horned lizard was not known historically in the project vicinity (Thomson et al. 2016) and the closest extant records of the species are approximately 13 miles to the northeast, at Mt. Diablo. Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
Loggerhead shrike (*Lanius ludovicianus*)	CSSC (nesting)	Nests in tall shrubs and dense trees; forages in grasslands, marshes, and ruderal habitats.	**May be Present as Breeder.** Known to breed in the project vicinity (Richmond et al. 2011), though not in substantial numbers (Cornell Lab of Ornithology 2023). Shrubs and trees on and adjacent to the study area provide suitable nesting habitat for loggerhead shrikes, and grasslands in the study area provide suitable foraging habitat. Up to one pair of loggerhead shrikes may breed on near the study area.
Yellow warbler (*Setophaga petechia*)	CSSC (nesting)	Nests in riparian woodlands.	**May be Present as Breeder.** Suitable nesting habitat for yellow warblers is largely absent from the study area. However, suitable riparian nesting habitat for this species is present adjacent to the site along Crow Creek and Norris Creek, and up to two pairs of yellow warblers could potentially nest along these creeks close enough to the project footprint to be affected by project activities. The species is an abundant migrant throughout the project region during the spring and fall, and nonbreeding individuals may forage along Crow and Norris Creeks adjacent to the site and in the mixed oak and riparian woodland habitats in the study area.
Grasshopper sparrow (*Ammodramus savannarum*)	CSSC (nesting)	Nests and forages in grasslands, meadows, fallow fields, and pastures.	**Absent as breeder.** The grasshopper sparrow is known to breed in the project vicinity (Cornell Lab of Ornithology 2023, Richmond et al. 2011). However, this species breeds in extensive grasslands, and the grasslands in the project study area are too limited in extent to provide suitable breeding habitat. This species may occasionally occur in the study area as a nonbreeding forager.
Pallid bat (*Antrozous pallidus*)	CSSC	Forages over many habitats; roosts in caves, rock outcrops, buildings, and hollow trees.	**May be Present as Breeder.** Known to be present in the project vicinity from two records, approximately 5 miles southwest and 5 miles northeast of the study area (CNDDB 2023, iNaturalist 2023). Additionally, at least two individual bats of unknown species were detected roosting in crevices in a large, open barn in the study area during daytime reconnaissance surveys in May 2023. While these individual bats were not observed directly, accumulations of large guano (approximately ¼-inch long) below the roost sites indicate that they are large-bodied individuals, such as pallid bats.
Townsend's big-eared bat (*Corynorhinus townsendii*)	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.** There are no recent records of this species in the project vicinity, and all CNDDB records in Alameda and Contra Costa Counties are either historical or extirpated (CNDDB 2023, iNaturalist 2023). Although suitable habitat for crevice-roosting bats is present in buildings in the study area, cavernous habitat suitable for this species is limited and is disturbed by human activity too much for use by roosting Townsend's big-eared bats. Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence in the Study Area
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	CSSC	Nests in a variety of habitats including riparian areas, oak woodlands, and scrub.	**Absent.** Suitable habitat for this species is present in the oak woodlands, riparian woodlands, and scrub habitats in the study area, but no nests of dusky-footed woodrats were detected during focused surveys for the species in May 2023. Determined to be absent.
American badger (*Taxidea taxus*)	CSSC	Burrows in grasslands and occasionally in infrequently disked agricultural areas.	**May be Present as Nonbreeder.** Known to occur in the project region primarily in extensive grasslands (iNaturalist 2023), though no records are present in the project vicinity. Badgers are not expected to regularly use the study area or establish a den in the study area due to high levels of human activity, but individuals may occur in the study area as dispersants or foragers due to close proximity of extensive grasslands to the north, east, and south.
State Fully Protected Species			
Golden eagle (*Aquila chrysaetos*)	SP	Breeds on cliffs or in large trees (rarely on electrical towers); forages in open areas.	**May be Present as Nonbreeder.** Known to nest in the project region, though there are no breeding records in the project vicinity (CNDDB 2023, Cornell Lab of Ornithology 2023). While ostensibly suitable nesting habitat (i.e. large trees) is present in the study area, no large, existing raptor nests were observed during the May 2023 site visit, and golden eagles are not expected to nest on or near the study area. This species may, however, occur in the project vicinity as an occasional forager, primarily during migration and winter.
White-tailed kite (*Elanus leucurus*)	SP	Nests in tall shrubs and trees; forages in grasslands, marshes, and ruderal habitats.	**May be Present as Breeder.** White-tailed kites are common residents in open areas in the project vicinity (Cornell Lab of Ornithology 2023). Trees in the mixed oak and riparian woodland habitats in the study area provide suitable nesting habitat for this species, although individuals are more likely to nest in trees along Crow and/or Norris Creeks adjacent to the site where taller trees and denser vegetation are present to provide superior cover for nest locations. No white-tailed kites or nests of this species were observed on or adjacent to the site during the May 2023 site visit; however, up to one pair of white-tailed kites may nest in trees on or adjacent to the study area. Individuals may forage in open habitats on and adjacent to the site year-round.

Key to Abbreviations: Status: Federally Endangered (FE); Federally Threatened (FT); Federal Candidate for Listing (FC); State Endangered (SE); State Threatened (ST); State Candidate for Listing (SC); State Fully Protected (SP); California Species of Special Concern (CSSC).

5.3 Sensitive Natural Communities, Vegetation Alliances, and Habitats

Natural communities have been considered part of the Natural Heritage Conservation triad, along with plants and animals of conservation significance, since the state inception of the Natural Heritage Program in 1979. The CDFW determines the level of rarity and imperilment of vegetation types, and tracks sensitive communities in its Rarefind database (CNDDB 2023). Global rankings (G) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas state (S) rankings are a reflection of the condition of a habitat within California. Natural communities are defined using NatureServe's standard heritage program methodology as follows (Faber-Langendoen et al. 2012):

G1/S1: Critically imperiled
G2/S2: Imperiled
G3/S3: Vulnerable
G4/S4: Apparently secure
G5/S4: Secure

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 (CDFW 2023). If an alliance is marked G1-G3, all of the vegetation associations within it will also be of high priority (CDFW 2023). The CDFW provides VegCAMP's currently accepted list of vegetation alliances and associations (CDFW 2023).

Impacts on CDFW sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, must be considered and evaluated under CEQA (Title 14, Division 6, Chapter 3, Appendix G of the California Code of Regulations). Furthermore, aquatic, wetland and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS.

5.3.1 Sensitive Natural Communities

A query of sensitive habitats in the CNDDB (2023) identified four sensitive natural communities as occurring within the nine 7.5-minute USGS quadrangles containing or surrounding the study area: northern coastal salt marsh (Rank G3/S3.2), northern maritime chaparral (Rank G1/S1.2), serpentine bunchgrass (Rank G2/S2.2), and valley needlegrass grassland (Rank G3/S3.1). Riparian woodland habitat along the unnamed creek in the west part of the study area does not meet the definition of the *California bay forest* natural community type, which is almost entirely California bay laurel and typically along the coast (Holland 1986). Therefore, the study area supports no sensitive natural communities as tracked by CNDDB.

5.3.2 Sensitive Vegetation Alliances

Non-native grassland in the study area likely qualifies as the "*Avena* spp. – *Bromus* spp." alliance (42.027.00). This alliance is ranked as a semi-natural alliance (CDFW 2023). This alliance does not have a global or state ranking, but because it is defined by dominance of nonnative species, is not considered sensitive by VegCAMP.

Mixed riparian woodland and forest in the study area corresponds to the "*Quercus agrifolia – Aesculus californica*" alliance (71.060.52). This alliance is not ranked and is not considered sensitive by the CDFW in VegCAMP (CDFW 2023). Several oak-dominated alliances throughout California are considered to be sensitive. However, the mixed oak woodland in the study area likely fits "*Quercus agrifolia*" alliance (71.060.02), which is ranked as G5/S5 and is not considered sensitive by the CDFW in VegCAMP (CDFW 2023).

Finally, coyote brush scrub in the study area likely qualifies as "*Baccharis pilularis / Annual grass – herb"* which is ranked as G5/S5 and is not considered sensitive by the CDFW in VegCAMP (CDFW 2023).

5.3.3 CDFW Riparian Habitat

Due to its rarity and disproportionately high habitat values and functions to wildlife, riparian habitat is considered to be sensitive. As described above in Section 3.2.4, the CDFW would likely claim jurisdiction over areas at, and below, the top of bank lines on either side of the unnamed ephemeral stream regardless of the vegetative composition of these areas. Riparian habitat associated with unnamed ephemeral stream corridor occurs in the study area, and the project has the potential for impacts on a very small amount of this habitat (See Section 6.2.1 for a discussion of impacts to CDFW riparian habitat).

5.3.4 Sensitive Habitats (Waters of the U.S./State)

The aquatic habitat in the unnamed ephemeral stream up to the ordinary high water mark lines may be considered waters of the U.S. and state. This aquatic habitat is located in the study area, but outside of the project's impact area. In addition, the riparian habitat (extending to the outer edge of the riparian canopy) in the study area associated with the unnamed ephemeral stream is considered waters of the state under Porter-Cologne. A very small amount of this habitat overlaps the project impact areas.

5.3.5 Nonnative and Invasive Species

Several nonnative, invasive plant species occur in the study area. Of these, the following have a "moderate" rating, indicating that they have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure, and that their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment would be generally dependent upon ecological disturbance: wild oats, black mustard, Italian thistle, tocalote, poison hemlock, blue gum, rattail sixweeks grass, Italian rye grass, fennel, wall barley (*Hordeum murinum*), crimson fountain grass, Harding grass, rose clover and Mexican fan palm (*Washingtonia robusta*). Species with a "high" invasive rating by the Cal-IPC have the potential to cause severe ecological impacts on physical processes, plant and animal

communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment, and most are widely distributed ecologically (Cal-IPC 2023). In the study area, substantial patches of freeway iceplant, a species with a "high" rating, were observed.

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."

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 (Chapter IV) 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 state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means"

D. "interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites"

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"

Potential impacts on biological resources resulting from the proposed project were systematically evaluated at the project level based on the project description and impact limits provided to us by Milan & Associates through June 2023. Based on this information, it is our understanding that all project impacts including grading, construction, staging, and access will occur within the limits of boundaries provided.

Potential impacts on existing biological resources were evaluated by comparing the quantity and quality of habitats present in the study area under baseline conditions to the anticipated conditions after implementation of the proposed project. Direct and indirect impacts on special-status species and sensitive natural communities were assessed based on the potential for the species, their habitat, or the natural community in question to be disturbed or enhanced following implementation of the proposed project.

6.1 Impacts on Special-Status Species: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant with Mitigation)

6.1.1 Impacts on California Annual Grassland, oak Woodland, Coyote Brush Scrub, and Associated Common Plant and Wildlife Species (Less than Significant)

Proposed project activities would result in permanent and or/temporary impacts to 3.18 acres of California annual grassland habitat, 0.63 acres of mixed oak woodland, and 2.64 acres of coyote brush scrub in the study area. These impacts would reduce the extent of vegetation within the impact area and result in a reduction in the abundance of some of the common plant and wildlife species that occur there. However, the California annual grassland, oak woodland, and coyote brush scrub in the study area are subject to regular human disturbance and do not provide regionally rare or especially high-value habitat for native vegetation, wildlife, or special-status species. In addition, these land cover types are abundant and widespread regionally and are not particularly sensitive; the project will impact only very low acreages of these habitats; and the habitat in the study area is not especially valuable (from the perspective of providing important plant or wildlife habitat) or an exemplary occurrence of this habitat type. Therefore, impacts on these habitats are considered less than significant under CEQA. Further, because the number of individuals of any common plant or animal species within these habitats, and the proportion of these species' regional populations that could be disturbed, is very small, the project's impacts would not substantially reduce regional populations of these species. Thus, these impacts do not meet the CEQA standard of having a *substantial* adverse effect and would not be considered significant under CEQA.

6.1.2 Impacts on Alameda Whipsnake (Less than Significant with Mitigation)

The Alameda whipsnake is known to occur in the project vicinity, and suitable foraging, dispersal, and refugial habitat is present in the grassland, scrub, and woodland habitats throughout the study area. Additionally, developed portions of the study area adjacent to these habitats (e.g. gravel pathways in scrub habitats and crumbling concrete block retaining walls) may provide supplementary foraging, dispersal, and refugial opportunities. In the absence of protective measures, development of the study area could impact individuals of these species via direct injury or mortality associated with vegetation removal; equipment and personnel movement; and grading, demolition, and construction activities. Substrate vibrations have the potential to cause individuals to move out of refugia, exposing them to a greater risk of predation. Increases in human concentration and activity in the vicinity of suitable habitat may result in an increase in native and nonnative

predators that would be attracted to trash left at the work site and that would prey opportunistically on Alameda whipsnakes. Additionally, the project will result in the temporary and/or permanent loss of a total of 6.46 acres of suitable Alameda whipsnake foraging, dispersal, and refugial habitat, including 2.64 acres of coyote brush scrub, 0.1 acre of riparian woodland, 0.63 acre of mixed oak woodland, and 3.18 acres of California annual grassland.

In our opinion, the temporary and/or permanent loss of 6.46 acres of suitable Alameda whipsnake foraging, dispersal, and refugial habitat and the potential loss of individual Alameda whipsnakes that may be present in the study area could contribute to broader-scale decline in regional Alameda whipsnake populations, which represents a significant impact under CEQA. The implementation of Mitigation Measure BIO-1 and BIO-2, below, would avoid and minimize project impacts on individual Alameda whipsnakes and provide compensatory mitigation for the loss of foraging, dispersal, and refugial habitat due to the project. With the implementation of these measures, project impacts on the Alameda whipsnake would be reduced to less than significant levels under CEQA.

Mitigation Measure BIO-1. Alameda Whipsnake Minimization Measures. To minimize impacts on Alameda whipsnakes, the following measures will be implemented.

- **Qualified Biologist.** Prior to project construction, the project proponent will retain a qualified biologist(s) to perform preconstruction surveys, worker environmental awareness training, and on-site construction monitoring.
- **Worker Environmental Awareness Program.** Prior to commencing work in the study area, all construction personnel will receive a worker environmental awareness training provided by the qualified biologist(s). At a minimum, the training will include descriptions of the Alameda whipsnake, California red-legged frog, California tiger salamander, and western pond turtle and their habitats; the regulatory protections afforded these species; the general measures that are being implemented to conserve them as they relate to the proposed project, and the boundaries within which project activities may be accomplished.
- **Pre-Activity Survey.** The qualified biologist shall survey the study area within 24 hours prior to the initiation of construction-related activities for Alameda whipsnakes, California red-legged frogs, California tiger salamanders, and western pond turtles. If an individual of any of these species is detected during the pre-activity survey, they will be relocated to suitable habitat outside the project's impact areas (with approval from the USFWS/CDFW as appropriate).
- **Wildlife Exclusion Fence.** Prior to project construction, wildlife exclusion fencing shall be installed to prevent Alameda whipsnakes, California red-legged frogs, California tiger salamanders, and western pond turtles from entering project impact areas. This fencing shall be installed along the perimeter of the project footprint in a manner that will prevent these species from entering the project footprint prior to the start of all work activities. The location and design of the fence shall be approved by a qualified biologist, and the qualified biologist will also be present on site to monitor installation until the exclusion fence is complete.

- At a minimum, the exclusion fencing shall be at least 3 feet high and the lower 6 inches of the fence shall be buried in the ground to prevent animals from crawling under. The remaining 2.5 feet shall be left above ground to serve as a barrier for animals moving on the ground surface. The fence shall be pulled taut at each support to prevent folds or snags, and supports shall be placed on the inside (project side) of the fencing. Escape ramps, funnels, or other features that allow animals to exit the construction area, but which will prohibit the entry of such animals, shall be provided in the exclusion fencing, and the top of the fencing shall be curved over on the outside of the fence to prevent animals climbing over it. Fencing shall be installed and maintained in good condition during all construction activities and shall be inspected and maintained daily until the completion of project construction. If equipment needs to pass through this fencing for work activities, a gate shall be installed to allow access and the fence shall be sealed at the end of each working day. Fencing shall be removed within 72 hours of the conclusion of construction activities.

- **Construction Monitoring.** The qualified biologist(s) will be present during any construction activities that could, in the biologist's opinion, potentially result in take of individual Alameda whipsnakes, California red-legged frogs, California tiger salamanders, or western pond turtles. The biologist(s) shall have the authority to stop any work that may result in take of this species. The on-site biologist will be the contact for any employee or contractor who might inadvertently kill or injure an Alameda whipsnake, California red-legged frog, California tiger salamander, or western pond turtle or anyone who finds a dead, injured, or entrapped individual of any of these species.

- **Immediate Work Stoppage.** If an Alameda whipsnake, California red-legged frog, California tiger salamander, or western pond turtle, or an animal that could be one of these species (e.g., a similar species of reptile or amphibian), is observed within the work area during project activities, all work that could result in the injury or death of the individual will stop immediately and the qualified biologist will be immediately notified. The animal will be allowed to leave the work area of its own volition. If it does not leave the area of its own volition, USFWS (for Alameda whipsnake, California red-legged frog, and California tiger salamander) and/or CDFW (for California tiger salamander and western pond turtle) will be contacted to determine next steps. No individual of any of these species will be handled without prior approval from the USFWS/CDFW.
- **Avoid Plastic Monofilament Netting.** No plastic monofilament netting or similar material will be used in erosion control materials to avoid potential entrapment of Alameda whipsnakes, California red-legged frogs, California tiger salamanders, and western pond turtles that may occur in the study area.
- **Trenches.** To prevent the inadvertent entrapment of Alameda whipsnakes, California red-legged frogs, California tiger salamanders, or western pond turtles, all excavated, steep-walled holes or trenches will be covered at the end of each work day with plywood or similar materials. If this is not possible, one or more escape ramps constructed of earth fill or wooden planks will be established in the hole. Before such holes or trenches are filled, they will be thoroughly inspected for any animals. If at any time a Alameda whipsnake, California red-legged frog, California tiger salamander, or western pond turtle is found trapped or injured in these holes, the individual will be relocated to suitable habitat outside the project's impact areas (with approval from the USFWS/CDFW as appropriate).

- **Food Trash Removal.** All food trash from project personnel shall be placed in containers with secure lids before the end of work each day in order to reduce the likelihood of attracting predators to the study area. If containers meeting these criteria are not available, all rubbish shall be removed from the study area at the end of each work day.

Mitigation Measure BIO-2. Alameda Whipsnake Habitat Restoration and Compensatory Mitigation. Temporary impacts to coyote brush scrub, riparian woodland, mixed oak woodland, and California annual grassland habitat will be restored in place to return Alameda whipsnake habitat to conditions of equal or greater habitat quality compared to the impacted areas, as determined by a qualified biologist. To offset the permanent loss of Alameda whipsnake habitat, compensatory mitigation will be provided for any permanent loss of coyote brush scrub, riparian woodland, mixed oak woodland, or California annual grassland habitat. Mitigation may be satisfied through project-specific conservation and management of suitable habitat occupied by this species and/or the purchase of credits at a conservation bank that has been approved by the USFWS and CDFW. If compensatory mitigation is provided through project-specific conservation and management of suitable habitat (on-site and/or off-site), the applicant will provide the mitigation at a 2:1 (mitigation: impact) ratio on an acreage basis for direct, permanent impacts to suitable habitat. If compensatory mitigation is provided through the purchase of credits at an approved conservation bank, mitigation will be provided at a 1:1 (mitigation: impact) ratio for direct permanent impacts.

If the applicant provides mitigation through project-specific conservation and management of suitable habitat, the applicant will prepare a Habitat Mitigation and Monitoring Plan (HMMP) describing the proposed mitigation lands for conservation/management (i.e., land outside the project's impact footprint, either on the subject parcel or in off-site areas), and monitoring that will occur to ensure that those lands continue to provide suitable habitat conditions. The HMMP will be prepared by a qualified ecologist and will include the following:

- A summary of habitat impacts and proposed acres of habitat conservation;
- The location of habitat conservation and enhancement site(s), and description of existing site conditions;
- A description of measures to be undertaken, if necessary, to enhance the mitigation site for the Alameda whipsnake;
- Proposed management activities to maintain high-quality habitat conditions for the Alameda whipsnake;
- A monitoring plan (including performance criteria, methods, data analysis, reporting requirements, and schedule). At a minimum, performance/success criteria will include demonstration of the presence of suitable habitat for the Alameda whipsnake.
- A description of the HMMP's adaptive component, including potential contingency measures for mitigation elements that do not meet performance criteria; and
- A description of the funding mechanism to ensure the long-term maintenance and monitoring of the mitigation lands.

The HMMP will be submitted to the USFWS and CDFW for review and approval prior to project implementation. If compensatory mitigation is provided through a purchase of mitigation credits, the applicant will purchase the credits from a conservation bank in consultation with the appropriate resource agencies prior to commencement of impacts on Alameda whipsnake.

6.1.3 Impacts on Water Quality, California Tiger Salamander, California Red-legged Frog, and Western Pond Turtle (Less than Significant with Mitigation)

The California red-legged frog, California tiger salamander, and western pond turtle have a low potential to occur in the study area. The California red-legged frog and western pond turtle may be present in low numbers in Crow Creek and/or Norris Creek just outside the western and northern boundaries of the study area, and the California red-legged frog and California tiger salamander also be present in agricultural ponds within dispersal distance of the study area. If individuals of any of these species are present in any of these aquatic habitats, they could disperse across upland areas surrounding these aquatic habitats and occupy refugial habitats in the study area. Individual western pond turtles, which can disperse up to 0.25 mile from aquatic habitats for nesting, could conceivably attempt to nest in the grasslands or more open scrub habitats in the study area. California tiger salamanders could potentially breed in nearby agricultural ponds (0.3 miles south and 1.1 miles east) and disperse through grassland, woodland, or developed habitats the study area, taking shelter in refugial habitats such as small mammal burrows. California red-legged frogs that are present in nearby aquatic habitats could, similarly, disperse between potentially occupied habitats across the woodland, grassland, and developed habitats in the study area, occupying refugial habitats such as small mammal burrows, vegetative and human made debris piles, or the ephemeral stream in the study area.

Potential impacts to individuals of these species would be similar to potential impacts to Alameda whipsnake. Project activities could result in injury or mortality of these species due to vegetation removal, equipment and personnel movement; and grading, demolition, and construction activities. Substrate vibrations have the potential to cause individuals to move out of refugia, exposing them to a greater risk of predation, or individual red-legged frogs or tiger salamanders could be crushed or injured in refugia by movement of heavy equipment or excavation. In addition, petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment may kill individuals, although standard best management practices to control releases of such chemicals make this unlikely. Increases in human concentration and activity in the vicinity of suitable habitat may result in an increase in native and nonnative predators that would be attracted to trash left at the work site and that would prey opportunistically on California red-legged frogs, California tiger salamanders, or western pond turtles.

Due to the rarity of these species, impacts on individual California red-legged frogs, California tiger salamanders, or western pond turtles would be considered significant under CEQA. Implementation of Mitigation Measure BIO-1, for Alameda whipsnake, will reduce any potential impacts to these species to less-than-significant levels.

The dispersal habitats (and nesting habitats for western pond turtle) in the project footprint areas are of low quality for these species due to the predominance of dense, nonnative vegetation and frequent human disturbance. Further, there is a very low probability that any of these species will occur in the study area given the distance of the study area from known occurrences of these species. Thus, the conversion of these low-quality dispersal and nesting habitats with a low probability of occupancy by any of these species to other, developed uses, would not rise to the CEQA standard of having a significant impact on California red-legged frogs, California tiger salamanders, or western pond turtles via loss of nesting or dispersal habitat, and no compensatory migitation for losses of suitable habitat would be necessary.

No direct impacts to Crow Creek, Norris Creek, or the unnamed ephemeral stream in the study area are proposed. Indirect impacts on water quality in the creek could potentially occur as a result of project activities, which will be located adjacent to Norris Creek in the northwest corner of the study area, and within approximately 40 feet of Crow Creek in the southwest corner of the study area. Project activities could potentially impact the California red-legged frog and western pond turtle in Crow and/or Norris Creeks due to a temporary increase in erosion, sedimentation, and turbidity in aquatic habitats located adjacent to or downstream of the work area. Additionally, minor spills of petrochemicals, hydraulic fluids, and solvents may occur during vehicle and equipment refueling. Such leaks/spills could adversely affect water quality downstream of construction activities, potentially impairing the health of frogs or turtles in the creek.

Indirect impacts on water quality from construction of the project would be avoided and minimized by implementing erosion and sediment control measures, as well as BMPs for work near aquatic environments. In addition, construction projects in California causing land disturbances that are equal to 1 acre or greater must comply with state requirements to control the discharge of storm water 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, as amended and administratively extended). Prior to the start of construction/demolition, a Notice of Intent must be filed with the SWRCB describing the project. A Storm Water Pollution Prevention Plan must be developed and maintained during the project and it must include the use of BMPs to protect water quality until the site is stabilized. Standard permit conditions under the Construction General Permit require that the applicant utilize various measures including: on-site sediment control BMPs, 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.

In many Bay Area counties, including Alameda County, projects must also comply with the California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (Water Board Order No. R2-2015-0049). This permit requires that all projects implement BMPs and incorporate Low Impact Development practices into the design to prevent stormwater runoff pollution, promote infiltration, and hold/slow down the volume of water coming from a site after construction has been completed. 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.

Compliance with these permit requirements will minimize the potential for impacts on water quality due to increases in erosion, sedimentation, and turbidity as well as releases of pollutants into the creek water. Therefore, project activities are not expected to result in substantial adverse indirect effects on water quality, California red-legged frog, California tiger salamander, or southwestern pond turtles in Crow Creek or Norris Creek, and such water quality-related impacts would be less than significant.

6.1.4 Impacts on the Crotch's Bumble Bee (Less than Significant)

Project activities will temporarily or permanently impact 2.64 acres of coyote brush scrub habitat and 3.18 acres of California annual grassland that could possibly provide foraging and/or nesting habitat for Crotch's bumble bees. Given the limited extent of potentially suitable habitat within the project footprint, few, if any Crotch's bumble bees are expected to be present in the study area when work occurs. Nevertheless, should small numbers of individuals be present, proposed project activities would result in the loss of nesting and foraging habitat for Crotch's bumble bees, and potentially also the loss of habitat and nests due to crushing by construction personnel or equipment, vegetation removal, excavations, and placement of soil stockpiles. However, given the small amount of high-quality foraging habitat in the project footprint, only a small number of foraging individuals are reasonably be expected to be present, if any are present at all, and breeding individuals are likely to be absent. Foraging individuals are expected to be able to move away from any construction areas or equipment before they could be injured or killed, and there is a very low probability of impacts to nests. Thus, impacts on a very small number of individual Crotch's bumble bees would not rise to the CEQA standard of having a substantial adverse effect on regional populations of the species, and would thus be considered less than significant. Similarly, the coyote brush scrub and California annual grassland habitats that could potentially support the Crotch's bumblebee in the project footprint are regionally abundant, and the loss of a small amount of this abundant habitat type would not constitute a significant impact under CEQA. Therefore, no mitigation measures are necessary to reduce impacts to the Crotch's bumble bee or its habitat to less-than-significant levels.

6.1.5 Impacts on Nonbreeding Special-Status Birds, Mammals, and Invertebrates (Less than Significant)

Several special-status bird, mammal, and invertebrate species may occur in the study area as nonbreeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers within or near the project footprint. These are the monarch butterfly, golden eagle, mountain lion, and American badger. The monarch butterfly (a federal candidate species) may forage in the study area, but no larval host plants were observed during the May 2023 reconnaissance surveys, and there are no known wintering roosts as far inland as the study area. The golden eagle (a state fully protected species) is not expected to nest in the study area due to a lack of suitable habitat, though individuals may occasionally forage in the study area in small numbers. Due to the site's location within the open habitats of the East Bay Hills, the mountain lion (a state candidate species) and American badger (a California species of special concern) may briefly traverse the site as non-breeding dispersants or foragers, but they are not expected to linger for any length of time due to high levels of human activity.

Activities under the proposed project would have some potential to impact foraging habitats and/or disturb individuals of these species. Construction activities 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, as individuals of these species would move away from any construction areas or equipment before they could be injured or killed. Further, the study area does not provide important foraging habitat used regularly or by large numbers of individuals of any of these species. As a result, impacts of the project will have little impact on these species' foraging habitat and no substantive impact on regional populations of these species. Therefore, this impact would be less than significant under CEQA.

6.1.6 Impacts on the Loggerhead Shrike, Yellow Warbler, and White-Tailed Kite (Less than Significant)

The yellow warbler (a California species of special concern when nesting) could potentially nest in riparian trees along Crow Creek and Norris Creek, and the white-tailed kite (a state fully protected species) may nest in riparian or in mixed oak woodland habitat or landscape trees on and adjacent to the study area. The loggerhead shrike (a California species of special concern when nesting) may nest in shrubs or tree on and adjacent to the study area. These species are assessed together because the potential impacts of the project on these species would be similar.

Based on site observations, the areal extent of suitable habitats within and adjacent to the study area, and known nesting densities of these species, it is likely that no more one or two pairs of yellow warblers and one pair of white-tailed kites or loggerhead shrikes could potentially nest on or immediately adjacent to the project footprint. The project would not result in the loss of suitable nesting habitat for the yellow warbler, as no activities are proposed within the bed and banks of Crow Creek or Norris Creek. The project would result in the permanent loss of suitable nesting and foraging habitat for the white-tailed kite and loggerhead shrike, as well as suitable foraging habitat for the yellow warbler. In addition, activities that occur during the nesting season and cause a substantial increase in noise or human activity near active nests may result in the abandonment of active nests (i.e., nests with eggs or young). Heavy ground disturbance, noise, and vibrations caused by project activities could potentially disturb nesting and foraging individuals and cause them to move away from work areas.

Because the number of nesting pairs of each species that could be disturbed is very small (i.e., 1–2 pairs), the impacts of project activities would represent a very small fraction of the regional population of these species. Therefore, neither the potential loss of individual yellow warblers, loggerhead shrikes, or white-tailed kites, nor the disturbance of nesting and foraging habitat, would rise to the CEQA standard of having a *substantial* adverse effect, and these impacts would thus not constitute a significant impact on these species or their habitat under CEQA. However, these species, as well as nearly all native bird species, are protected by the MBTA and California Fish and Game Code, and measures should be implemented to avoid violation of these laws (see Section 7 below

6.1.7 Impacts on Common and Special-Status Roosting Bats (Less than Significant with Mitigation)

Common bat species, such as the Yuma myotis and Mexican free-tailed bat, as well as the pallid bat, a California species of special concern, can potentially roost in buildings and trees in the study area. These common and special-status species are grouped together because project impacts on these species will be similar, and because project avoidance and minimization measures for these species are also similar.

Reconnaissance-level surveys during the maternity season in May 2023 detected at least two active bat roosts in the open, barn-like structure in the southeastern portion of the project footprint, and additional abandoned buildings and large trees provide suitable habitat for common and special-status roosting bats. Thus, the removal of trees and buildings in the study area has the potential to result in the loss of individuals, and possibly, a maternity colony of roosting bats. When buildings or trees containing roosting colonies or individual bats are removed or modified, individual bats can be physically injured or killed, can be subjected to physiological stress from disturbance during torpor, or can face increased predation because of exposure during daylight. In addition, nursing young may be subjected to disturbance-related abandonment by their mothers. Impacts on a moderate-sized maternity colony of common species that have potential to occur in the study area (i.e., at least 10 big brown bats or at least 20 individuals of other non-special-status bat species), or impacts on a pallid bat roost of any type (i.e., a maternity or non-maternity colony) or size would be considered a substantial adverse effect on these species as this could have a substantial adverse effect on their regional populations. Implementation of Mitigation Measure BIO-3 will reduce these impacts to less-than-significant levels under CEQA.

Mitigation Measure BIO-3. Rooting Bat Measures. To reduce impacts on common and special-status roosting bats to less-than-significant levels, the following mitigation measures will be implemented:

- **Mitigation Measure BIO-3a. Initial Habitat Survey.** A qualified bat biologist shall conduct an initial survey of all buildings and trees in the study area that are slated for removal to determine whether suitable habitat for a moderate-sized colony of common bat species (i.e., at least 10 big brown bats or at least 20 individuals of other non-special-status species), or a pallid bat colony of any size, is present. The locations of trees with suitable cavities and crevices, as well as any buildings with accessible interiors or other crevices (e.g., roof tiles or other exterior features) that support suitable roost locations, will be identified, and potential entry and exit locations will be mapped.

  The purpose of this initial survey is to determine where surveys for maternity roosts (described in Mitigation Measure BIO-3b) and where pre-activity surveys (described in Mitigation Measure BIO-3c), if required, should be performed. For trees and buildings that are determined, in the qualified biologist's discretion, not to provide suitable habitat for a moderate-sized colony of common bat species or a pallid bat colony of any size, no further surveys are required. If the qualified biologist determines that any buildings or trees provide suitable habitat, then further surveys under Mitigation Measure BIO-3b and BIO-3c are required.

The site visit for this survey may be combined with the daytime component of the maternity season survey described under Mitigation Measure BIO-3b, below, if it is performed during the maternity season (generally March 15 – August 31).

- **Mitigation Measure BIO-3b. Maternity Season Survey.** A qualified bat biologist shall conduct a focused survey for roosting bats within all buildings and trees in the study area that are slated for removal, and within which suitable habitat was identified during the initial habitat survey described in Mitigation Measure BIO-3a above, during the maternity season (generally March 15 – August 31) and prior to the start of project construction to determine presence or absence of a maternity colony, the species present, and an estimate of the colony size, if present. If close inspection of potential roost features during the daytime is infeasible, the focused survey shall consist of a dusk emergence survey when bats can be observed flying out of the roost. The purpose of this survey is to determine whether replacement roost habitat needs to be provided, as described under Mitigation Measure BIO-3f below.

  This survey may be combined with the initial habitat survey described under Mitigation Measure BIO-3a above and/or the pre-activity survey described under Mitigation Measure BIO-3c below, if desired. However, due to the potential for the presence of a maternity colony to result in a project delay (i.e., maintaining a non-disturbance buffer around the roost), if work will be initiated during the maternity season, it is recommended that this survey be conducted in a year prior to the year in which project construction will occur.

  If a maternity colony is detected in a year prior to the year in which project construction will occur, the exclusion measures described in Mitigation Measure BIO-3d below will be implemented prior to March 15 of the year in which construction occurs to ensure that bats are excluded from the roost prior to the start of construction. In addition, Mitigation Measure BIO-3f will be implemented.

- **Mitigation Measure BIO-3c. Pre-Activity Survey.** A pre-activity survey shall be conducted for roosting bats within all buildings and trees in the study area that are slated for removal, and within which suitable habitat was identified during the initial habitat survey and the maternity roosting survey described in Mitigation Measure BIO-3a. The survey will be conducted by a qualified bat biologist within seven days prior to the start of building demolition or tree removal for the purpose of impact avoidance. If building demolition and/or tree removal will occur in phases, a pre-activity survey will be conducted within 7 days prior to the demolition of each building and/or removal of each tree in which suitable roost habitat is present. If close inspection of potential roost features during the daytime is infeasible, the focused survey shall include a dusk emergence survey when bats can be observed flying out of the roost.

  If a moderate-sized maternity colony of common bat species (i.e., at least 10 big brown bats, 20 Yuma myotis, or 100 individuals of other non-special-status species), or a pallid bat colony of any size or kind (i.e., a maternity or non-maternity colony), is not detected during the survey, no additional measures are required.

If a moderate-sized maternity colony of common bat species (i.e., at least 10 big brown bats or at least 20 individuals of other non-special-status species), or a pallid bat colony of any size or kind (i.e., a maternity or non-maternity colony), is present, the qualified bat biologist will identify an appropriate disturbance-free buffer zone to be maintained until either the end of the maternity season or a qualified biologist has determined that all young are volant (i.e., capable of flight) to avoid the loss of dependent young. The exclusion measures described in Mitigation Measure BIO-3d below will be implemented after dependent young are no longer present and prior to the removal of any portion of the tree or building where the roost is located. In addition, the compensatory measures described under Mitigation Measure BIO-3f will be implemented.

If a non-maternity colony of pallid bats of any size is present, the compensatory measures described under Mitigation Measure BIO-3f will be implemented.

- **Mitigation Measure BIO-3d. Bat Exclusion.** If bats are present in a building or tree to be removed or disturbed, the individuals shall be safely evicted outside the bat maternity season (approximately March 15 – August 31) and the winter torpor period (approximately October 15 – February 28, depending on weather). Bats may be evicted through exclusion, as directed by a qualified biologist, after notifying the CDFW. The qualified biologist must be present for removal of trees or structures occupied by bats.

  For eviction from roost trees, trimming or removal of trees shall follow a two-step removal process whereby limbs and branches not containing roost habitat are removed on day 1 to disturb the roost, and then the entire tree is removed on day 2.

  Disturbance of or removal of structures containing or suspected to contain active (non-maternity or hibernation) or potentially active common bat roosts shall be done in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost. Removal will be completed the subsequent day. Alternatively, exclusion methods may include the installation of one-way doors and/or use of ultrasonic deterrence devices. One-way doors and/or deterrence devices should be left in place for a minimum of two weeks with a minimum of five fair-weather nights with no rainfall and temperatures no colder than 50°F.

- **Mitigation Measure BIO-3f. Compensatory Mitigation.** If a maternity colony of common bat species containing at least 10 big brown bats, 20 Yuma myotis, or 100 individuals of other non-special-status bat species, or a pallid bat day roost of any type (maternity or non-maternity) or size, is determined to be present in the study area, replacement roost habitat that is appropriate to the species shall be provided, as determined by a qualified bat biologist. The nature of the replacement roost habitat (e.g., the design of an artificial roost structure) will be determined by a qualified bat biologist based on the number and species of bats detected. Ideally, the roost structure should be installed in the study area. If replacement habitat cannot be placed in the study area, it should be installed no more 100 feet from the site (or as close to the site as feasible). Exact placement of replacement habitat shall be determined in consultation with a qualified bat biologist.

6.1.8 Impacts due to Bird Collisions (Less than Significant with Mitigation)

Under existing conditions, the study area consists of a mix of undeveloped areas dominated by grasslands, riparian and oak woodlands, scrub habitats, and developed areas with buildings. Terrestrial land uses and habitat conditions immediately surrounding the study area consist of low-density rural residential and small-scale agricultural development along the Crow Canyon Road corridor to the east, and the undeveloped woodlands, grasslands, and scrub habitats of the East Bay Hills to the north, south, and west. Riparian habitats associate with Crow Creek and Norris Creek lie to the east and northwest of the site, respectively. This diverse mix of native vegetation supports relatively high densities and diversity of native bird species, and these birds will use the native habitats on and surrounding the study area for nesting, roosting, and foraging. They will also use vegetation and structures within the developed portions of the study area opportunistically, due to the site's close proximity to these high-quality native habitats.

The extent and composition of future landscape vegetation to be installed under the project is unknown. Preliminary development plans indicate that 10 existing trees will be removed from within or adjacent to currently developed areas of the project footprint; for the purposes of this assessment, we assume that these trees will not be replaced. However, these trees to be removed represent a tiny fraction of the overall number of trees on and immediately surrounding the study area, and the removal of a relatively small number of trees from the developed areas of the study area is not expected substantially change bird use of the site. We also assume that landbirds that will occur in the study area and in the vicinity after project development will be attracted to any trees and landscaped areas that are planted, and some will make use of the new structures in the study area. As a result, no substantive changes in the number of songbirds inhabiting the study area are expected to result from the proposed project.

It is well documented that glass windows and building façades can result in injury or mortality of birds due to birds' collisions with these surfaces (Klem et al. 2009, Sheppard and Phillips 2015). Because birds do not perceive glass as an obstruction the way humans do, they may collide with glass when the sky or vegetation is reflected in glass (e.g., they see the glass as sky or vegetated areas); when transparent windows allow birds to perceive an unobstructed flight route through the glass (such as at corners); and when the combination of transparent glass and interior vegetation (such as in planted atria) results in attempts by birds to fly through glass to reach that vegetation. The greatest risk of avian collisions with buildings occurs in the area within 40–60 feet of the ground, because this is the area in which most bird activity occurs (San Francisco Planning Department 2011, Sheppard and Phillips 2015). Very tall buildings (e.g., buildings 500 feet or more high) may also pose a threat to birds that are migrating through the area, particularly to nocturnal migrants that may not see the buildings or that may be attracted to lights on the buildings (San Francisco Planning Department 2011).

Birds are likely to collide with glazing on building façades in the study area for the following reasons:

- It is possible that the project may incorporate trees and other landscaping immediately adjacent to glazing on building façades, or that natural vegetation will be located adjacent to this glazing. Such vegetation is expected to attract birds. Once birds are using that vegetation, they may not perceive the adjacent glass as

a solid structure. The vegetation would reflect in the glass of the building's façades, potentially causing birds to attempt to fly in to the reflected "vegetation" and strike the glass. As a result, some birds that are attracted to the natural or ornamental landscape vegetation that is adjacent to the glass façades are expected to collide with the glass.

- Night lighting associated with new buildings has some potential to disorient birds, especially during inclement weather when night migrating birds descend to lower altitudes. As a result, some birds moving through the study area at night may be disoriented by night lighting and potentially collide with buildings.

The extent to which the proposed new buildings and other structures will incorporate glazing on their façades is unknown, as these structures have not yet been designed. Nevertheless, buildings are estimated to result in the mortality of an estimated 365 to 988 million birds per year, or 2–9% of all North American birds, with low-rise buildings such as those proposed for the study area accounting for the mortality of an estimated 62–664 million birds (median 246 million) each year (Loss et al. 2014). Most birds that are vulnerable to collisions with low-rise buildings are migrants that move through during the spring and fall (Loss et al. 2014). However, certain groups of birds are also more vulnerable to collisions, including hummingbirds, swifts, waxwings, warblers, nuthatches, tits, and creepers (Loss et al. 2014), all of which are likely to occur in the riparian and oak woodlands, grasslands, and scrub habitats on and adjacent to the study area either as migrants or year-round residents. As a result, construction of the project can potentially result in the mortality of large numbers of birds relative to the size of regional populations, and enough individuals of common and/or special-status bird species could potentially strike the buildings over the long term to result in a significant impact according to CEQA. Mitigation Measure BIO-4 below would incorporate bird-safe design elements into the project design and reduce this impact to a less-than-significant level.

Mitigation Measure BIO-4. Implement Bird-Safe Building Design. Due to the potential for glazed façade areas on the proposed buildings to result in high numbers of bird collisions, the project shall implement the following bird-safe building design considerations for these facades:

- Reduce the extent of glass on these building facades, to the extent feasible.
- Reduce or eliminate the visibility of landscape vegetation behind glass.
- No more than 10% of the surface area of the combined façades for any single building shall consist of untreated glazing between the ground and 60 feet above ground. Bird-safe glazing treatments may include fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or ultraviolet patterns visible to birds. Vertical elements of the window patterns should be at least 0.25 inches wide at a maximum spacing of four inches or have horizontal elements at least 0.125 inches wide at a maximum spacing of two inches.
- Avoid free-standing clear glass walls, skywalks, transparent building corners, glass enclosures (e.g., greenhouses) on rooftops, and free-standing clear glass railings where feasible. If any such features are included in the project design, all glazing used in any such features shall be 100% treated with a bird-safe glazing treatment. These features shall be treated to a height of 60 feet above grade. Features located more

than 60 feet above grade are not required to be treated. For transparent glass corners, the required treatment area extends horizontally from a building corner as far the corner as it is possible to see through the corner to the other side of the building.

- Landscaping, including planted vegetation and water features, shall be designed to minimize the potential for collisions adjacent to glazed building facades. For example, vegetation providing particularly valuable resources to birds (such as fruits) shall be planted away from glass facades, and vegetation in general shall be planted in such a way that it is not clearly reflected in windows. Water features shall be located away from building exteriors to reduce the attraction of birds toward glazed facades.

Potential impacts due to increased nighttime lighting, which may also contribute to bird collisions with buildings, are addressed in Section 6.1.9, below.

6.1.9 Impacts due to Increased Lighting (Less than Significant with Mitigation)

The project will result in the construction of buildings and other features (e.g., driveways, roads, and sidewalks) that will increase the amount of lighting on and around the study area. Lighting from the project would be the result of light fixtures illuminating buildings, building architectural lighting, driveway/road lighting, and pedestrian lighting. Depending on the location, direction, and intensity of exterior lighting, this lighting can potentially spill into the surrounding natural areas, thereby resulting in an increase in lighting compared to existing conditions.

Many animals are sensitive to light cues, which influence their physiology and shape their behaviors, particularly during the breeding season (Ringer 1972, de Molenaar et al. 2006). Artificial light has been used as a means of manipulating breeding behavior and productivity in captive birds for decades (de Molenaar et al. 2006), and has been shown to influence the territorial singing behavior of wild birds (Longcore and Rich 2004, Miller 2006, de Molenaar et al. 2006). While it is difficult to extrapolate results of experiments on captive birds to wild populations, it is known that photoperiod (the relative amount of light and dark in a 24-hour period) is an essential cue triggering physiological processes as diverse as growth, metabolism, development, breeding behavior, and molting (de Molenaar et al. 2006). This holds true for birds, mammals (Beier 2006), and other taxa as well, suggesting that increases in ambient light may interfere with these processes across a wide range of species, resulting in impacts on wildlife populations.

Artificial lighting may indirectly impact mammals and birds by increasing the nocturnal activity of predators like owls, hawks, and mammalian predators (Negro et al. 2000, Longcore and Rich 2004, DeCandido and Allen 2006, Beier 2006). The presence of artificial light may also influence habitat use by rodents (Beier 2006) and by breeding birds (Rogers et al. 2006, de Molenaar et al. 2006), by causing avoidance of well-lit areas, resulting in a net loss of habitat availability and quality.

Wildlife species inhabiting the study area are already habituated to the existing artificial illuminance from the existing low-intensity development in the study area and along Crow Canyon Road. However, due to the ecological importance of these habitats and the wildlife communities they support, substantial increases in

illuminance of these natural areas could result in a potentially significant impact under CEQA by disrupting the natural behaviors of the species using these habitats. Although there is agreement throughout the literature that increases in illuminance can affect wildlife behavior, as described above, there is no quantitative level of illuminance increase (above ambient light) that is agreed upon as a threshold for significant impacts to animals. In our professional opinion, implementation of Mitigation Measure 4 below would reduce this impact to a less-than-significant level under CEQA.

Mitigation Measure BIO-5. Minimize Project Lighting. Due to the potential for lighting in the study area to affect wildlife species that occur in the study area and in adjacent natural areas, the project will implement the following measures to minimize lighting in the study area.

- All exterior lighting shall be fully shielded to block illumination from shining outward from the study area.
- To the maximum extent feasible, up-lighting (i.e., lighting that projects upward above the fixture) shall be avoided in the project design. All lighting shall be fully shielded to block illumination from shining upward above the fixture.

  If up-lighting cannot be avoided in the project design, up-lights shall be shielded and/or directed such that no luminance projects above/beyond objects at which they are directed (e.g., trees and buildings) and such that the light would not shine directly into the eyes of a bird flying above the object. If the objects themselves can be used to shield the lights from the sky beyond, no substantial adverse effects on migrating birds are anticipated. Buddha statues located in woodland, grassland, or scrub habitats will not be illuminated at night.
- Fixtures shall comply with lighting zone LZ-1, *Low Ambient*, as recommended by the International Dark-Sky Association (2011) for rural and low-density residential areas. The allowed total initial luminaire lumens for the study area is 1.25 lumens per square foot of hardscape, and the BUG rating for individual fixtures shall not exceed B2 or G1, as follows:
  - B2: 1,000 lumens high (60–80 degrees), 2,500 lumens mid (30–60 degrees), 1,000 lumens low (0–30 degrees)
  - G1 (asymmetrical fixtures): 100 lumens forward very high (80–90 degrees), 100 lumens backlight very high (80–90 degrees), 1,800 lumens forward high (60–80 degrees), and 500 lumens backlight high (60–80 degrees) for asymmetrical fixtures or 1,800 lumens backlight high for quadrilateral symmetrical fixtures.

  In addition, the maximum allowed luminaire lumens (initial lamp lumens for a lamp, multiplied by the number of lamps in the luminaire) for unshielded luminaires at one entry per building is 420 lumens, and for additional unshielded luminaires in the study area is 315 lumens. The maximum allowed luminaire lumens for fully shielded luminaires is 1,260 lumens. Landscape lighting and shielded directional flood lighting shall be avoided.

- Exterior lighting shall be minimized (i.e., total outdoor lighting lumens shall be reduced by at least 30% or extinguished, consistent with recommendations from the International Dark-Sky Association [2011]) from 10:00 p.m. until sunrise, except as needed for safety and City code compliance.

6.2 Impacts on Sensitive Communities: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS (Less than Significant with Mitigation, or Significant and Unavoidable)

6.2.1 Impacts on Riparian Habitat, Oak Woodland Habitat, or Other Sensitive Natural Communities (Less than Significant with Mitigation)

The CDFW defines sensitive natural communities and vegetation alliances using NatureServe's standard heritage program methodology (CDFW 2023), as described above in Section 5.3. Aquatic, wetland, and riparian habitats are also protected under applicable federal, state, or local regulations, and are generally subject to regulation, protection, or consideration by the USACE, RWQCB, CDFW, and/or the USFWS (see Section 6.4 below). Project impacts on sensitive natural communities, vegetation alliances/associations, or any such community identified in local or regional plans, policies, and regulations, were considered and evaluated.

The project will result in permanent and/or temporary impacts to slightly less than 0.01 acre of riparian habitat associated with the on-site ephemeral stream (Figure 3). Riparian habitats contribute disproportionately high habitat values for and ecological functions relative to their extent, and the permanent conversion or loss of even small amounts of this habitat type would be considered significant under CEQA. Further, impacts to riparian habitats, which fall under the jurisdiction of the CDFW will require an LSAA from CDFW. Further, some of these riparian trees are rooted below top of bank, and thus regulated by the RWQCB. Therefore, they will be subject to Waste Discharge Requirements from the RWQCB. Implementation of Mitigation Measures BIO-6 and BIO-7, below, would reduce any potential impacts to riparian habitats to less-than significant levels under CEQA and mitigate for impacts to CDFW and RWQCB jurisdiction.

Mitigation Measure BIO-6. Avoid Direct Impacts to Riparian Habitat. Given that the impact limits barely overlap with riparian habitat, the applicant should avoid such impacts if feasible. Avoidance would include avoiding any vegetation removal, grading, placement of fill or structures, or other development-related activity beneath the dripline of the riparian canopy (i.e., within the limits of riparian habitat indicated on Figure 3 of this report).

Mitigation Measure BIO-7. Compensate for Direct Impacts to Riparian Habitat. If direct impacts will occur to riparian habitat, the applicant shall prepare and implement a Riparian Mitigation & Monitoring Plan (Riparian and Aquatic MMP) for riparian habitat creation as a means of compensatory mitigation, and restoration of temporary impact areas as a means of impact minimization. An open space or conservation easement, or other similar instrument, shall be recorded on property associated with the mitigation lands to protect the created habitat's plant and wildlife resources in perpetuity. Permanent direct impacts will be

mitigated at a 2.5:1 ratio (mitigation area to impact area) of high quality, native riparian habitat based on affected canopy if implemented onsite or on either creek within 0.25 miles of the properties, and 3:1 if mitigated off-site at a location farther away from the impacts. Temporary impacts will be restored in place at a 1:1 ratio, with vegetated areas being revegetated with a native seed mix. The restoration of temporary impacts to vegetation is to be implemented before the end of the wet season following completion of construction. The Riparian MMP shall be prepared by a qualified restoration ecologist and will provide, at a minimum, the following items:

- Habitat impacts summary and proposed habitat mitigation actions.
- Goals of the restoration to achieve no net loss.
- The location of the mitigation sites and existing site conditions.
- Mitigation design including:
    - Proposed site construction schedule.
    - Description of existing and proposed soils, hydrology, geomorphology and geotechnical stability.
    - Site preparation and grading plan.
    - Invasive species eradication plan.
    - Soil amendments and other site preparation.
    - Planting plan (plant procurement/propagation/installation).
    - Maintenance plan.
- Monitoring measures, performance and success criteria, including a requirement for no more than 5% invasive plant species in year 5.
- Monitoring methods, duration, and schedule.
- Contingency measures and remedial actions.
- Reporting measures.
- The mitigation shall be deemed complete when the final success criteria have been met as determined by the qualified restoration ecologist and the County of Alameda or applicable regulatory/resource agencies.

The HMMP will be reviewed and approved by the County prior to impacts on riparian habitat.

There is also potential for indirect effects to occur within riparian areas on and adjacent to the study area if runoff from the project increases in intensity or frequency due to the proposed project. However, required construction period BMPs and post-construction stormwater requirements will apply to the proposed project as discussed above in Section 6.1.4, and these requirements would reduce these impacts to a less-than-significant level.

6.2.2 Impacts due to the Spread of Nonnative and Invasive Species (Less than Significant with Mitigation)

A number of nonnative, invasive plant species were observed in the study area, including the following species that are considered by California Invasive Plant Council (Cal-IPC) to have a "moderate" invasive rating and therefore can cause substantial ecological impacts on physical processes, plant and animal communities, and

vegetation structure: wild oats, black mustard, Italian thistle, tocalote, poison hemlock, blue gum, rattail sixweeks grass, Italian rye grass, fennel, wall barley, crimson fountain grass, Harding grass, rose clover and Mexican fan palm. In addition, one species with a "high" Cal-IPC rating, freeway iceplant, was also observed in large patches study area. Invasive species can spread quickly and can be difficult to eradicate, as they produce seeds that germinate readily following disturbance. Further, disturbed areas are highly susceptible to colonization by nonnative, invasive species that occur locally, or whose propagules are transported by personnel, vehicles, and other equipment.

While project activities within the already-developed portions of the project footprint are not expected to contribute to the spread of invasive weeds (i.e. they are already present in abundance), project activities, such as the construction of Buddha statues in currently undeveloped coyote brush scrub habitats, have the potential to introduce invasive weeds into natural habitats where they are not currently present. Because the scrub habitats in the study area provide suitable habitat for special-status animals, the introduction of invasive weeds into these habitats would be considered a significant impact under CEQA. Implementation of Mitigation Measure BIO-8 will reduce these impacts to less-than-significant levels.

Mitigation Measure BIO-8. Implement Invasive Weed BMPs. The invasion and/or spread of noxious weeds will be avoided by the use of the following invasive weed BMPs:

- During project construction, all seeds and straw materials used on-site will be weed-free rice straw (or similar material acceptable to the County), and all gravel and fill material will be certified weed-free to the satisfaction of the County.
- During project construction, all construction equipment (e.g., haul vehicles, excavators, and other heavy equipment) will be washed (including wheels, undercarriages, and bumpers) before and after entering the study area. Vehicles will be cleaned at existing construction yards or legally operating car washes.
- Following construction of the project, a standard erosion control seed mix (acceptable to the County) from a local source and consisting of native species appropriate to the disturbed habitat 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 **Impacts on Wildlife Movement**: 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 (Less than Significant)

For many species, the landscape is a mosaic of suitable and unsuitable habitat types. Environmental corridors are segments of land that provide a link between these different habitats 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).

As described in Section 4.3, small-scale, local movement of wildlife occurs throughout the study area, but we do not expect larger, more mobile animals to heavily utilize the study area during regionally important, landscape-level dispersal movements. Proposed project development will be concentrated around already-developed portions of the study area, with construction of new buildings and infrastructure, such as leach fields and parking lots, confined to these areas. While several old buildings and associated paved surfaces will be demolished, a similar number of new structures and surfaces will replace them within the existing developed footprint in the study area. The only new structures proposed for portions of the project footprint without existing structures are three Buddha statues/monuments, which will be placed on the undeveloped hillsides to the north and east of the existing structures in the study area. These statues will not, however, be large enough to pose substantial constraints to wildlife that move through the area. Further, while a small number of weekend visitors are expected to visit these Buddha statues during the first 6 months after construction, wildlife that regularly utilize the study area are already accustomed to periodic human disturbance, and this small increase in human presence in the undeveloped portions of the study area is not expected to substantially alter existing movement patterns. Thus, while localized wildlife movements in the study area may be temporarily disrupted during project construction, animals that currently move through the study area will continue to be able to do so in a similar manner after project construction. Therefore, the project would not 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, and this impact is determined to be less than significant.

6.4 Impacts due to Conflicts with Local Policies: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant with Mitigation)

6.4.1 Impacts Due to the Removal of Ordinance-Sized Trees (Less than Significant)

The project does not propose to remove any trees within the Alameda County right-of-way. If construction activities have the potential to impact any trees within the Alameda County right-of-way, the project will comply with Alameda County Ordinance No: O-2016-66, Chapter 12.11.110 (Protection of Trees) and 12.11.120 (Tree Planting, Maintenance, and Removal Responsibilities And Requirements), which will reduce any impacts due to conflicts with the County tree ordinance to less-than-significant levels.

6.4.2 Impacts Due to Conflicts with Alameda County Watercourse Protection (No Impact)

As discussed in Section 3.2.2, above, the unnamed ephemeral stream in the eastern portion of the study area does not meet the Alameda County definition of a "watercourse." While Crow Creek, to the west of the study area, and Norris Creek, to the northwest, are watercourses as defined by Alameda County, no project impacts

will occur within the required 20-foot setback from these watercourses. Therefore, no impacts due to conflicts with the Alameda County Watercourse Protection ordinance will occur.

6.5 Impacts due to Conflicts with an Adopted Habitat Conservation Plan: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan (No Impact)

The study area is not located within an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any such plans.

6.6 Cumulative Impacts (Less than Significant with Mitigation)

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. Future development activities in the project vicinity will result in impacts on the same habitat types and species that will be affected by the proposed project. The proposed project, in combination with other projects in the area and other activities that impact the species that are affected under the 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.

The cumulative impact on biological resources resulting from the project in combination with other projects in the larger region would be dependent on the relative magnitude of adverse effects of these projects on biological resources compared to the relative benefit of impact avoidance and minimization efforts prescribed by planning documents, CEQA mitigation measures, and permit requirements for each project; and compensatory mitigation and proactive conservation measures associated with each project. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts on biological resources would occur.

However, many projects in the region that impact resources similar to those impacted by the project will be subject to CEQA requirements. It is expected that such projects will mitigate their impacts on sensitive habitats and special-status species through the incorporation of mitigation measures and compliance with permit conditions.

Regardless of the magnitude and significance of cumulative impacts that result from other projects, the Fa Yun Chan Temple Project is not expected to have a substantial effect on biological resources, and would implement the mitigation measure described above to reduce impacts under CEQA to less-than-significant levels. Thus, provided that this project successfully incorporates the mitigation measure described in this biological resources report, the project will not have a cumulatively considerable contribution to cumulative effects on biological resources.

Section 7. Compliance with Additional Laws and Regulations for Nesting Birds

Several species of common native birds protected by the MBTA and California Fish and Game Code may nest in the grassland, scrub, woodland, and developed habitats in the study area or immediately adjacent to the site. It is also possible that protected native birds could nest on the buildings in the study area. The removal of vegetation or demolition of buildings supporting active nests may cause the direct loss of eggs or young, while construction-related activities located near an active nest may cause adults to abandon their eggs or young. This type of impact would not be significant under CEQA, in our opinion, because of the local and regional abundances of the species that could potentially nest in the study area and the very low magnitude of the potential impact of development on these species (i.e., the project is expected to impact only a few pairs of these species, which is not a substantial impact on their regional populations). However, the following measures should be implemented to ensure that project activities do not violate the MBTA and California Fish and Game Code:

Measure 1. Avoidance of the Nesting Season. To the extent feasible, the initiation of commencement of demolition and construction activities should be scheduled to avoid the nesting season. If demolition and construction activities are initiated outside the nesting season, all potential demolition/construction impacts on nesting birds protected under the MBTA and California Fish and Game Code will be avoided. The nesting season for most birds in Alameda County extends from February 1 through August 31.

Measure 2. Pre-Activity/Pre-Disturbance Surveys. If it is not possible to schedule the initiation of demolition and construction activities between September 1 and January 31, then pre-activity surveys for nesting birds should be conducted by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. We recommend that these surveys be conducted no more than seven days prior to the initiation of demolition or construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., trees, shrubs, and buildings) in and immediately adjacent to the impact areas for nests.

Measure 3. Non-Disturbance Buffers. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist 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 species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation.

Measure 4. Nesting Deterrence. If construction activities will not be initiated until after the start of the nesting season, all potential nesting substrates (e.g., bushes, trees, grasses, and other vegetation) that are scheduled to be removed by the project may be removed prior to the start of the nesting season (e.g., prior to

February 1). This will preclude the initiation of nests in this vegetation and minimize the potential delay of the project due to the presence of active nests in these substrates.

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Appendix A. Plants Observed

Family	Scientific Name	Common Name	Cal-IPC Rank[1]
Dryopteridaceae	*Dryopteris arguta*	sharp-tooted wood fern	
Cupressaceae	*Sequoia sempervirens*	coast redwood	
Pinaceae	*Cedrus deodara**	deodar cedar	
Lauraceae	*Umbellularia californica*	California bay	
Aizoaceae	*Carpobrotus edulis**	freeway iceplant	High
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	
Apiaceae	*Conium maculatum**	poison hemlock	Moderate
	*Foeniculum vulgare**	fennel	Moderate
	Sanicula crassicaulis	thick-stemmed sanicula	
Apocynaceae	*Nerium oleander**	common oleander	
Asteraceae	*Achillea millefolium*	thousand-leaved yarrow	
	Agoseris sp.	agoseris	
	Artemesia californica	California sagebrush	
	Baccharis ppilularis ss. consanguinea	coyote brush	
	Carduus pycnocephalus ssp. *pycnocephalus**	Italian thistle	Moderate
	*Centaurea melitensis**	tocalote	Moderate
	*Crepis setosa**	bristly hawksbeard	
	*Lactuca serriola**	prickly lettuce	
	*Logfia gallica**	daggerleaf cottonrose	
	Pseudognaphalium californicum	California everlasting	
	*Silybum marianum**	milk thistle	Limited
	Sonchus asper ssp. *asper**	prickly sow thistle	
Boraginaceae	*Amsinckia intermedia*	common fiddleneck	
Brassicaceae	*Brassica nigra**	black mustard	Moderate
Cucurbitaceae	*Marah fabacean*	California man-root	
Fabaceae	*Lupinus bicolor*	miniature lupine	
	*Trifolium hirtum**	rose clover	Moderate
	*Vicia sativa**	garden vetch	
	*Vicia villosa**	hairy vetch	
Fagaceae	*Quercus agrifolia*	coast live oak	
Geraniaceae	*Erodium moschatum**	greenstem filaree	
Lamiaceae	*Stachys bullata*	puckered hedge-nettle	

Montiaceae	*Claytonia parviflora*	small-flowered claytonia	
Myrsinaceae	*Lysimachia arvensis**	scarlet pimpernel	
Myrtaceae	*Eycalyptus globulus**	blue gum	Moderate
Onagraceae	*Ephilobium brachycarpum*	short-fruited willowherb	
Papaveraceae	*Eschscholzia californica*	california poppy	
	*Fumaria capreolata**	white ramping fumitory	
Phrymaceae	*Diplacus aurantiacus*	orange bush monkeflower	
Polygonaceae	*Eriogonum sp.*	wild buckwheat	
	*Rumex crispus**	curly dock	Limited
Rosaceae	*Prunus sp.*	peach	
Sapindaceae	*Aexculus californica*	California buckeye	
Urticaceae	*Urtica dioica*	dioecious stinging nettle	
Arecaceae	*Phoenix canariensis**	Canary Island palm	Limited
	*Washingtonia robusta**	Mexican fan palm	Moderate
Asparagaceae	*Yucca elephantipes**	spineless yucca	
Iridadeae	*Sisyrinchium bellum*	blue-eyed grass	
Poaceae	*Avena fatua**	wild oat	Moderate
	*Festuca myuros**	rattail sixweeks grass	Moderate
	*Festuca perennis**	italian rye grass	Moderate
	*Hordeum murinum**	wall barley	Moderate
	*Pennisetum setaceum**	crimson fountain grass	Moderate
	*Phalaris aquatica**	Harding grass	Moderate
	*Stipa miliacea var. miliacea**	smilo grass	Limited

[1]Cal-IPC Ranks (Cal-IPC 2022):

- Watch List – These species are predicted to become invasive if no further actions are taken. Distribution may range from limited to widespread in specific regions.
- Limited – These species are invasive, but their ecological impacts are minor on a statewide level. They have low to moderate rates of colonization. Although their distribution is generally limited, these species may be locally persistent and problematic.
- Moderate – These species have substantial and apparent—but generally not severe—ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal. Distribution may range from limited to widespread.
- High – These species have severe ecological impacts on the surrounding habitat. They have moderate to high rates of dispersal and establishment, and most are widely distributed.

Appendix B. Special-Status Plants Considered but Rejected for Occurrence

Common Name	Scientific Name	Suitable Habitat Absent	Edaphic Conditions Absent	Outside the Elevation Range	Outside of Known Geographic Range/No Nearby Extant Records
adobe sanicle	*Sanicula maritima*		x		
alkali milk-vetch	*Astragalus tener var. tener*			x	
bay buckwheat	*Eriogonum umbellatum var. bahiiforme*	x	x		
bent-flowered fiddleneck	*Amsinckia lunaris*				
big-scale balsamroot	*Balsamorhiza macrolepis*		x		
Brewer's western flax	*Hesperolinon breweri*		x		
bristly leptosiphon	*Leptosiphon aureus*				
California androsace	*Androsace elongata ssp. acuta*				x
California seablite	*Suaeda californica*	x		x	
chaparral harebell	*Ravenella exigua*	x			
chaparral ragwort	*Senecio aphanactis*				x
coastal triquetrella	*Triquetrella californica*	x			
Congdon's tarplant	*Centromadia parryi ssp. congdonii*		x		
Contra Costa goldfields	*Lasthenia conjugens*		x		
Contra Costa manzanita	*Arctostaphylos manzanita ssp. laevigata*	x		x	
cut-leaved monkeyflower	*Erythranthe laciniata*		x		
dark-eyed gilia	*Gilia millefoliata*	x		x	
Diablo helianthella	*Helianthella castanea*				
fragrant fritillary	*Fritillaria liliacea*		x		
hairless popcornflower	*Plagiobothrys glaber*	x			
Hall's bush-mallow	*Malacothamnus hallii*		x		
Hoover's button-celery	*Eryngium aristulatum var. hooveri*	x		x	
Hospital Canyon larkspur	*Delphinium californicum ssp. interius*				x
Jepson's coyote-thistle	*Eryngium jepsonii*	x	x		
Jepson's woolly sunflower	*Eriophyllum jepsonii*		x		

Common Name	Scientific Name	Suitable Habitat Absent	Edaphic Conditions Absent	Outside the Elevation Range	Outside of Known Geographic Range/No Nearby Extant Records
johnny-nip	*Castilleja ambigua var. ambigua*				x
Kellogg's horkelia	*Horkelia cuneata var. sericea*	x			
large-flowered leptosiphon	*Leptosiphon grandiflorus*				x
Lobb's aquatic buttercup	*Ranunculus lobbii*		x		
Loma Prieta hoita	*Hoita strobilina*		x		
long-styled sand-spurrey	*Spergularia macrotheca var. longistyla*	x	x		
Marin knotweed	*Polygonum marinense*	x		x	
Michael's rein orchid	*Piperia michaelii*				
minute pocket moss	*Fissidens pauperculus*	x			
most beautiful jewelflower	*Streptanthus albidus ssp. peramoenus*		x		
Mt. Diablo buckwheat	*Eriogonum truncatum*				x
Mt. Diablo fairy-lantern	*Calochortus pulchellus*				x
Mt. Diablo jewelflower	*Streptanthus hispidus*			x	
Mt. Diablo manzanita	*Arctostaphylos auriculata*	x			
Mt. Diablo phacelia	*Phacelia phacelioides*			x	
northern slender pondweed	*Stuckenia filiformis ssp. alpina*	x		x	
Oakland star-tulip	*Calochortus umbellatus*		x		
Oregon meconella	*Meconella oregana*	x		x	
Oregon polemonium	*Polemonium carneum*	x			
oval-leaved viburnum	*Viburnum ellipticum*			x	
pallid manzanita	*Arctostaphylos pallida*		x		
phlox-leaf serpentine bedstraw	*Galium andrewsii ssp. gatense*		x		
Point Reyes salty bird's-beak	*Chloropyron maritimum ssp. palustre*	x		x	
Presidio clarkia	*Clarkia franciscana*	x			
robust spineflower	*Chorizanthe robusta var. robusta*	x			
saline clover	*Trifolium hydrophilum*	x			
San Francisco popcornflower	*Plagiobothrys diffusus*	x			
San Joaquin spearscale	*Extriplex joaquinana*		x		

Common Name	Scientific Name	Suitable Habitat Absent	Edaphic Conditions Absent	Outside the Elevation Range	Outside of Known Geographic Range/No Nearby Extant Records
Santa Clara red ribbons	*Clarkia concinna ssp. automixa*				
Santa Cruz tarplant	*Holocarpha macradenia*				x
serpentine leptosiphon	*Leptosiphon ambiguus*		x		
Southern California black walnut	*Juglans californica*		x		
stinkbells	*Fritillaria agrestis*		x		
Tehama navarretia	*Navarretia heterandra*	x			
Tiburon buckwheat	*Eriogonum luteolum var. caninum*		x		
western leatherwood	*Dirca occidentalis*		x		
woodland woollythreads	*Monolopia gracilens*		x		