



H. T. HARVEY & ASSOCIATES

Ecological Consultants



**Hummingbird Energy Storage Project
Biological Resources Report**

Project #4284-01

Prepared for:

Amie Ashton
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San José, CA 95126

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
CNDDDB	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
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
PG&E	Pacific Gas & Electric
Porter-Cologne	Porter-Cologne Water Quality Control Act
ROW	right-of-way
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
VHP	Santa Clara Valley Habitat Plan

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List of Preparers

Steve Rottenborn, Ph.D., Principal/Senior Wildlife Ecologist

Kelly Hardwicke, Ph.D., Associate Plant/Wetland Ecologist

Robin Carle, M.S., Project Manager/Senior Wildlife Ecologist

Mark Bibbo, M.S., Senior Plant/Wetland Ecologist

Emily Malkauskas, B.S., Wildlife Ecologist

Section 1. Introduction

This report describes the biological resources present in the area of the proposed Hummingbird Energy Storage Project (project), as well as the potential biological impacts of the proposed project and measures necessary to reduce these impacts to less-than-significant levels under the California Environmental Quality Act (CEQA). This assessment is based on the project maps and description provided to H. T. Harvey & Associates by David J. Powers & Associates through November 2019.

1.1 Project Location

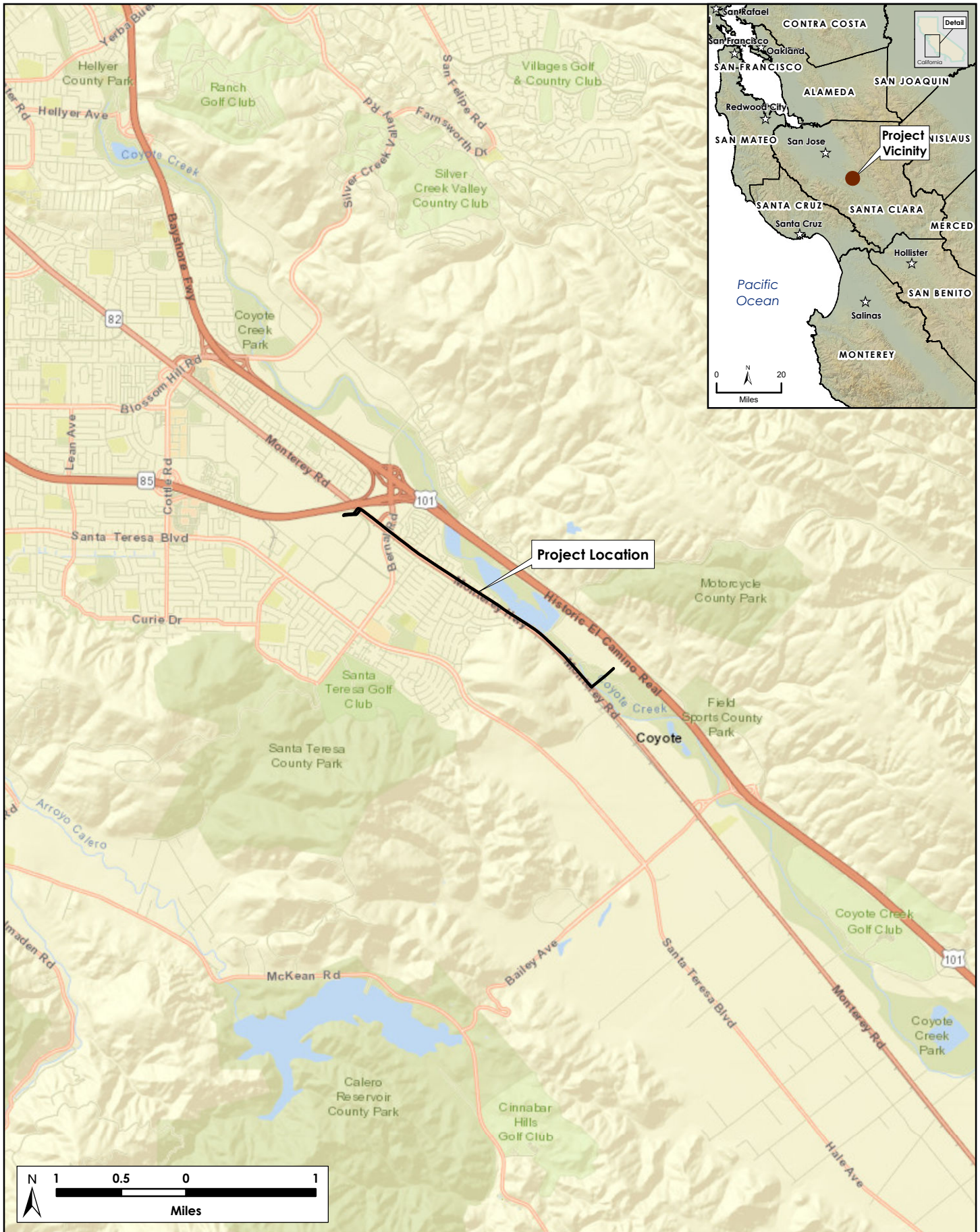
The proposed project is located in southern San José, California (Figure 1). The project has two main components: (1) an approximately 103,894 square-foot battery-based energy storage building and substation at 6321 San Ignacio Avenue (APN 706-09-094), and (2) an approximately 2.5-mile-long transmission line that would extend southeast from 6321 San Ignacio Avenue to the Pacific Gas & Electric (PG&E) Metcalf Transmission Substation at 150 Metcalf Road. For the purpose of this report, these components are referred to together as the *project alignment* (Figure 2). The transmission line would run underground along the east side of Monterey Road from the energy storage building to a point south of Metcalf Road and then cross Coyote Creek via overhead lines to connect to the Metcalf Power Plant substation. The project alignment is located on the *Santa Teresa Hills* and *Morgan Hill, California* 7.5-minute United States Geological Survey (USGS) quadrangles.

1.2 Project Description

The project involves the construction of a 75 mega-watt/300 mega-watt hour battery-based energy storage system. The project was awarded a long-term agreement with PG&E to address an electrical capacity deficiency in the South Bay-Moss Landing sub-capacity area (which includes the south portion of the City of San José) caused by the potential retirement of the Metcalf Substation.

Energy storage is an essential part of enabling the state's transition to a carbon-free electricity system. Intermittent resources, such as wind and solar, require the ability to store excess generated energy that would otherwise be wasted (curtailed). The renewable energy is stored and redistributed for later use when demand is high. The energy storage capacity created as part of the project would assist the City and State of California in meeting their carbon-free electricity goals.

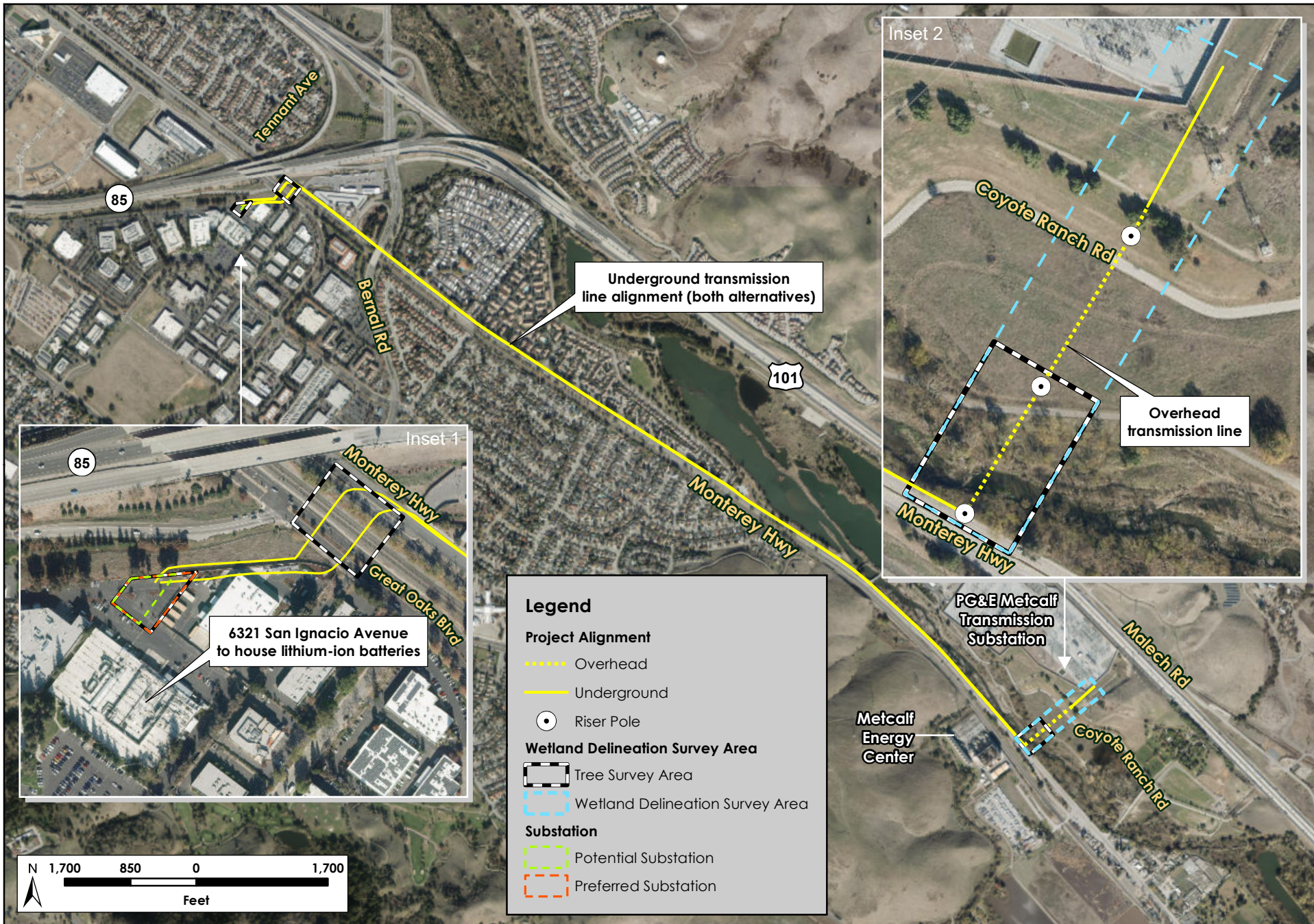
The project alignment is located within the Santa Clara Valley Habitat Plan (VHP) permit area, and the proposed project is a "covered project" under the VHP (ICF International 2012). As a result, the proposed project is required by the City of San José to pay VHP fees for land impacts in accordance with the types and acreage of habitat impacted (see Section 6.1), and to implement conservation measures specified by VHP conditions. Thus, all applicable VHP conditions (see Section 6.1) are considered part of the proposed project description.



N:\Projects\42004\284-01\Reports\Biological Resources\Fig 1 Vicinity Map.mxd miagarde



N:\Projects\42001\4284-01\Reports\Biological Resources\Fig 2 Project Alignment.mxd mlagarde



1.1.1 Battery Storage Facility and Substation

The proposed project would utilize an existing 103,894 square-foot, vacant industrial building at 6321 San Ignacio Avenue to house lithium-ion batteries that would store excess energy generated by the electrical grid during the day. The batteries would be assembled within racks and cabinets that are seismically anchored to the building foundation and constructed of non-flammable aluminum and steel. In addition to the batteries, inverters and medium-voltage transformers would be installed inside the existing building. Once fully operational, the energy storage facility would be able to store up to 75 mega-watt/300 mega-watt hour of electricity generated within the South Bay-Moss Landing area.

Metal-clad switchgear, a power transformer, and additional electrical equipment would be installed north of the energy storage facility building within an approximately 15,000-square-foot fenced substation located in the parking area to the west of the energy storage facility. This substation is needed to transform the electricity voltage for storage and use consistent with PG&E requirements. Substation electrical equipment would be housed in fire-rated enclosures and screened from view using slatted fencing. Substation electrical cabling would be installed underground.

1.1.2 Transmission Line

The energy storage facility and associated substation would connect to the Metcalf Substation via a 2.5-mile-long, underground transmission line within the Monterey Road public right-of-way (ROW). The underground transmission line would exit the energy storage building at the northeast corner and travel northeast through the northeast portion of the business park, under the existing BNSF railroad tracks, and under Monterey Road. It would then run along the east side of Monterey Road for approximately 2.3 miles. The transmission line would daylight and span Coyote Creek, connecting to the Metcalf Substation, approximately 780 feet south of the existing transmission line corridor. Three riser poles would be installed to span the creek corridor: one 10 feet from Monterey Road just below/within the top of the southwestern bank of Coyote Creek, where the transmission line would transition from underground to overhead; one 35 feet northeast of the Coyote Creek bike path; and one between the Metcalf Substation and Coyote Ranch Road where the transmission line would transition from overhead to underground (Figure 2).

1.1.3 Access, Circulation, and Parking

Access to the battery energy storage building would be provided via an existing driveway from San Ignacio Avenue. The existing research and development/manufacturing building currently has approximately 405 parking spaces. Construction of the substation and provision of additional emergency vehicle egress would result in the removal of 60 parking spaces; however, approximately 364 parking spaces would remain for the building at 6321 San Ignacio Avenue.

1.1.4 Staffing

The energy storage facility would be monitored remotely with maintenance staff visiting the facilities approximately four times per month. No permanent employees would occupy the building. Remote access to battery status, meters, schedules, and other data would be available to off-site personnel. In the event of an unforeseen emergency, including but not limited to a change in battery temperature, the monitoring system would immediately notify local operations and maintenance personnel in the vicinity. If necessary, a temporary shutdown of the facility would be automatically triggered until the issue is diagnosed and resolved.

1.1.5 Construction

1.1.5.1 Battery Storage Facility and Substation

Construction of the proposed project (including the battery storage facility, substation, and transmission line) would begin in early 2020 and would be completed in approximately nine months. The energy storage facility building would include tenant improvements within the existing building, as well as the installation of rooftop and exterior mechanical equipment. Construction of the substation would require grading and excavation to a depth of approximately 2 feet to allow installation of the transformers and related equipment.

1.1.5.2 Transmission Line

Construction of the majority of the underground transmission line would occur within the public ROW, except at the northern end (where the line would connect to the substation and battery storage facility at 6321 San Ignacio Avenue) and southern end (where it would connect to the PG&E Metcalf Substation). A 2-foot-wide by 6-foot-deep trench would be excavated to accommodate the transmission line. The trench would be located within the paved roadway ROW on the east side of Monterey Road. Construction of the trench would occur within a 20-foot-wide work area centered approximately at the eastern edge of the northbound travel lane on Monterey Road. Where the line would cross Coyote Creek to enter the Metcalf Substation, it would daylight and travel overhead between three new riser pole structures—spanning the creek to avoid impacting the bed, bank, or surrounding riparian corridor.

The project would avoid impacting existing trees to the extent feasible; however, limited tree removal would occur in the public ROW at the northern end of the transmission line alignment where the line crosses west under a median island as it travels to connect to the substation and battery storage facility at 6321 San Ignacio Avenue. Installation of the southern, approximately 0.9-mile portion of the transmission line could require minor amounts of vegetation removal to accommodate work areas on the east side of the roadway. This is needed due to the fact that this portion of Monterey Road does not have an improved roadway shoulder (i.e., curb, gutter, and sidewalk) to accommodate the needed work area. The riser pole closest to Monterey Road will not require any tree removal, but will involve temporary ground disturbance within the riparian corridor of Coyote Creek, minor tree trimming, and placement of a permanent structure with the riparian corridor of Coyote Creek (see discussion in Section 6).

Section 2. Methods

2.1 Background Review

Prior to conducting field work, H. T. Harvey & Associates ecologists reviewed the project description and maps provided by David J. Powers & Associates through August 2019; aerial images (Google Inc. 2019); a USGS topographic map; the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) (2019); the City of San José's General Plan *Envision San José 2040* (City of San José 2012); habitat and species information from the VHP (ICF International 2012); 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 project alignment.

In addition, for plants, we reviewed all species on current California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1A, 1B, 2A, and 2B lists occurring in the project region, which is defined as the *Santa Teresa Hills and Morgan Hill, California* USGS 7.5-minute quadrangles and surrounding ten quadrangles (*San José West, San José East, Lick Observatory, Isabel Valley, Mt. Sizer, Gilroy, Mt. Madonna, Loma Prieta, Laurel, and Los Gatos, California*). Quadrangle-level results are not maintained for CRPR 3 and 4 species, so we also conducted a search of the CNPS Inventory records for these species occurring in Santa Clara County (CNPS 2019). In addition, we queried the CNDDB (2019) for natural communities of special concern that occur along the project alignment, and we perused records of birds reported in nearby areas, such as at the Metcalf Pond/Parkway Lakes complex and the Coyote Ranch vicinity, on eBird (Cornell Lab of Ornithology 2019) and on the South-Bay-Birds List Serve (2019).

2.2 Site Visits

Reconnaissance-level field surveys of the project alignment were conducted by H. T. Harvey & Associates plant ecologists Mark Bibbo, M.S., and Jill Pastick, M.S., on July 19, 2019 and wildlife ecologist Emily Malkauskas, B.S., on July 23, 2019. The purpose of these surveys was to provide an impact assessment specific to the proposed construction of the battery storage facility, substation, and transmission line as described above. Specifically, surveys were conducted to (1) assess existing biotic habitats and plant and animal communities along the project alignment, (2) assess the project alignment 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. A field survey was conducted by H. T. Harvey & Associates senior wildlife ecologist Steve Rottenborn, Ph.D. on September 17, 2019 to assess potential impacts from construction of the overhead powerline and associated towers near the Metcalf Substation.

Because the proposed project is a "covered project" under the approved VHP (ICF International 2012), VHP mapping of land cover types was referenced, though it was field-verified and modified as necessary based upon site conditions observed during the field survey. In addition, because the reach of Coyote Creek adjacent to

and within the project alignment is mapped by the VHP as potentially suitable nesting habitat for the tricolored blackbird (*Agelaius tricolor*), E. Malkauskas conducted a habitat survey to determine whether any potential nesting substrate for tricolored blackbirds was present within 250 feet of the project alignment, per Condition 17 of the VHP. In addition, she conducted a focused survey for (1) suitable burrowing owl (*Athene cunicularia*) roosting and nesting habitat (i.e., burrows of California ground squirrels [*Otospermophilus beecheyi*]) within 250 feet of the project alignment, (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*).

During the July 19, 2019 site visit, M. Bibbo and J. Pastick performed a technical delineation of wetlands and other waters within a 7.81-acre portion of the project alignment from Monterey Road to the Metcalf Substation (shown on Figure 2 as the “wetland delineation survey area”). A focused delineation was conducted in this area so that construction activities adjacent to the creek (i.e., the installation of a riser pole) could be sited to avoid impacts within the bed and banks of the creek. The delineation was performed in accordance with the *Corps of Engineers 1987 Wetlands Delineation Manual* (Environmental Laboratory 1987). Additionally, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0)* (U.S. Army Corps of Engineers [USACE] 2008) was followed to document site conditions relative to hydrophytic vegetation, hydric soils, and wetland hydrology. M. Bibbo and J. Pastick performed preliminary mapping of the extent and distribution of wetlands and other waters of the U.S. that may be subject to regulation under Section 404 of the Clean Water Act (CWA) as well as waters of the state that may be subject to regulation under the Porter-Cologne Water Quality Control Act (Porter-Cologne), which is administered by the Regional Water Quality Control Board (RWQCB). In addition, M. Bibbo and J. Pastick mapped the top of bank along Coyote Creek, which was determined in the field by mapping the significant topographic break in slope along the creek. Biotic habitats, jurisdictional habitats, ordinary high water (OHW) marks, and the tops of bank for the wetland delineation survey area are shown on Figure 3.

A tree survey and assessment was conducted by HortScience/Bartlett Consulting on July 22 and 29, 2019 within two areas along the project alignment where potential impacts to trees could potentially occur, and along Coyote Creek where impacts to trees will be avoided; these specific tree survey areas are shown on Figures 2 and 3. The results of the tree survey are provided in an appendix to this report (Appendix A).

A focused survey for Congdon’s tarplant (*Centromadia parryi* var. *congdonii*) was conducted by H. T. Harvey & Associates plant ecologist Mark Bibbo on November 15, 2019. That survey targeted areas of suitable habitat along the project alignment in between Monterey Road and the Metcalf substation.

N:\Projects\4200\4284-01\Reports\Biological Resources\Fig 3 Biotic Habitats and Impacts.mxd mlr/garde

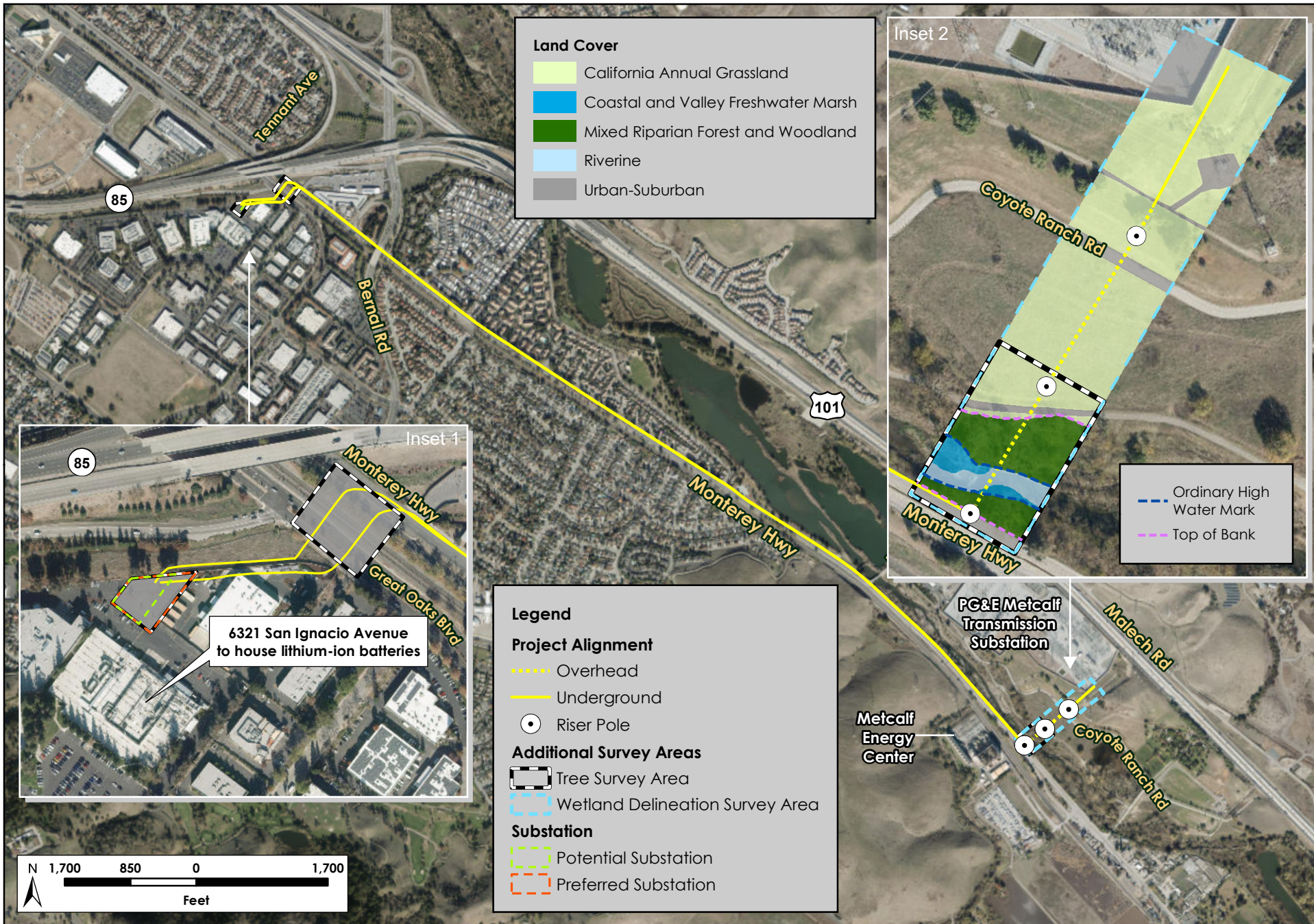


Figure 3. Land Cover Map

Section 3. Regulatory Setting

Biological resources along the project alignment 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 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, USACE jurisdiction extends to the 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 RWQCBs) charged with implementing water quality certification in California.

Project Applicability: Coyote Creek is considered waters of the U.S. based the presence of an OHW mark, regular flow, and direct hydrologic connectivity to the San Francisco Bay. The riverine wetlands within the OHW mark were determined to be three-parameter wetlands based on the presence of obligate hydrophytic vegetation, direct observations of hydrology (i.e., flowing surface water), and their location between the OHW marks. The riser pole to be located 10 feet east of Monterey Road will be placed on the high bank of Coyote Creek approximately 45 feet upslope from the OHW mark in Coyote Creek, thereby avoiding direct impacts to wetlands or waters subject to the CWA.

3.1.2 Federal Endangered Species Act

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

death or injury of a listed wildlife species. An activity can be defined as *take* even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under the FESA only if they occur on federal lands.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (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 federally listed or candidate plant species occur within the project alignment. There is some potential (albeit low) for the federally threatened California red-legged frog (*Rana draytonii*) to occur along the southern portion of the alignment and may be affected by the proposed project. In addition, the federally threatened Central California Coast steelhead (*Oncorhynchus mykiss*) is known to occur in Coyote Creek along the project alignment and could potentially be affected by project activities (in the absence of avoidance and minimization measures).

3.1.3 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 the 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 the NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to recommendations by the NMFS.

Project Applicability: The Pacific Fisheries Management Council has designated EFH for the Pacific Coast Salmon FMP within Coyote Creek along the project alignment due to the presence of the Chinook salmon (*Oncorhynchus tshawytscha*).

3.1.4 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 prohibits the possession of all nests of protected bird species whether they are active or inactive. An active nest is defined as having eggs or young, as described by the Department of the Interior in its April 16, 2003 Migratory Bird Permit Memorandum. Nest starts (nests that are under construction and do not yet contain eggs) are not protected from destruction.

Project Applicability: All native bird species that occur in the project area 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 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, 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: Along the project alignment, waters of the state include all potential waters of the U.S., including Coyote Creek and its adjacent perennial freshwater wetlands. The RWQCB will also consider the riparian vegetation and areas of the riparian banks above OHW and below top of bank to be important buffers to waters of the state associated with the creek (Figure 3). Because the edge of Monterey Road is located immediately adjacent to the riparian habitat along Coyote Creek, there is limited available space to accommodate the riser pole for the underground-to-overhead transition of the transmission line. As a result, the riser pole along Monterey Road will be located just below the top of the southwestern bank of Coyote Creek, within

riparian habitat along the creek, and in an area subject to jurisdiction by the RWCQB. Project impacts to riparian habitat are discussed in Section 6 below.

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 suitable habitat for any state-listed plant or animal species occurs in the project alignment, and thus no state-listed plants or animals are reasonably expected to occur in the project 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 (CNDDDB 2019). Further, the CDFW ranks sensitive vegetation alliances based on their global (G) and state (S) rankings analogous to those provided in the CNDDDB. Global rankings (G1–G5) of natural communities reflect the overall condition (rarity and endangerment) of a habitat throughout its range, whereas S rankings are a reflection of the condition of a habitat within California. If an alliance is marked as a G1–G3, all of the associations within it would also be of high priority. The CDFW provides the Vegetation Classification and Mapping Program’s currently accepted list of vegetation alliances and associations (CDFW 2019).

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: CDFW jurisdiction under Section 1602 of the California Fish and Game Code would extend up to the tops of bank of the Coyote Creek where it is crossed by the overhead transmission line. As mentioned above in section 3.2.1, the riser pole just east of Monterey Road would need to be located within the top of bank of Coyote Creek. The location of that pole has been purposefully selected to avoid having to remove any trees and such that only minor tree trimming is required. Project impacts on riparian habitat subject to CDFW jurisdiction are discussed in Section 6.

Most native bird, mammal, and other wildlife species that occur along the project alignment and in the immediate vicinity are protected by 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 Santa Clara 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 permit; therefore construction phase activities would not result in detrimental water quality effects upon biological/regulated resources. Additionally, the project must comply with the Municipal Regional Stormwater NPDES Permit for design of appropriate stormwater treatment facilities and incorporate feasible Low Impact Development practices for the new substation near the existing vacant industrial building at 6321 San Ignacio Avenue. Given that the site location for the substation currently consists of an existing parking lot which may not have proper stormwater treatment, this will likely result in substantial improvements to stormwater treatment and flows off of the site.

3.3 Local Regulations

The majority of the project alignment is located within the limits of the City of San José, and applicable City ordinances and policies are provided below. No project activities (e.g., tree removal) will occur in portions of the alignment located in unincorporated areas of Santa Clara County (i.e., between Monterey Road and the PG&E Metcalf Substation, inclusive of Coyote Creek) such that any County ordinances would apply.

3.3.1 City of San José Tree Ordinance

The City of San José promotes the health, safety, and welfare of the city by regulating the planting, removal, and maintenance of trees in the city. The City provides tree protection under the Municipal Code Section 13.28 (street trees, hedges, and shrubs), 13.32 (tree removal controls), and 13.44.220 (damaging park property). The Municipal Code details permit requirements for tree related work, including removal, pruning, and planting. Removal of trees within the street ROW are subject to tree removal permitting by the City of San José. Street trees are located in the public ROW between the curb and the sidewalk. Pruning or removal of street trees is illegal without a permit issued by the City. Replacement trees are required for the removal of ordinance-size street trees. A single trunk tree qualifies as an ordinance-size tree if it measures 38 inches or more in circumference at 4.5 feet above ground (approximately 12 inches diameter at breast height). A multi-trunk tree qualifies as ordinance-size if the combined measurement of each trunk circumference (at 4.5 feet above ground) adds up to 38 inches or more. As part of the permit application it is required to contact the planning division with regard to the replacement of ordinance-size trees.

Removal of trees on private property, commercial, and industrial properties are also subject to tree removal permitting by the City of San José. A permit is required to remove a tree of “any size” from a commercial and industrial property. A separate “permit adjustment application” is required to be filed for non-ordinance-sized trees that will be removed from commercial and industrial properties. As part of the permit application it is required to contact the City’s planning division with regard to the replacement of trees on private, commercial and industrial properties.

Project Applicability: Ordinance-sized trees are present along the project alignment. A tree survey was conducted for the purpose of (1) identifying any trees that may potentially need to be trimmed or removed for some portion of project implementation, and (2) siting project activities to minimize tree impacts. The project

will comply with the City of San José's tree replacement guidelines and policies for any trees that need to be removed.

3.3.2 City of San José Riparian Policy

Measures to protect riparian corridors are provided in the City's Riparian Corridor Policy Study (City of San José 1999), which was incorporated into the City's Envision San José 2040 General Plan (City of San José 2012); the Zoning Code (Title 20 of the San José Municipal Code); and the City Council-adopted VHP, specifically Condition 11. The term *riparian corridor* as defined by the City means any defined stream channel, including the area up to the bank full-flow line, as well as all characteristic streamside vegetation in contiguous adjacent uplands.

In 2016, the City released Council Policy 6-34 to provide guidance on the implementation of riparian corridor protection consistent with all City policies and requirements that provide for riparian protection. Council Policy 6-34 indicates that riparian setbacks should be measured from the outside edges of riparian habitat or the top of bank, whichever is greater, and that development of new buildings and roads generally should be set back 100 feet from the riparian corridor. However, Council Policy 6-34 also indicates that a reduced setback may be considered under limited circumstances, including the existence of legal uses within the minimum setback, and utility or equipment installations or replacements that involve no significant disturbance to the riparian corridor during construction and operation and that generate only incidental human activity.

Project Applicability: A 265-foot-wide riparian corridor associated with Coyote Creek will be spanned by the overhead transmission line from Monterey Road to the Metcalf Substation. The riparian edge of this corridor was mapped as part of the wetland delineation and field surveys described in Section 2.2. The edges of the riparian corridor are shown on Figure 3 and correspond to the top of bank (and the boundaries of the area mapped as mixed riparian forest and woodland) on either side of the creek. No new buildings or roads will be constructed as part of this project with 100 feet of the riparian corridor. The riser pole just east of Monterey Road will be installed approximately 10 feet off of the road shoulder, within the top of bank and therefore within the 100-foot setback. A second riser pole is located to the east of the Coyote Creek bike trail outside of the top of bank by about 60 feet (and therefore also within the 100-foot setback), while the easternmost riser pole will be installed in disturbed annual grassland approximately 510 feet from the riparian corridor edge on the east side of the creek (well outside the 100-foot setback). Coordination with the City of San José (both for City Riparian Corridor Policy compliance and VHP compliance) is likely to be needed to determine if the placement of the two westernmost poles qualify for an exception to riparian setback requirements.

3.3.3 Santa Clara Valley Habitat Plan

The VHP (ICF International 2012) provides a framework for promoting the protection and recovery of natural resources, including endangered and threatened species, while streamlining the permitting process for planned development, infrastructure, and maintenance activities. The VHP allows the County of Santa Clara, Santa Clara Valley Water District, the Santa Clara Valley Transportation Authority, and the cities of Gilroy, Morgan

Hill, and San José (collectively, the Local Partners or Permittees) to receive endangered species permits for activities and projects they conduct and those under their jurisdiction. The Santa Clara Valley Open Space Authority also contributed to VHP preparation. The VHP will protect, enhance, and restore natural resources in specific areas of Santa Clara County and contribute to the recovery of endangered species. Rather than separately permitting and mitigating individual projects, the VHP evaluates natural-resource impacts and mitigation requirements comprehensively in a way that is more efficient and effective for at-risk species and their essential habitats.

The VHP was developed in association with the USFWS and CDFW and in consultation with stakeholder groups and the general public. The USFWS has issued the Permittees a 50-year permit that authorizes incidental take of listed species under FESA, while CDFW has issued a 50-year permit that authorizes take of all covered species under the Natural Community Conservation Planning Act. This approach allows the Permittees to streamline future mitigation requirements into one comprehensive program. In addition to obtaining take authorization for each participating agency's respective activities, the cities and County will be able to extend take authorization to project applicants under their jurisdiction.

The USFWS and CDFW will also provide assurances to the Permittees that no further commitments of funds, land, or water will be required to address impacts on covered species beyond that described in the VHP to address changed circumstances. In addition to strengthening local control over land use and species protection, the VHP provides a more efficient process for protecting natural resources by creating new habitat reserves that will be larger in scale, more ecologically valuable, and easier to manage than the individual mitigation sites created under the current approach.

The VHP and associated documents are approved and adopted by the six Local Partners (Cities of Gilroy, Morgan Hill and San José, County of Santa Clara, Santa Clara Valley Transportation Authority, and Valley Water).

Project Applicability. The project alignment is located within the VHP permit area. Therefore, project activities are considered covered under the VHP and are required to comply with VHP conditions (ICF International 2012).

Section 4. Environmental Setting

4.1 General Project Area Description

The project alignment is located in the City of San José in Santa Clara 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 approximately 20 inches of annual precipitation with a monthly average temperature range from 49.3°F to 70.3°F (PRISM Climate Group 2019). Elevations along the project alignment range from 204 feet above mean sea level at the north end of the alignment to 256 feet mean sea level at the south end near the Metcalf Substation (Google Inc. 2019). The Natural Resource Conservation Service (NRCS) has mapped six soil units along the project alignment: (1) Urbanland-Campbell complex, 0–2% slopes, (2) Urbanland-Elpaloalto complex, 0–2% slopes, (3) Cortina very gravelly loam, 0 to 5%, (4) Yolo silty clay loam, 0–2% slopes, (5) Garretson loam, gravel substratum, 0–2% slopes, and (6) Riverwash (NRCS 2019). The Urbanland-Campbell and Urbanland-Elpaloalto complexes are found on basin floors, and are composed of disturbed and human transported material (Urbanland soil series), and very deep, well drained soils that formed in alluvium from mixed rock sources (Elpaloalto and Campbell series). Cortina very gravelly loam soils are very deep, somewhat excessively drained soils on alluvial fans and floodplains formed in gravelly alluvium from mixed rock sources (NRCS 2019). Yolo silty clay loams are very deep, well drained soils that formed in alluvium from mixed rocks and found on alluvial fans and flood plains. Garretson soils are gravelly, very fine sandy loams, on nearly level to strongly sloping fans and floodplains at elevations of 50 to 3,000 feet. They formed in medium textured alluvium, dominantly from sedimentary formations (NRCS 2019). None of these five soils are considered “hydric” soils (NRCS 2019). Riverwash soils are found in perennial and/or intermittent drainageways, and consist of cobbles, gravels, sands, and stratified coarse sand to sandy loam deposited by active channels. This soil series is considered hydric by the NRCS (NRCS 2019).

4.2 Land Cover

As described above, biotic habitats along the project alignment habitats were classified according to the land cover classification system described in the VHP (ICF International 2012), with modifications based upon site conditions verified during the 2019 field survey. The reconnaissance-level survey identified five land cover types along the project alignment: urban-suburban (i.e., developed/landscaped), California annual grassland, mixed riparian forest and woodland, riverine, and coastal and valley freshwater marsh (Figure 3). These land cover types are described in detail below. As mentioned in Section 2.2 above, most of the project alignment, including the proposed substation and the existing warehouse where battery storage will be located, are on developed land that is either currently paved or consists of landscaping associated with development. Land cover types consisting of natural vegetation were mapped within the wetland delineation survey area and are shown on Figure 3. Plant species observed during the reconnaissance survey are listed in Appendix C.

4.2.1 Urban-Suburban

Vegetation. The majority of the project components are situated in existing developed land uses and landscaped areas, which fall within the VHP urban-suburban land cover type. Where urban-suburban areas fall within a defined portion of the project alignment (i.e., within the potential and preferred substation areas, tree survey areas, and/or the wetland delineation survey area) they are shown on Figure 3. Urban-suburban areas are not mapped along the linear portions of the project alignment where the transmission line will be installed underground; here, the extent of the project area is unknown but is assumed to be limited within developed/landscaped areas at 6321 San Ignacio Avenue and along Monterey Road. These areas include existing warehouse buildings, office buildings, and hardscape such as paved asphalt parking lots and roadways (Photo 1, Appendix B). Landscaped areas have been planted with ornamental trees, shrubs and groundcovers common to the region, including eucalyptus (*Eucalyptus* spp.), acacia (*Acacia* spp.), European olive (*Olea europaea*), and London plane (*Platanus x hybrida*) (Photo 2, Appendix B).

Wildlife. The urban-suburban areas within the project alignment serve as wildlife habitat only in a very limited capacity, and most wildlife species that occur in these areas are tolerant of frequent human disturbances. Species that use these areas include the nonnative European starling (*Sturnus vulgaris*), rock pigeon (*Columba livia*), house mouse (*Mus musculus*), and Norway rat (*Rattus norvegicus*), as well as the native raccoon (*Procyon lotor*) and striped skunk (*Mephitis mephitis*). Reptiles such as western fence lizards (*Sceloporus occidentalis*) and gopher snakes (*Pituophis catenifer*) may bask on road or parking lot surfaces in order to raise their body temperature. A variety of birds, including the Anna's hummingbird (*Calypte anna*), California towhee (*Melospiza crissalis*), bushtit (*Psaltriparus minimus*), chestnut-backed chickadee (*Poecile rufescens*), and California scrub-jay (*Aphelocoma californica*) will nest and forage in landscape vegetation. In addition, the eaves and corners of buildings and bridges on or immediately adjacent to the project alignment provide attractive nesting sites for black phoebes (*Sayornis nigricans*) and cliff swallows (*Petrochelidon pyrrhonota*), and cliff swallows were observed nesting beneath the Metcalf Road bridge at Coyote Creek during the reconnaissance-level survey. Additionally, large nonnative trees adjacent to and/or overhanging the project alignment provide potential nesting sites for raptors, such as Cooper's hawks (*Accipiter cooperii*), although no old, existing nests of raptors were observed within or adjacent to the project alignment during the focused survey.

4.2.2 California Annual Grassland

Vegetation. California annual grassland habitat along the project alignment is present outside the top of bank along Coyote Creek, in between the Coyote Creek bikeway and the Metcalf Substation (Photos 3 and 4, Appendix B). This habitat type is dominated by non-native grasses such as ripgut brome (*Bromus diandrus*), and wild oat (*Avena barbata*), and weedy forbs such as summer mustard (*Hirschfeldia incana*), wild radish (*Raphanus sativus*), and yellow star thistle (*Centaurea solstitialis*). Closer to the Metcalf Substation the annual grassland is browsed by horses, so that vegetation height is even shorter and sparser, and the dominant species are weedy ruderal forb species such as mallows (*Malva* spp.), stinkwort (*Diurichia graveolens*), horseweed (*Erigeron canadensis*), bristly ox-tongue (*Helminthotheca echioides*) and prickly lettuce (*Lactuca serriola*). Grassland vegetation around the

Metcalf Substation is also regularly mowed and disked for fire prevention and vegetation management around this critical infrastructure.

Wildlife. Wildlife use of grasslands along the project alignment is limited by human disturbance (e.g., due to mowing around the substation for fire prevention), the limited extent of the grassland area, and the isolation of this habitat from more extensive grasslands in the region (i.e., east of U.S. Route 101 and west of Monterey Road). As a result, some of the wildlife species associated with extensive grasslands in the South Bay, such as the grasshopper sparrow (*Ammodramus savannarum*), are absent from the grasslands along the project alignment. Many of the wildlife species that occur in the grassland areas within the project alignment occur primarily in adjacent developed or riparian areas and use the grasslands along the project alignment for foraging. Such species include the house finch (*Haemorhous mexicanus*), bushtit, and lesser goldfinch (*Spinus psaltria*), which forage on seeds in grassland areas, and the black phoebe, cliff swallow, and Mexican free-tailed bat (*Tadarida brasiliensis*), which forage aerially over grassland habitats for insects.

Burrows of California ground squirrels and Botta's pocket gophers (*Thomomys bottae*) were observed along the project alignment near the PG&E Metcalf Substation. These fossorial mammal species are an important component of grassland communities, providing a prey base for diurnal raptors and terrestrial predators. Other rodent species that can potentially occur in the grassland habitat along the project alignment include the California vole (*Microtus californicus*) and deer mouse (*Peromyscus maniculatus*). Diurnal raptors such as red-tailed hawks (*Buteo jamaicensis*) and Cooper's hawks forage for these small mammals over grasslands during the day, and at night nocturnal raptors, such as barn owls (*Tyto alba*), will forage for nocturnal rodents, such as deer mice.

Several reptile species regularly occur in grassland habitats, including the western fence lizard, gopher snake, and southern alligator lizard (*Elgaria multicarinata*). Burrows of California ground squirrels and Botta's pocket gophers provide refuges for these reptile species, as well as for common amphibians that may occur in adjacent riparian habitat such as the western toad (*Anaxyrus boreas*) and Pacific tree frog (*Hyla regilla*). Mammals such as the native striped skunk, raccoon, and black-tailed jackrabbit (*Lepus californicus*), as well as the nonnative Virginia opossum (*Didelphis virginiana*) and feral cat (*Felis catus*) use grassland habitats along the project alignment for foraging.

4.2.3 Mixed Riparian Forest and Woodland

Vegetation. Mixed riparian forest and woodland habitat was mapped on either side of Coyote Creek where the project alignment crosses from Monterey Road to the Metcalf Substation. The mixed riparian forest and woodland habitat is contained within the areas mapped as the "top of bank" as shown on Figure 3.

The top of bank of the Coyote Creek was well defined on the west side of the creek by Monterey Road and on the east side of the creek by the Coyote Creek bikeway. Within this area, the riparian woodland habitat was characterized by a relatively open canopy of California black walnut (*Juglans hindsii*), Fremont cottonwood (*Populus fremontii*), coast live oak (*Quercus agrifolia*), red willow (*Salix laevigata*), and valley oak (*Quercus lobata*). The

majority of the tree cover on the upper banks of the creek corridor is composed of California black walnut with significant canopy branch die back, including standing snags of dead individual trees. Understory shrubs include California rose (*Rosa californica*), poison oak (*Toxicodendron diversilobum*), Himalayan blackberry (*Rubus armeniacus*), and coyote brush (*Baccharis pilularis*). Herbaceous species observed in the understory included common annual grassland species such as ripgut brome, Italian thistle (*Carduus pycnocephalus*), summer mustard, milk thistle (*Silybum maritimum*), and poison hemlock (*Conium maculatum*). (Photo 5, Appendix B).

Wildlife. Riparian habitats in California generally support exceptionally rich animal communities and contribute a disproportionately high amount to landscape-level species diversity. In addition to providing breeding, foraging, and roosting habitat for a diverse array of animals, riparian communities provide movement corridors for some species, connecting a variety of habitats throughout a region. The riparian habitat along Coyote Creek is of high value to wildlife, particularly to those species that are tolerant of or associated with the adjacent developed/landscaped areas and grasslands.

However, the riparian habitat along Coyote Creek within the project alignment is somewhat sparse, and provides moderate-quality habitat compared to other reaches of Coyote Creek that are characterized by dense, continuous trees and understory vegetation. Resident bird species that nest and forage in this habitat include the song sparrow (*Melospiza melodia*), lesser goldfinch, Anna's hummingbird, Bewick's wren (*Thryomanes bewickii*), and bushtit. Swallows, especially cliff swallows that nest on the nearby bridge, forage for insects over Coyote Creek on the project site. Mallards (*Anas platyrhynchos*) will nest in dense riparian understory vegetation or adjacent grasslands and forage along the creek. Great egrets (*Egretta alba*) will forage within this habitat year-round, but this species is not known to nest along Coyote Creek near the project site.

No nests of raptors (e.g., hawks, owls, and falcons) were observed in riparian trees within the project alignment or in immediately adjacent areas during the reconnaissance-level survey. However, larger trees in the riparian habitat, especially those with dense foliage that provide concealment from nearby human activity along Monterey Road, provide potential nesting sites for common raptors such as red-shouldered hawks (*Buteo lineatus*), Cooper's hawks, and red-tailed hawks.

In addition to permanent resident and breeding birds, a number of migratory and wintering species occur in the site's riparian habitat, including species of warblers, vireos, flycatchers, and sparrows. During migration, willow, cottonwood, and oak trees provide high-quality foraging habitat for these migrants. Although most of these trees are deciduous, and thus provide poor cover in winter, they still support fairly large numbers of foraging birds during this season. Migrant songbirds, such as the yellow warbler (*Setophaga petechia*), Wilson's warbler (*Cardellina pusilla*), orange-crowned warbler (*Oreothlypis celata*), western tanager (*Piranga ludoviciana*), Pacific-slope flycatcher (*Empidonax difficilis*), and warbling vireo (*Vireo gilvus*), forage on insects in trees and shrubs during spring and fall migration. Several other species, including the ruby-crowned kinglet (*Regulus calendula*), yellow-rumped warbler (*Setophaga coronata*), white-crowned sparrow (*Zonotrichia leucophrys*), and golden-crowned sparrow (*Zonotrichia atricapilla*), occur as both migrants and winter residents.

Garter snakes and gopher snakes will forage for insects and amphibians in this riparian habitat, and western fence lizards will also forage for insects. Amphibians such as the arboreal salamander (*Aneides lugubris*) occur in the leaf litter in this habitat and the native Pacific tree frog is also present. Urban-adapted mammals, such as the native raccoon and striped skunk, as well as the non-native Virginia opossum, Norway rat, black rat (*Rattus rattus*), and eastern gray squirrel (*Sciurus carolinensis*), reside in riparian habitat and adjacent habitats on the project site. Nonnative feral cats occur within this habitat as well. No cavities large enough to support colonies of roosting bats were observed along the project alignment, although small numbers of individual bats may roost in small cavities and crevices in trees within and adjacent to the alignment.

4.2.4 Riverine and Coastal and Valley Freshwater Marsh

Vegetation. The open water of Coyote Creek within the project alignment was mapped as riverine habitat. This included areas of unvegetated, flowing water, and small, unvegetated gravel and sand bars within the OHW mark. Two small, narrow freshwater emergent wetlands were mapped along the edge of Coyote Creek as well (Figure 3; Photo 6, Appendix B). These wetlands are situated on low gravel and sand terraces within the OHW of Coyote Creek. At the time of the delineation, in the middle of summer when the flows in Coyote Creek are at their lowest, these wetlands were still inundated with surface water flowing through the wetland vegetation with portions of the wetland consisting of floating aquatic vegetation. The freshwater marsh wetlands were dominated by strongly hydrophytic vegetation, including rice cutgrass (*Leersia oryzoides*), spotted knotweed (*Persicaria maculosa*), and common rush (*Juncus effusus*), with occasional saplings of arroyo willow (*Salix lasiolepis*) and sandbar willow (*Salix exigua*) along the edge.

Wildlife. The riverine habitat in Coyote Creek supports several species of native fish such as the Sacramento hitch (*Lavinia exilicauda exilicauda*), Central California roach (*Lavinia symmetricus symmetricus*), Sacramento sucker (*Catostomus occidentalis*), and Pacific lamprey (*Entosphenus tridentatus*), as well as non-native fish such as mosquitofish (*Gambusia affinis*), bluegill (*Lepomis macrochirus*), and inland silverside (*Menidia beryllina*). The Central California Coast steelhead and Central Valley fall-run Chinook salmon are present in Coyote Creek, and can potentially occur along the project alignment. Amphibians such as the Pacific tree frog and non-native bullfrog (*Lithobates catesbeianus*) occur in this reach of Coyote Creek. A western pond turtle (*Actinemys marmorata*) was observed basking on woody debris within the project alignment during the reconnaissance-level survey, and this species occurs in low numbers along Coyote Creek in the site vicinity. The creek provides foraging habitat for several species of waterbirds including the mallard, Canada goose (*Branta canadensis*), and great egret, and wading birds such as the killdeer (*Charadrius vociferous*) and spotted sandpiper (*Actitis macularius*) nest and forage along its banks.

The coastal and valley freshwater marsh habitat along the project alignment is too limited in extent to support wildlife species that are associated with more extensive marsh habitats in the region. Wildlife species that make use of these areas are expected to be similar to those described for mixed riparian forest and woodland, above.

4.3 Wildlife Movement

Wildlife movement within and in the vicinity of the project alignment 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 vicinity of the site 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 project alignment is situated within the northern portion of Coyote Valley, a regionally important area of habitat connectivity positioned between vast expanses of open space that lie to the east and west of Santa Clara Valley. Currently, north Coyote Valley provides the shortest pathway for wildlife movement between the foothills of the Santa Cruz Mountains and the Diablo Range for animals to traverse through relatively undeveloped areas, either during dispersal events by individual animals or over the course of generations. Therefore, a variety of species are expected to disperse through the project vicinity and may traverse the project alignment during such movement events.

Coyote Creek and its associated riparian corridor, which eventually drains to the open waters of the San Francisco Bay, serves as a movement corridor for several common and special-status species of birds fish, mammals, reptiles, and amphibians in the project vicinity. In addition, a number of birds, mammals, reptiles, and amphibians utilize the riparian corridor of Coyote Creek for movement purposes, as it provides sufficient vegetative cover preferred by these species when navigating across the landscape. Specifically, migratory passerines, rabbits, striped skunks, raccoons, Pacific treefrogs, and alligator lizards, amongst other species, are expected to move along this corridor alongside and within the project alignment.

Further, the upland habitats present within and adjacent to the project alignment serve as movement pathways for some terrestrial wildlife species. Although they are less likely to occur within the open, uncovered portions of the project alignment and surrounding areas, mammals including bobcats (*Lynx rufus*) and coyotes (*Canis latrans*) likely traverse grasslands along the project alignment near the Metcalf Substation. Roadkills documented along Monterey Road as well as on surrounding roads in the area further indicate that many animals are moving across these areas, including in places that do not necessarily provide dense vegetative cover.

In summary, the project vicinity is particularly important for movement by wildlife, as it contains some high-quality corridor areas allowing for the dispersal of such animals over the landscape. In particular, Coyote Creek provides the most suitable dispersal habitat for a variety of birds, mammals, fish, reptiles, and amphibians. These species are also expected to occasionally traverse the project alignment when dispersing in between more suitable habitat areas in natural areas in the surrounding foothills.

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 are:

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

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

- Listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species.
- Listed under CESA as threatened, endangered, or a candidate threatened or endangered species.
- Designated by the CDFW as a California species of special concern.
- Listed in the California Fish and Game Code as fully protected species (fully protected birds are provided in 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 along the project alignment was collected from several sources and reviewed by H. T. Harvey & Associates biologists as described in Section 2.1 above. Figure 4 depicts CNDDDB records of special-status plant species in the general vicinity of the project alignment and Figure 5 depicts CNDDDB records of special-status animal species. These generalized maps show areas where special-status species are known to occur or have occurred historically.

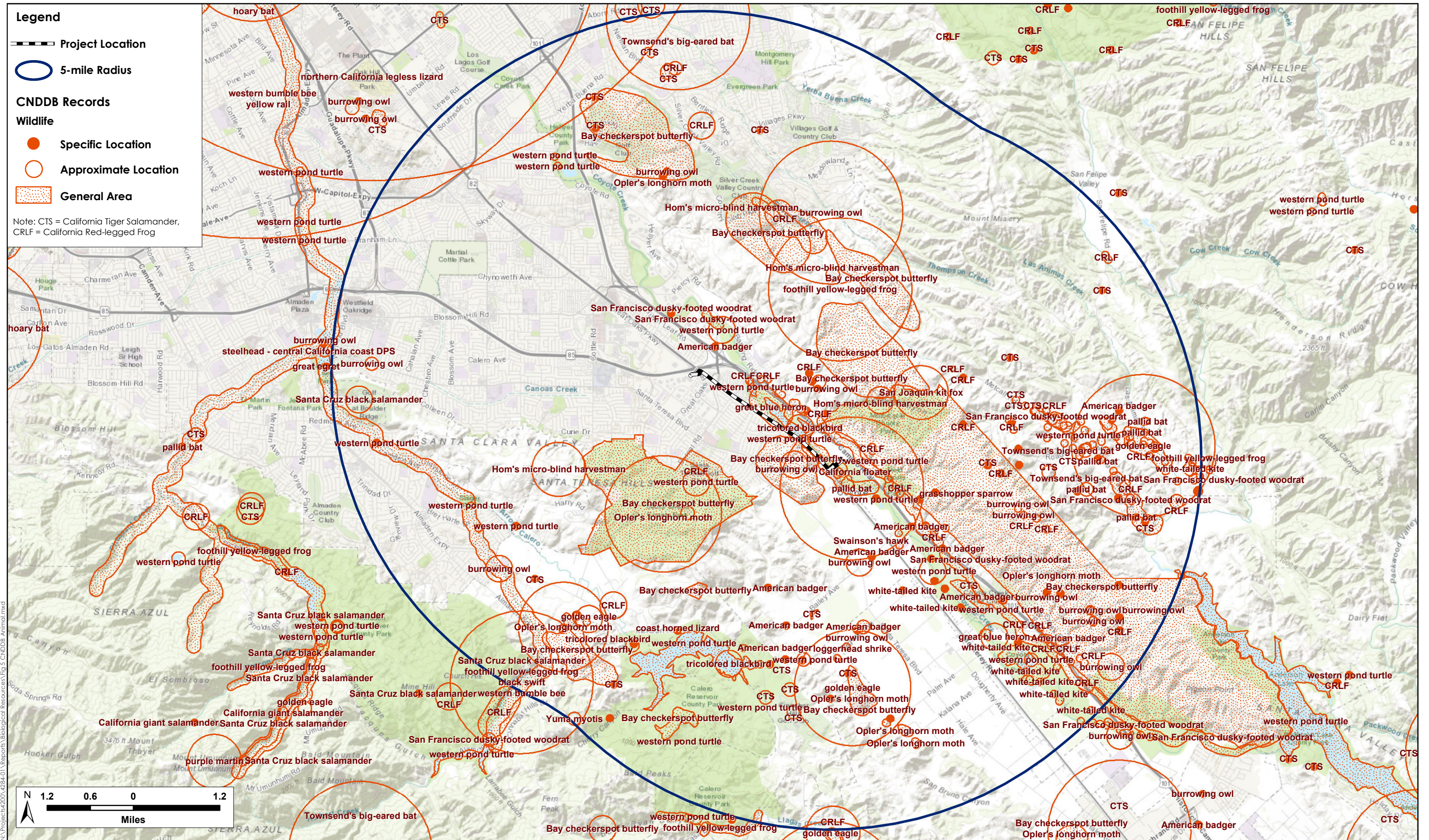


Figure 5. CNDDB-Mapped Records of Special-Status Animals
 Hummingbird Energy Storage Project Biological Resources Report (4284-01)
 December 2019

5.1 Special-Status Plant Species

The CNPS (2019) and CNDDDB (2019) identify 99 special-status plant species as potentially occurring in at least one of the 10 USGS 7.5-minute quadrangles containing or surrounding the project alignment for species in CRPR 1 and 2, or in Santa Clara County for CRPR 3 and 4 species. The majority of potentially occurring special-status plant species were determined to be absent from the project alignment for at least one of the following reasons: (1) absence of suitable habitat types; (2) lack of specific microhabitat or edaphic requirements, such as serpentine soils; (3) the elevation range of the species is outside of the range of the project alignment; and/or (4) the species is presumed extirpated from the project region. This group includes many species known to occur on serpentine soils on nearby Coyote Ridge and/or Tulare Hill east and west of the project alignment, respectively, where outcrops of serpentine geology and soils are present. No project activities will occur in undeveloped areas on serpentine soils. Project activities will be largely be restricted to previously developed areas, and the annual grassland within which project activities will occur (for the construction of the easternmost riser pole as well as trenching from the riser pole to the Metcalf Substation) is previously disturbed by horse grazing and regular mowing and disking of vegetation around the Metcalf Substation for fire prevention.

Suitable habitat, edaphic requirements, and elevation range were present in the project alignment for one plant species, Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*). Congdon's tarplant has been documented by the CNDDDB in the project vicinity (Figure 4) and can persist in disturbed grasslands. An expanded discussion on this species is provided below.

5.1.1 California Native Plant Society Ranked Plant Species

Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*). Federal Listing Status: None; State Listing Status: None; CNPS: 1B.1. Congdon's tarplant is an annual herb in the composite family (Asteraceae) that is endemic to California. It has a variable blooming period extending from May through November. Congdon's tarplant occurs in valley and foothill grassland habitat, floodplains, and swales, particularly those with alkaline substrates; and in disturbed areas with non-native grasses such as wild oat, ripgut brome, Italian ryegrass (*Festuca perenne*), and seaside barley (*Hordeum marinum*) (CNDDDB 2019, CNPS 2019, Baldwin et al. 2012). Congdon's tarplant occurs in Alameda, Contra Costa, Monterey, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, and Solano counties (CNDDDB 2019). A single, historic population of Congdon's tarplant is recorded in the CNDDDB (2019) within 5 miles of the project alignment. This is a historic population from a general area recorded as "eastern San José", which is presumed extinct due to the level of development in this area (CNDDDB 2019).

The California annual grassland habitat located along the project alignment in between Coyote Creek and the Metcalf Substation provides some suitable habitat for Congdon's tarplant, though the soils here are not alkaline, which Congdon's tarplant prefers and which renders the habitat only marginally suitable for this species (CNPS 2019). In addition, herbaceous vegetation cover in this area is sparse and regularly disturbed by mowing and disking of vegetation around the Metcalf Substation for fire prevention (Photo 4, Appendix B).

A protocol-level survey for Congdon's tarplant was conducted on November 15, 2019 by H. T. Harvey and Associates plant ecologist, M. Bibbo, M.S. Prior to conducting the survey Mr. Bibbo visited a reference population at Sunnyvale Baylands Park in Sunnyvale, California (CNDDDB Element Occurrence No. 53) to confirm that the species was blooming and identifiable. The focused survey area included all annual grassland where potential project impacts are expected, namely the area in between and around the riser poles between Monterey Road and the Metcalf Substation, as well as the area that would be trenched for the transmission line in between the easternmost riser pole and the substation. No Congdon's tarplant was observed in this area. Thus, Congdon's tarplant is determined to be absent from the project alignment.

5.2 Special-Status Animal Species

The legal status and likelihood of occurrence along the project alignment of special-status animal species known to occur, or potentially occurring, in the surrounding region are presented in Table 1. Most of the special-status species listed in Table 1 are not expected to occur along the project alignment 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 South Bay, or in specialized habitats in the South Bay, are absent from the project alignment due to a lack of suitable habitat and/or isolation of the site from populations by urbanization: the Bay checkerspot butterfly (*Euphydryas editha bayensis*), California tiger salamander (*Ambystoma californiense*), foothill yellow-legged frog (*Rana boylei*), riffle sculpin (*Cottus gulosus*), Swainson's hawk (*Buteo swainsoni*), San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), loggerhead shrike (*Lanius ludovicianus*), grasshopper sparrow (*Ammodramus savannarum*), burrowing owl, bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), least Bell's vireo (*Vireo bellii pusillus*), and San Joaquin kit fox (*Vulpes macrotis mutica*). While some of the birds in this list likely fly over the project area at times, none are expected to nest in, or make regular/heavy use of, any resources within the project alignment. No nests of San Francisco dusky-footed woodrats (*Neotoma fuscipes annectens*) were observed along or adjacent to the project alignment during the focused survey on July 19, 2019, and this species is also determined to be absent from these areas.

The Central California Coast steelhead, Central Valley fall-run Chinook salmon, Pacific lamprey, Sacramento hitch, and Central California roach occur in Coyote Creek within and adjacent to the project alignment. Although these special-status species will not be directly affected by project activities, there is some potential for project activities to result in indirect effects on these species due to their close proximity to the alignment. The Central California Coast steelhead is addressed in greater detail in Table 1 below because this species occurs within Coyote Creek immediately adjacent to the project alignment (see Section 6 *Impacts and Mitigation Measures* below).

Two special-status bird species, the peregrine falcon (*Falcon peregrinus anatum*) and tricolored blackbird, can occasionally occur along the project alignment as nonbreeding foragers (i.e., they do not nest along the project alignment). The pallid bat (*Antrozous pallidus*), a California species of special concern, may also forage aerially

over habitats along the project alignment, and the American badger (*Taxidea taxus*), also a California species of special concern, can potentially disperse or forage within the alignment. These species are not expected to nest, roost, or breed in or immediately adjacent to the project alignment, and will be affected very little, if at all, by the proposed project.

The California red-legged frog, western pond turtle, white-tailed kite (*Elanus leucurus*), and yellow warbler are addressed in greater detail in Table 1 below because these species can potentially breed or occur along or immediately adjacent to the project alignment and/or may be significantly impacted by project construction (see Section 6 *Impacts and Mitigation Measures* below).

Table 1. Special-status Animal Species, Their Status, and Potential Occurrence within the Project Alignment

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
Federal or State Endangered, Threatened, or Candidate Species			
Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>)	FT, VHP	Native grasslands on serpentine soils. Larval host plants are <i>Plantago erecta</i> and/or <i>Castilleja exserta</i> or <i>C. densiflora</i> .	Absent. No suitable native grasslands, serpentine soils, or larval host plants to support this species were identified along the project alignment during the reconnaissance-level survey, and the VHP does not map suitable habitat along the project alignment (ICF International 2012). Critical habitat Unit 6 (Tulare Hill) is located immediately adjacent to the project alignment southwest of Monterey Road, and overlaps the alignment slightly approximately 0.3 mile southeast of Metcalf Road (USFWS 2008). However, no suitable habitat for Bay checkerspot butterflies is present within this portion of the alignment, which is limited to the ROW of Monterey Road and consists entirely of unvegetated urban-suburban areas. Determined to be absent.
Central California Coast steelhead (<i>Oncorhynchus mykiss</i>)	FT	Typically spawns in gravel substrates in clear, cool, perennial sections of relatively undisturbed streams with conditions allowing migration between spawning and marine habitats and dense canopy cover that provides shade, woody debris, and organic matter. Usually cannot survive long in pools or streams with water temperatures above 70°F; however, they can use warmer habitats if adequate food is available.	Present. Steelhead are known to occur in all accessible reaches of Coyote Creek (i.e., from the San Francisco Bay upstream as far as Anderson Dam), and these areas are mapped as critical habitat for steelhead (NMFS 2005). The project alignment is located immediately adjacent to Coyote Creek from approximately Forsum Road southeast to the Metcalf Substation, and the alignment crosses Coyote Creek (as overhead power lines) between Monterey Road and the Metcalf Substation. Suitable spawning and rearing habitat for steelhead is concentrated primarily in the colder reach of Coyote Creek between Anderson Dam and the Ogier Ponds, located approximately 3.6 miles upstream of the project alignment. Barriers to migration present downstream of the alignment reduce the potential for spawning individuals to access the project reach, and high water temperatures reduce habitat quality within the creek, making spawning unlikely within or adjacent to the project alignment (Smith 2013). This reach of Coyote Creek functions as a migration corridor for individuals traveling between the San Francisco Bay and spawning and rearing habitat present farther upstream.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
California tiger salamander (<i>Ambystoma californiense</i>)	FT, ST, VHP	Preferred breeding habitat consists of temporarily (a minimum of 3–4 months) ponded environments (e.g., vernal pools, ephemeral pools, or human-made ponds) surrounded by grasslands or open woodlands where small mammal burrows are present. Will also utilize permanent ponds if aquatic vertebrate predators are not present. Suitable ponds provide breeding and larval habitat, while burrows of small mammals such as California ground squirrels and Botta’s pocket gophers in upland habitats provide refugia for juvenile and adult salamanders during the dry season.	Absent. Suitable breeding habitat is absent from the project alignment, and no designated critical habitat occurs along or adjacent to the alignment (USFWS 2005). The closest known breeding locations are east of U.S. Route 101 in a pond located approximately 0.4 mile east of the alignment and in a freshwater marsh approximately 0.5 mi to the east (Jennings 2017, CNDDDB 2019); however, U.S. 101 is a barrier that is likely insurmountable between those breeding sites and portions of the project alignment east of Coyote Creek, and the creek itself would impede movement farther west. The nearest known breeding locations west of U.S. Route 101 are approximately 1.6 mi to the southwest in Santa Teresa County Park and approximately 1.9 miles to the southwest (CNDDDB 2019). The VHP maps potential breeding habitat in the Coyote Ranch Pond approximately 450 feet to the southeast and secondary habitat in riparian habitat and uplands along Coyote Creek within the alignment (ICF International 2012). However, surveys have not detected tiger salamanders breeding in Coyote Ranch Pond, as well as in the Metcalf Pond/Parkway Lakes complex and along Coyote Creek (H. T. Harvey & Associates 2012a). Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
California red-legged frog (<i>Rana draytonii</i>)	FT, CSSC, VHP	Inhabit perennial freshwater pools, streams, and ponds throughout the Central California Coast Range as well as isolated portions of the western slopes of the Sierra Nevada (Fellers 2005). Preferred breeding habitat consists of deep perennial pools with emergent vegetation for attaching egg clusters (Fellers 2005), as well as shallow benches to act as nurseries for juveniles (Jennings and Hayes 1994). Nonbreeding frogs may be found adjacent to streams and ponds in grasslands and woodlands, and may travel up to 2 miles from their breeding locations across a variety of upland habitats (Bulger et al. 2003, Fellers and Kleeman 2007).	Absent as Breeder. Suitable breeding habitat is absent from the project alignment, and no critical habitat occurs along or adjacent to the alignment (USFWS 2010). The species was historically recorded along Coyote Creek at the Metcalf Pond/Parkway Lakes complex, in a pond at Santa Teresa County Park, and at an abandoned canal along Metcalf Road (CNDDDB 2019), and was more recently documented breeding in a freshwater marsh 0.4 mi north of the alignment east of U.S. Route 101 (Jennings 2017, CNDDDB 2019). No recent records of the species are located within 2.0 miles of the alignment west of U.S. Route 101 (CNDDDB 2019). The VHP maps breeding habitat within the Metcalf Pond/Parkway Lakes complex immediately adjacent to the alignment, along Coyote Creek within and immediately adjacent to the alignment, and in Coyote Ranch Pond approximately 450 feet to the southeast (ICF International 2012). However, recent surveys have not detected red-legged frogs in Coyote Ranch Pond and along Coyote Creek, and the presence of predatory fish and bullfrogs in these areas likely precludes the presence viable breeding populations. Nevertheless, Coyote Creek provides a potential avenue for dispersal for red-legged frogs to the project alignment, and given the ostensibly suitable breeding habitat conditions (aside from predator abundance) in Coyote Creek and Coyote Ranch Pond the possibility that red-legged frogs may occur in these areas as occasional dispersants cannot be ruled out.
Foothill yellow-legged frog (<i>Rana boylei</i>)	SC, VHP	Found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows. Ideal habitat for this species consists of streams with riffles and cobble-sized rocks, with slow water flow (Jennings and Hayes 1994).	Absent. Not known to occur in the project vicinity, and no suitable habitat is present within Coyote Creek within or near the project alignment. The nearest occurrences of this species to the project alignment are along Llagas Creek 4.8 miles to the south (CNDDDB 2019). The VHP maps Coyote Creek as secondary habitat for foothill yellow-legged frogs (ICF International 2012); however, the species has been extirpated from valley floor areas of Santa Clara County, and is no longer known to occur along the County's streams below major reservoirs, including Anderson Lake (H. T. Harvey & Associates 1999). Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
Tricolored blackbird (<i>Agelaius tricolor</i>)	ST, VHP	Highly colonial nester that establishes dense breeding colonies in emergent vegetation, grain fields, fallow fields, extensive thickets of blackberry, ruderal vegetation such as mustard or thistle, and occasionally in early-successional riparian habitat. Nesting colonies usually are located near fresh water. Tricolored blackbirds are itinerant nesters, and because their nesting habitat is ephemeral, it is possible for this species to colonize or recolonize an area as suitable breeding habitat becomes available.	Absent as Breeder. In Santa Clara County, has bred in only a few scattered locations, and is absent from, or occurs only as a nonbreeder in, most of the County (Rottenborn 2007a). This species was known to nest in Coyote Ranch Pond approximately 450 feet southeast of the alignment in the mid-1990s. However, the July 23, 2019 reconnaissance-level survey determined that no suitable nesting habitat is present along the project alignment or in areas within 250 feet. Individual tricolored blackbirds will occur as occasional foragers along the project alignment year-round, especially during winter and migration.
Swainson's hawk (<i>Buteo swainsoni</i>)	ST	Prime breeding habitat encompasses riparian draws or clumps of trees surrounded by open grassland or oak savannah for foraging.	Absent. Apparently nested in small numbers in Santa Clara County historically, and there is an 1894 nest record from the Berryessa area (in eastern San José) (Bousman 2007a). Since 2013, a pair of Swainson's hawks has nested successfully each year near Coyote Creek in northern Coyote Valley, approximately 1.5 mi southeast of the project alignment. Otherwise, this species is known to occur in the project vicinity only as a very infrequent transient during migration. Although nesting Swainson's hawks may be returning to the region, Swainson's hawks are not expected to nest within or adjacent to the project alignment due to high levels of human disturbance (e.g., roads, trails, and operations/maintenance activities associated with the Metcalf Substation). This species may forage in the region when in transit through the County, albeit infrequently and in very low numbers. However, the grassland areas along the project alignment are too limited in extent to provide suitable foraging habitat for this species. Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
Bald eagle (<i>Haliaeetus leucocephalus</i>)	SE, SP	Ideal habitat is composed of remote, forested landscape with old-growth or mature trees and easy access to an extensive and diverse prey base. Forages in fresh and salt water where their prey species (fish) are abundant and diverse. Builds nests in tall, sturdy trees at sites that are in relatively close proximity to aquatic foraging areas and isolated from human activities.	Absent. Known to nest (or to have recently nested) in Santa Clara County in at least 10 locations, mostly near reservoirs (Bousman 2007b, Ventana Wildlife Society 2012). No suitable nesting habitat for bald eagles is present along the project alignment. Nonbreeding individuals may forage in the Metcalf Pond/Parkway Lakes complex, but no suitable foraging habitat is present within Coyote Creek, including within the project alignment. Determined to be absent.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE, SE, VHP	Nests in heterogeneous riparian habitat, often dominated by cottonwoods and willows.	Absent. This species has not been recorded nesting along Coyote Creek, which does not provide high-quality nesting habitat, or anywhere in the project vicinity. The only breeding records in Santa Clara County are from Llagas Creek southeast of Gilroy in 1997 and the Pajaro River south of Gilroy in 1932 (Rottenborn 2007b). Otherwise, records in the County of least Bell's vireos include 1–2 singing males along lower Llagas Creek in May 2001 (CNDDDB 2019), a singing male in June 2006 along Coyote Creek near the Coyote Creek Golf Club (H. T. Harvey & Associates 2007), and a singing male on May 23, 2016 in Alviso (Jeffers, pers. comm.). The VHP does not map suitable habitat for this species as occurring along the project alignment (ICF International 2012). Although the abundance and distribution of this species may increase as core populations increase, it is unlikely to be more than a rare and very locally occurring breeder along southern Santa Clara County streams (south of the project alignment). Determined to be absent.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, ST, VHP	Annual grassland or mixed shrub and grassland habitats throughout low, rolling hills and in valleys.	Absent. This species has not been recorded within, and is not expected to occur within, the project alignment. The closest area of potential occurrence (based on VHP mapping) is approximately 20.1 miles southeast of the project alignment in the vicinity of Pacheco Creek and the uppermost reaches of the Pajaro River, where it may occur infrequently and in low numbers during dispersal (ICF International 2012). Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
California Species of Special Concern			
Central Valley fall-run Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	CSSC	Cool rivers and large streams that reach the ocean and that have shallow, partly shaded pools, riffles, and runs.	Present. Chinook salmon are known to occur in Coyote Creek below Anderson Dam, although the quality of potential spawning and rearing habitat for Chinook salmon in Coyote Creek within and downstream of the project alignment is limited due to water quality issues (e.g., due to runoff) (Smith 2013). The project alignment is located immediately adjacent to Coyote Creek from approximately Forsum Road southeast to the Metcalf Substation, and the alignment crosses Coyote Creek (as overhead power lines) between Monterey Road and the Metcalf Substation. This species could potentially occur in the reach of Coyote Creek adjacent to and within the project area during migration between the ocean and upstream spawning and rearing areas. However, genetic analyses indicate that Chinook salmon in South Bay streams are all derived from Central Valley fall-run or Columbia River stock (Salsbery et al. 2004, Garza and Pearse 2008). There is no evidence that adults are successfully returning to spawn in these creeks, and thus there is no evidence that the species has naturalized in South Bay streams (Santa Clara Valley Water District 1998–2005, Salsbery 2009).
Pacific lamprey (<i>Entosphenus tridentatus</i>)	CSSC	Medium- and large-sized, low-gradient cold rivers and streams, with a wide range of habitats (e.g., gravel, low-gradient riffles).	Present. This species is known to be present in Coyote Creek along the project alignment (Buchan et al. 2002, Santa Clara Valley Water District 2008). Spawning is expected to occur primarily in cooler water; ammocoetes may be present in warmer areas farther downstream (Santa Clara Valley Water District 2008).
Central California roach (<i>Lavinia symmetricus symmetricus</i>)	CSSC	Generally found in small streams, they are well adapted to intermittent watercourses (e.g., tolerant of high temperatures and low oxygen levels).	Present. This species is known to be present in Coyote Creek (Buchan et al. 2002, Leidy 2007, Valley Water 2008). It occurs widely, often in unshaded pools with warm temperatures, and is expected to occur within Coyote Creek within and adjacent to the project alignment.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
Sacramento hitch (<i>Lavinia exilicauda exilicauda</i>)	CSSC	Warm, lowland, waters including clear streams, turbid sloughs, lakes, and reservoirs. Has a high tolerance for varying stream conditions and water temperature.	Present. This species is known to be present in Coyote Creek (Buchan et al. 2002, Leidy 2007, Santa Clara Valley Water District 2008, Smith 2017, Smith 2018). It has been recorded upstream nearly to Anderson Dam and with its high tolerance of stream conditions and water temperatures it is expected to occur along and adjacent to the project alignment.
Riffle sculpin (<i>Cottus gulosus</i>)	CSSC	Permanent, cool, headwater streams with an abundance of riffles and rocky substrates.	Likely Absent. Although this species is known to be present in upper Coyote Creek, it is not known to occur downstream from Anderson Dam (Smith 2006). Not expected to occur within the project alignment.
Western pond turtle (<i>Actinemys marmorata</i>)	CSSC, VHP	Occurs in ponds, streams, and other wetland habitats in the Pacific slope drainages of California (Bury and Germano 2008). Ponds or slack-water pools with suitable basking sites (such as logs) are an important habitat component for this species, and western pond turtles do not occur commonly along high-gradient streams. Females lay eggs in upland habitats, in clay or silty soils in unshaded (often south-facing) areas (Jennings and Hayes 1994). Juveniles feed and grow in shallow aquatic habitats (often creeks) with emergent vegetation and ample invertebrate prey. Nesting habitat is typically found within 600 feet of aquatic habitat (Jennings and Hayes 1994), but if no suitable nesting habitat can be found close by, adults may travel overland considerable distances to nest.	Present. Known to be present in Coyote Creek, the Metcalf Pond/Parkway Lakes complex, and the Coyote Ranch Ponds (H. T. Harvey & Associates 2012b), and an adult western pond turtle was observed basking on woody debris within the project alignment during the reconnaissance-level survey on July 23, 2019. The VHP maps primary habitat for western pond turtles along Coyote Creek within the project alignment as well as within the nearby Metcalf Pond/Parkway Lakes complex Coyote Ranch Pond; secondary habitat is mapped within grassland and riparian habitats adjacent to Coyote Creek within the project alignment (ICF International 2012). Coyote Creek provides dispersal and foraging habitat for pond turtles year-round, and basking sites for pond turtles are present along the banks of the channel and where emergent vegetation or woody debris are present to provide cover from predators. Western pond turtles may nest in grasslands and riparian habitats located within 600 feet of Coyote Creek within the project alignment.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
Burrowing owl (<i>Athene cunicularia</i>)	CSSC, VHP	Prefers annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, burrowing owls are found in close association with California ground squirrels; owls use the abandoned burrows of ground squirrels for shelter and nesting. The nesting season as recognized by the CDFW (California Department of Fish and Game 2012) extends from February 1 through August 31. After nesting is completed, adult owls may remain in their nesting burrows or in nearby burrows, or they may migrate (Gorman et al. 2003); young birds disperse across the landscape from 0.1 to 35 miles from their natal burrows (Rosier et al. 2006).	Absent. Burrowing owls were present in northern Coyote Valley into the late 1990s, but they have been infrequently recorded in this area in recent years (Trulio 2007). The species overwinters in small numbers on Tulare Hill adjacent to the project alignment, but individuals do not remain in this area to breed (Chromczak et al. 2016). Surveys for breeding burrowing owls conducted for the VHP (Albion Environmental 2008) found no owls breeding in southern San José, and there are no other recent (i.e., post-2000) breeding records from the project vicinity in the CNDDDB (CNDDDB 2019) or in eBird (Cornell Lab of Ornithology 2019). Thus, although burrowing owls nested in the project vicinity historically, they are currently known to occur there only as scarce nonbreeders. Burrows of California ground squirrels are present within and adjacent to the project alignment and provide suitable nesting and roosting sites for burrowing owls, and areas of open grasslands provide suitable foraging habitat. However, given the species' extremely limited distribution in the project vicinity in recent years (i.e., limited to Tulare Hill), burrowing owls are not expected to occur along or adjacent to the project alignment. Determined to be absent.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	CSSC (nesting)	Open habitats interspersed with shrubs, trees, poles, fences, or other perches from which it can hunt. Nests are built in densely foliated shrubs or trees, often containing thorns, which offer protection from predators and on which prey items are impaled. The breeding season may begin as early as mid-February and extends through July.	Absent. No suitable nesting habitat is present along the project alignment. Loggerhead shrikes are known to nest in the project vicinity where open grassland, ruderal, or agricultural habitat with scattered brush, chaparral, or trees providing perches and nesting sites are present (Bousman 2007c). However, the species is not known to nest near the project alignment, and typically nests in larger areas of grasslands and agricultural fields in the region (e.g., in Santa Teresa County Park and along Coyote Ridge). Individual loggerhead shrikes will occur as occasional foragers along the project alignment southeast of Forsum Road, especially during winter and migration.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
Yellow warbler (<i>Setophaga petechia</i>)	CSSC (nesting)	Nests in riparian woodlands. Prefers riparian corridors with an open overstory of mature cottonwoods and sycamores, a midstory of box elder (<i>Acer negundo</i>) or willow, and a substantial shrub understory (Bousman 2007d).	May be Present. In Santa Clara County, yellow warblers have been recorded nesting in riparian habitats along a number of creeks, including Coyote Creek, and they are known to nest in the project vicinity (Bousman 2007d, CNDDDB 2019). The riparian habitat along Coyote Creek within and adjacent to the project alignment provides suitable nesting habitat for up to 1–2 pairs of yellow warblers, and nonbreeding individuals occur in this habitat in the spring and fall when they are an abundant migrant throughout the project region.
San Francisco common yellowthroat (<i>Geothlypis trichas sinuosa</i>)	CSSC	Nests in herbaceous vegetation, usually in wetlands or moist floodplains.	Absent. This subspecies breeds along Coyote Creek as far south as Montague Expressway, approximately 15 miles north of Forsum Road where Coyote Creek is located adjacent to the project alignment. Those common yellowthroats nesting along Coyote Creek within and adjacent to the project alignment are of the non-special-status subspecies <i>arizela</i> (San Francisco Bay Bird Observatory 2012). Determined to be absent.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	CSSC (nesting)	Nests and forages in grasslands, meadows, fallow fields, and pastures.	Absent as Breeder. Not known to nest in grassland areas near the project alignment (e.g., at Tulare Hill), and suitably extensive grasslands to support nesting by this species are not present within the project alignment or in immediately adjacent grasslands around the Metcalf Substation. Breeding areas in the project vicinity are located primarily in Santa Teresa County Park, around Calero Reservoir, and in Coyote Ridge Open Space Preserve. Individual grasshopper sparrows will forage in grasslands along the project alignment year-round.
Pallid bat (<i>Antrozous pallidus</i>)	CSSC	Forages over many habitats; roosts in caves, rock outcrops, buildings, and hollow trees.	Absent as Breeder. Historically, pallid bats were likely present in a number of locations throughout the project region, but their populations have declined in recent decades. This species has been extirpated as a breeder from urban areas close to the Bay, as is the case along the project alignment. No high-quality roosting habitat is present along the project alignment, and no known maternity colonies of this species are present within or adjacent to the alignment. There is a low probability that the species occurs in the site vicinity at all due to urbanization; however, individuals from more remote colonies could potentially forage over open habitats along the southern portion of the project alignment on rare occasions.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
San Francisco dusky-footed woodrat (<i>Neotoma fuscipes annectens</i>)	CSSC	Nests in a variety of habitats including riparian areas, oak woodlands, and scrub.	Absent. Suitable habitat for this species is present along Coyote Creek within and adjacent to the project alignment. However, the July 23, 2019 focused survey determined that no nests of this species are present within or adjacent to the project alignment. Determined to be absent.
American badger (<i>Taxidea taxus</i>)	CSSC	Burrows in grasslands and occasionally in infrequently disked agricultural areas.	Absent as Breeder. Roadkilled badgers have been recorded on several occasions along Monterey Road adjacent to the southern portion of the project site. Suitable denning habitat for badgers is present in extensive open grassland areas surrounding the southern portion of the project alignment (i.e., within Santa Teresa County Park, around Calero Reservoir, in Coyote Ridge Open Space Preserve, and in agricultural areas). Badgers are not expected to den within or immediately adjacent to the project alignment due to human disturbance from activities associated with the PG&E Metcalf Substation and human activity along Monterey Road. However, badgers denning in the surrounding vicinity may disperse across Monterey Road or forage within natural areas along the project alignment southeast of Forsum Road.
State Fully Protected Species			
American peregrine falcon (<i>Falco peregrinus anatum</i>)	SP	Forages in many habitats; nests on cliffs and tall bridges and buildings.	Absent as Breeder. This species may occasionally forage in natural areas along the southern portion of the project alignment (i.e., along Coyote Creek and in adjacent grassland areas from the Metcalf Pond/Parkway Lakes complex to the PG&E Metcalf Substation) during the nonbreeding season, though always at low densities. Peregrine falcons are not expected to nest along the project alignment, which lacks suitable cliff-like habitat for nesting.
Golden eagle (<i>Aquila chrysaetos</i>)	SP	Breeds on cliffs or in large trees (rarely on electrical towers), forages in open areas.	Absent. No suitable nesting habitat for golden eagles is present along the project alignment. This species occurs along Coyote Creek in the vicinity of the Metcalf Pond/Parkway Lakes complex and the PG&E Metcalf Substation) as an occasional forager, primarily during migration and winter. However, no suitable foraging habitat for golden eagles is present in the limited areas of grassland habitat along the project alignment. Determined to be absent.

Name	*Status	Habitat	Potential for Occurrence within the Project Alignment
White-tailed kite (<i>Elanus leucurus</i>)	SP	Nests in tall shrubs and trees, forages in grasslands, marshes, and ruderal habitats.	Present. White-tailed kites are common residents in open areas along the project alignment southeast of Forsum Road. Trees along Coyote Creek within and immediately adjacent to the project alignment may be used for nesting, and the species will forage in grassland habitats around the Metcalf Substation year-round. Up to one pair of kites may nest within or immediately adjacent to the project alignment. Individuals may forage in open habitats along the project alignment 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 (SC); State Fully Protected (SP); California Species of Special Concern (CSSC); Santa Clara Valley Habitat Plan Covered Species (VHP)

5.3 Sensitive Natural Communities, Vegetation Alliances, and Habitats in the Plan Area

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 (CNDDDB 2019). 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 (Sawyer et al. 2009). If an alliance is marked G1-G3, all of the vegetation associations within it will also be of high priority (CDFW 2019). The CDFW provides the Vegetation Classification and Mapping Program's (VegCAMP) currently accepted list of vegetation alliances and associations (CDFW 2019).

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 CNDDDB (2019) identified three sensitive natural communities as occurring within the twelve 7.5-minute USGS quadrangles containing or surrounding the project alignment area: (1) sycamore alluvial woodland (Rank G1/S1.1), (2) northern maritime chaparral (Rank G1/S1.2), and serpentine bunchgrass grassland (Rank G2/S2.2). Riparian woodland within the project alignment does not meet the definition of sycamore alluvial woodland, which is dominated by western sycamore (*Platanus racemosa*), and occurs within braided, depositional channels of intermittent streams, usually with cobble or boulder substrate

(Holland 1986). Similarly, northern maritime chaparral or serpentine bunchgrass grassland do not occur along the project alignment.

5.3.2 Sensitive Vegetation Alliances

The coastal and valley freshwater marsh wetlands in the project alignment most closely aligns with the *Schoenoplectus californicus* – *Typha latifolia* Alliance as described in the Manual of California Vegetation, 2nd Edition (Sawyer et. al. 2009). This alliance is ranked as G5/S4 and is not considered sensitive (CDFW 2019). The mixed riparian forest and woodland within the project alignment is dominated by Fremont cottonwood and red willow and would be considered a *Populus fremontii* (Fremont cottonwood forest) Alliance. This alliance is ranked as G4/S3 meaning that it is considered “apparently secure” on a global scale, but vulnerable on a statewide level (CDFW 2019).

5.3.3 CDFW Riparian Habitat

Due to its rarity and disproportionately high habitat values and functions to wildlife, CDFW considers riparian habitat 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 Coyote Creek regardless of the vegetative composition of these areas. In addition, CDFW jurisdiction would extend to the outer edges of riparian tree canopies, which in this case corresponds to the boundaries of the mixed riparian woodland habitat as shown on Figure 3.

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

As described above under Section 3.1.1, Coyote Creek and the perennial freshwater wetlands it supports are considered waters of the U.S./state up to the OHW mark lines. Jurisdictional buffers for waters of the state in the project alignment would likely extend up to the top of bank lines of the Coyote Creek, which within the project alignment encompasses the edges of riparian tree canopies.

5.3.5 Nonnative and Invasive Species

Several nonnative, invasive plant species occur along the project alignment in both riparian woodland and California annual grassland habitats. Of these, the following have a rating of “limited” invasiveness (considered invasive but their ecological impacts are minor on a statewide level and their reproductive biology and other attributes result in low to moderate rates of invasiveness) according to the California Invasive Plant Council (Cal-IPC) (2019): soft brome (*Bromus hordeaceus*), slender flowered thistle (*Carduus tenuiflorus*), red stemmed filaree (*Erodium cicutarium*), bristly ox-tongue, rabbitsfoot grass (*Polypogon monspeliensis*), wild radish, curly dock (*Rumex crispus*), smilo grass (*Stipa miliacea*), and woolly mullein (*Verbascum thapsus*). The following species 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, ripgut brome, Italian thistle,

bull thistle (*Cirsium vulgare*), poison hemlock, Fuller's teasel (*Dipsacus fullonum*), stinkwort, Italian rye grass, summer mustard, pennyroyal (*Mentha pulegium*), and Washington 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 2019). Within the project alignment the following species with a "high" rating were observed: yellow star thistle, fennel (*Foeniculum vulgare*), broad-leaf pepperwort (*Lepidium latifolium*), and floating primrose willow (*Ludwigia peploides*). Broad-leaf pepperwort and floating primrose willow were found along Coyote Creek and adjacent terraces where they are common along this stretch of Coyote Creek. Fennel was observed within the mixed riparian forest on high terraces adjacent the creek corridor. Yellow star thistle was abundant and locally dense in the California annual grassland in between the Metcalf Substation and the Coyote Creek bikeway. Yellow star thistle is also regionally common and abundant. Due to their ubiquity in the region and limited amount of proposed disturbance in the habitats where these species are found, project activities are not expected to result in the spread on non-native and invasive plant species.

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 as a result of the proposed project were systematically evaluated at the project level. These impacts were first evaluated to qualitatively describe how proposed project activities could impact biological resources, and whether impacts would be temporary (i.e., occurring only during project construction and the period immediately following) or permanent. Impacts were then evaluated with the application of any applicable VHP conditions (see below) with which the proposed project must comply to determine whether the impacts were significant (and thus required mitigation).

6.1 Santa Clara Valley Habitat Plan

The proposed project is classified as an “Urban Development” project, which is a “covered project” under the VHP (ICF International 2012). Urban Development projects include public and private utilities such as electric transmission and distribution lines within the planning limits of urban growth in the city of San José. Activities occurring within Coyote Creek and its adjacent habitat along the project alignment are not covered; however, no project impacts are proposed within these areas. The Santa Clara Valley Habitat Agency (SCVHA) leads the implementation of the VHP, which is a regional partnership between the CDFW, the USFWS, and six local partners, including the Santa Clara Valley Water District, the County of Santa Clara, Santa Clara Valley Transportation Authority, and the Cities of San José, Gilroy, and Morgan Hill. The VHP was adopted in 2013 by all local participating agencies, and permits were issued from the USFWS and CDFW. The VHP is both a habitat conservation plan and natural community conservation plan, or HCP/NCCP. The planning document helps private and public entities plan and conduct projects and activities in ways that lessen impacts on natural resources, including specific threatened and endangered species. The VHP identifies regional lands (called reserves) to be preserved or restored to the benefit of at-risk species, and describes how reserves will be managed and monitored to ensure that they benefit those species. In providing a long-term, coordinated planning for habitat restoration and conservation, the VHP aims to enhance the viability of threatened and endangered species throughout the Santa Clara Valley.

The VHP defines measures to avoid, minimize, and mitigate impacts on covered species and their habitats while allowing for the implementation of certain “covered projects”. Chapter 6 of the VHP includes detailed and comprehensive conditions to avoid and minimize impacts on the 18 “covered species” (nine animal species and nine plant species) included in the plan area, which consists of 519,506 acres, or approximately 62% of Santa Clara County. These conditions are designed to achieve the following objectives:

- provide avoidance of certain covered species during implementation of covered activities throughout the project site;
- prevent take of individuals of certain covered species from covered activities as prohibited by law (e.g., take of fully protected species);
- minimize impacts on natural communities and covered species where conservation actions will take place; and
- avoid and minimize impacts on jurisdictional wetlands and waters throughout the study area to facilitate project-by-project wetland permitting.

In conformance with the VHP, project proponents are required to pay impact fees in accordance with the types and acreage of habitat or “land cover” impacted, and to implement conservation measures specified by the VHP. Land cover impacts are used because it is the best predictor of potential species habitat, and is applicable to all of the covered species (with the exception of the burrowing owl). The SCVHA has mapped the following

three fee zones in the VHP area: (1) rangeland and natural lands, (2), agricultural and valley floor lands, and (3) small vacant sites (SCVHA 2019). The following areas are exempt from land cover fees:

- all development that occurs on land mapped by the VHP as urban-suburban, landfill, reservoir (excluding dams), or agriculture developed land cover types;
- urban development in Fee Zones A–C on parcels less than 0.5 acre;
- additions to structures within 50 ft of an existing structure that result in less than 5,000 ft of impervious surface so long as there is no effect on wetland or serpentine land cover types; and
- construction of recreational facilities within the reserve system.

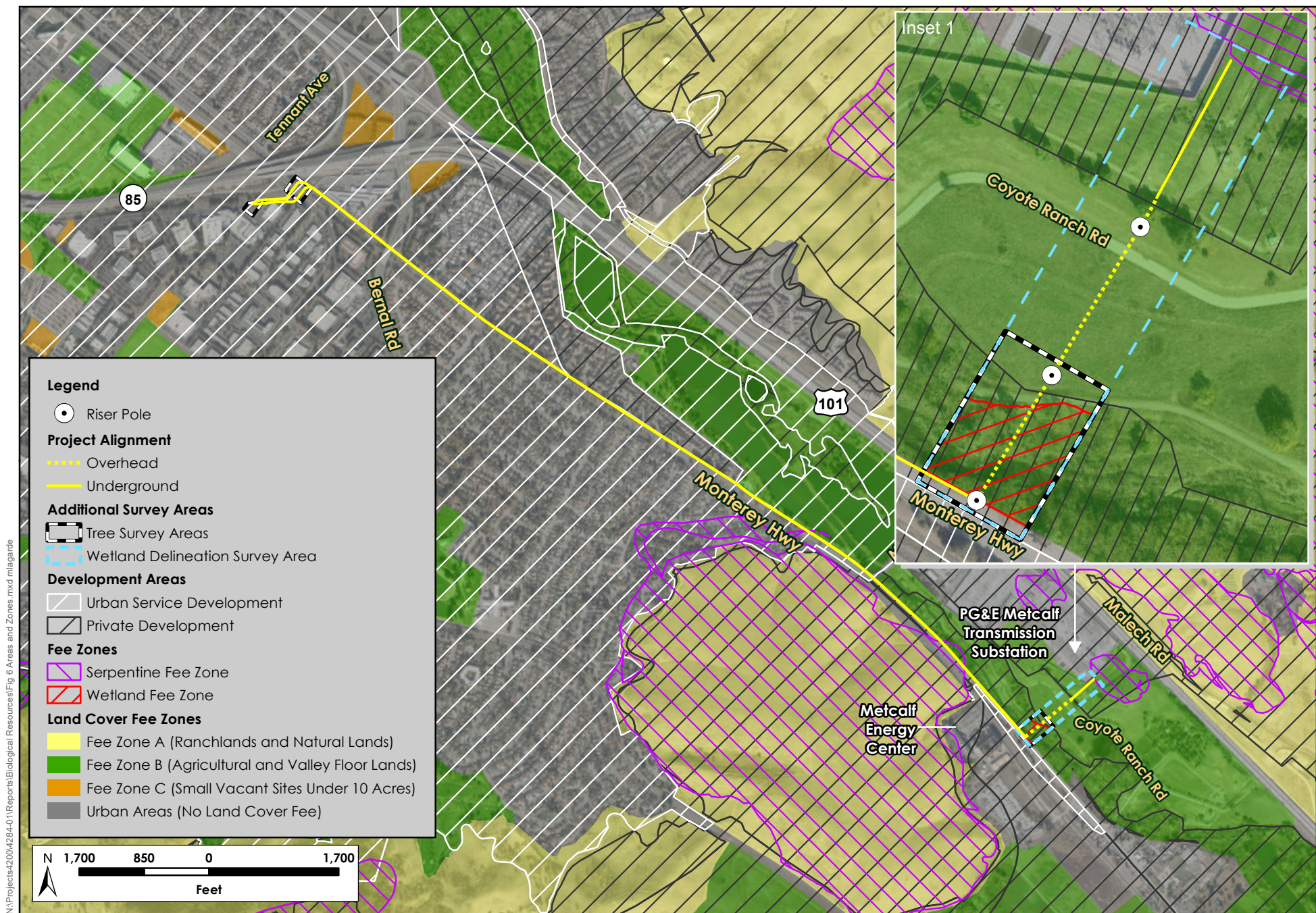
Additional fees in-lieu of providing compensatory mitigation are imposed for projects that impact serpentine habitat, wetlands, and burrowing owls, and for certain projects that result in atmospheric nitrogen emissions, although in some cases, project proponents may provide land to restore or create habitats protected by the VHP in lieu of payment of fees.

The project alignment is located within the VHP Urban Service Area for the City of San José, and the portion of the alignment south of Metcalf Road extends within the VHP Private Development Area (Figure 6). In regards to the VHP's land cover fee zones, the project alignment falls mostly within Urban Areas (No Land Cover Fee); however, the portion of the alignment that extends east of Monterey Road to the PG&E Metcalf Substation falls within Fee Zone B (Agricultural and Valley Floor Lands) (Figure 6). The project will avoid impacts to natural areas within the VHP-mapped serpentine fee zone that extends across the project alignment; therefore, fees in lieu of mitigation for impacts on this habitat type would not be required. The project alignment also does not include lands mapped as occupied burrowing owl nesting habitat and no burrowing owl fee applies. The project will engender an anticipated four vehicle trips per month by personnel visiting the facilities and may therefore be required to pay fees for nitrogen emissions.

This impact assessment summarizes the applicable fees and conservation measures that are required by the VHP. VHP conditions that apply to the proposed project are provided below.

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

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



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Figure 6. VHP Urban Service Area, Development Areas, and Fee Zones

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Condition 3. Maintain Hydrologic Conditions and Protect Water Quality

Condition 3 applies to all projects and identifies a set of programmatic BMPs, performance standards, and control measures to minimize increases of peak discharge of storm water and to reduce runoff of pollutants to protect water quality, including during project construction. These requirements include preconstruction, construction site, and post-construction actions. Preconstruction conditions are site design planning approaches that protect water quality by preventing and reducing the adverse impacts of stormwater pollutants and increases in peak runoff rate and volume. They include hydrologic source control measures that focus on the protection of natural resources. Construction site conditions include source and treatment control measure to prevent pollutants from leaving the construction site and minimizing site erosion and local stream sedimentation during construction. Post-construction conditions include measures for stormwater treatment and flow control.

Condition 4. Avoidance and Minimization for In-Stream Projects

Condition 4 applies to projects that will occur within the bed and bank of streams and within the adjacent riparian corridor, and requires the design of all such projects to minimize impacts on stream habitat and flows. Compliance with this condition also necessitates implementing the measures listed in Chapter 6 (Table 6-2) of the VHP.

Condition 7. Rural Development Design and Construction Requirements

Condition 7 applies to covered projects that consist of new development in rural areas (i.e., outside the urban service areas of cities). Compliance with Condition 7 helps to minimize impacts on covered species and sensitive land cover types. The project will be required to implement the avoidance and minimization measures listed on pages 6-30 to 6-34 of the VHP, which apply to the project design, construction, and post-construction phases. During the design phase, the project is required to minimize ground disturbance areas, construct project features close to existing infrastructure, and minimize stream crossings, among other measures. During the construction phase, the project is required to stabilize soils adjacent to drainages, minimize ground-disturbing impacts, and avoid planting species identified by Cal-IPC as invasive (Cal-IPC 2019). All temporarily disturbed soils are required to be revegetated with native plants or sterile, nonnative species, and temporarily disturbed areas such as staging areas will be returned to pre-project or ecologically improved conditions within 1 year of the completion of construction.

Condition 11. Stream and Riparian Setbacks

Condition 11 applies to covered projects that may affect streams and associated riparian vegetation within the VHP plan area. This condition requires new covered projects to adhere to setbacks from creeks and streams and associated riparian vegetation to minimize and avoid impacts on aquatic and riparian land cover types, covered species, and wildlife corridors. The standard required setback for the reach of Coyote Creek (a Category

1 stream) within and adjacent to the project alignment is 150 feet from the top of bank because the slope of the project site is less than 30%, no areas 35 feet from the edge of riparian vegetation extend past the 100-foot buffer, and the project site is located outside of VHP-designated urban service areas. However, some exemptions may be applicable depending on the nature of the channel. Further, as described in Section 3.3.2, City Council Policy 6-34 provides guidance on the implementation of riparian corridor protection consistent with all City policies and requirements that may provide for riparian protection, including those contained in the Council-adopted VHP, and calls for a setback of 100 feet from the edge of riparian canopy rather than from top of bank (or 35 feet from edge of canopy) in accordance with VHP Condition 11. Thus, the setback required under the VHP is expected to be larger than that required for compliance with the City's riparian policy.

Condition 17. Tricolored Blackbird

This condition applies to projects that are located within 250 feet of any riparian, coastal, and valley freshwater marsh and helps to protect tricolored blackbirds by prescribing preconstruction surveys, construction buffer zones, biological monitoring, and other requirements. If a project is located within 250 feet of habitat mapped as pond by the VHP, a qualified biologist must confirm that the pond land cover type is present. If a qualified biologist verifies that the project area is within 250 feet of pond habitat, a qualified biologist must conduct a field investigation to identify and map potential nesting substrate. If suitable nesting substrate is identified, avoidance and minimization measures must be implemented (see pages 4-43 to 4-44 of the VHP).

The proposed project is located within 250 feet of an area (i.e., Coyote Creek) mapped by the VHP as suitable nesting habitat for the tricolored blackbird (ICF International 2012). Therefore, per Condition 17 of the VHP, H. T. Harvey & Associates wildlife ecologist E. Malkauskas, B.S., conducted a field investigation to identify and map potential nesting substrate for tricolored blackbirds on July 23, 2019. No suitable vegetation for nesting by tricolored blackbirds was present along Coyote Creek within 250 feet of the project alignment due to predominance by woody riparian vegetation and shorter ruderal vegetation and the absence of large stands of emergent vegetation. Thus, no additional surveys or avoidance and minimization measures are required.

Condition 20. Avoid and Minimize Impacts to Covered Plant Occurrences

This condition applies to projects that are located in areas where covered plant species are likely to occur and within covered Plant Survey Areas; this condition helps protect certain plant species by requiring plant surveys, specific avoidance and minimization practices (e.g., using seclusion fencing), and monitoring.

If a project is located within a Plant Survey Area as mapped by the VHP, a qualified biologist must verify if the on-site land cover is suitable to support one of the nine VHP covered plants. If the relevant land cover type(s) is determined to be present, surveys for covered plants must be conducted. If an occurrence of a covered plant species is found, avoidance and minimization measures must be implemented (see pages 4-49 to 4-54 of the VHP).

Portions of the project alignment are located within Plant Survey Areas identified by the VHP. However, based on the verified land cover map (Figure 3) it was determined that no suitable habitat (i.e., serpentine bunchgrass grassland, serpentine rock outcrop, serpentine seep, mixed serpentine chaparral, mixed oak woodland and forest with serpentine soils, coast live oak forest and woodland with serpentine soils, or northern coastal scrub and Diablan sage scrub with serpentine soils) for any of the nine covered plant species is present along the project alignment. Rather, a portion of the project alignment is located within Plant Survey Areas because of covered plant occurrences on nearby serpentine habitats that occur on a different landform and soil type than is present along the project alignment. Thus, no surveys or avoidance and minimization measures are required.

6.2 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)

6.2.1 Impacts on California Annual Grassland and Associated Common Plant and Wildlife Species (Less than Significant)

Proposed project activities would result in a very small footprint of permanent impacts (where two riser poles will be installed) and up to 0.2 acre of temporary impacts (where the trench will be excavated) on California annual grassland habitat from the installation of the overhead-to-underground riser pole near the Metcalf Substation and the trenching of the transmission line from this structure to the substation. These small areas of California annual grassland to be impacted occur in a location that has been subject to disturbance and fragmentation in the past (i.e., for the creation of the Metcalf Substation) and as a result of ongoing maintenance (i.e. mowing and disking to maintain a firebreak around the substation), such that these areas do not provide regionally rare or especially high-value habitat for native vegetation or wildlife, or special-status species. Nevertheless, these impacts would reduce the extent of vegetation within the impact area and would result in a reduction in abundance of some of the common plant and wildlife species that use the site. However, California annual grassland is abundant and widespread regionally, and is not particularly sensitive, valuable (from the perspective of providing important plant or wildlife habitat), or an exemplary occurrence of this habitat type. Therefore, impacts on this habitat are considered less than significant. Further, because the number of individuals of any common plant or animal species within this habitat, 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.

Although no mitigation is necessary to reduce project impacts on California annual grassland habitat and associated plant and animal species to less-than-significant levels under CEQA, these species will benefit from the conservation program of the VHP (e.g., preservation, enhancement, and management of numerous habitat types throughout the VHP Reserve System) to which the project would contribute via payment of VHP impact fees.

6.2.2 Impacts on Water Quality and Special-Status Fish (Less than Significant with Mitigation)

Direct impacts to riparian habitat from the installation of the riser pole next to Monterey Road are discussed below in Section 6.3.1. Impacts on water quality in the creek could potentially occur as a result of sediment mobilization, or spills of fluids or materials into the creek, during the installation of this riser pole. Indirect impacts on Coyote Creek or water quality within the channel due to the installation of the second riser pole and excavation of a trench, located approximately 570 feet upslope from Coyote Creek, are unlikely due to the distance between these activities and the creek; however, the potential for water quality impacts due to these activities cannot be ruled out. No indirect impacts on Coyote Creek or water quality in the channel are expected to occur as a result of activities taking place along all other portions of the alignment northwest of Forsum Road.

The Project will comply with all VHP conditions, including Conditions 3 and 4, which require implementation of design phase, construction phase, and post-construction phase measures, including programmatic BMPs, performance standards, and control measures, to minimize increases of peak discharge of storm drain water and to reduce runoff of pollutants to protect water quality, including during construction. Indirect impacts on water quality from installation of the riser poles to span the transmission line over Coyote Creek would be further avoided and minimized by implementing erosion and sediment control measures, as well as BMPs for work near aquatic environments. Construction projects in California causing land disturbances that are equal to 1 acre or greater¹ must comply with state requirements to control the discharge of stormwater pollutants under the NPDES *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Water Board Order No. 2009-0009-DWQ). Prior to the start of construction/demolition, a Notice of Intent must be filed with the 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 Santa Clara 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

¹ Total project impacts at 6321 San Ignacio Avenue, along Monterey Road, and adjacent to the Metcalf Substation are anticipated to be more than 1 acre.

incorporate the use of green roofs, impervious surfaces, tree planters, grassy swales, bioretention and/or detention basins, among other factors.

Project activities may also result in effects on the Central California Coast steelhead, Central Valley fall-run Chinook salmon, Pacific lamprey, Central California roach, and Sacramento hitch in Coyote Creek due to a temporary increase in erosion, sedimentation, and turbidity in aquatic habitats located 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. Compliance with permit requirements and VHP Conditions 3 and 4 to protect water quality, as described above, will minimize the potential for impacts to water quality due to increases in erosion, sedimentation, and turbidity as well as releases of pollutants into the creek water. These measures will also minimize the release or pollutants to waters in the Coyote Creek, thereby protecting water quality in the creek.

The project is designed to avoid direct impacts on the Central California Coast steelhead, Central Valley fall-run Chinook salmon, Pacific lamprey, Central California roach, and Sacramento hitch and their habitat. The project will result in the temporary disturbance of a 1,219 square-foot area within the banks of the creek as well as the permanent removal of 79 square feet of habitat in the creek banks due to the installation of the new riser pole. However, these impact areas are located high on the creek banks, well outside the OHW mark, and are thus not used by special-status fish species because water levels rarely reach this height in the channel even during high flows. Therefore, construction of the project is not expected to impact or reduce habitat for special-status fish species in Coyote Creek.

Although no substantial noise or vibration disturbance (e.g., pile driving) is anticipated to occur during installation of the riser pole on the west side of Coyote Creek, any fish that are present in the channel when work occurs may be disturbed by the presence of workers near the creek and from whatever construction noise, vibrations, and visual disturbances do occur. Individual fish present in this reach of the creek could move away from work activities as a result, potentially exposing them to stress (e.g., if they move into lower-quality habitat) or increasing their likelihood of predation. For Central Valley fall-run Chinook salmon, Pacific lamprey, Central California roach, and Sacramento hitch, this impact is not expected to adversely affect their populations within the Coyote Creek watersheds based on the small area that will be affected and the small number of individuals (relative to regional populations) likely to be disturbed by the proposed work. However, due to the extremely small population size of Central California Coast steelhead in Coyote Creek, the loss of even one individual may have population-level effects. Therefore, impacts on individual steelhead as a result of construction-related disturbance would be significant. Implementation of Mitigation Measure 1 below will avoid indirect impacts on Central California Coast steelhead in Coyote Creek due to disturbance by restricting work activities in the banks of Coyote Creek to the dry season. Although this reach of the creek functions as a migration corridor for individuals traveling between the San Francisco Bay and spawning and rearing habitat present farther upstream during the cooler wet season, water temperatures in this reach are likely too high to be used by steelhead during the summer and early fall, and thus Central California Coast steelhead are not expected to be present adjacent to the work area during the work window specified in Mitigation Measure 1.

Mitigation Measure 1. Work Window. All project activities within the banks of Coyote Creek will occur between June 15 and October 15, when Central California Coast steelhead are not expected to be present.

Thus, with compliance with VHP Conditions 3 and 4, permit requirements, and Mitigation Measures 1 above, potential project impacts on water quality and special-status fish species would be less than significant under CEQA.

6.2.3 Impacts on Nonbreeding Special-Status Birds and Mammals (Less than Significant)

Several special-status bird and mammal species occur along the project alignment as nonbreeding migrants, transients, or foragers, but they are not known or expected to breed or occur in large numbers within or near the alignment impact areas. These are the tricolored blackbird, grasshopper sparrow, American peregrine falcon, American badger, and pallid bat.

The tricolored blackbird (a state threatened species and covered under the VHP) is not expected to occur within or adjacent to the project alignment as a breeder due to the absence of suitable habitat, but individuals may occur occasionally as foragers during the nonbreeding season. The grasshopper sparrow (a California species of special concern) breeds in expansive grassland habitats in the foothills, and individuals may occasionally forage in grassland habitat along the project alignment during migration. The American peregrine falcon (a state fully protected species) is not expected to breed along the project alignment due to a lack of suitable nesting habitat, though individuals of this species may occasionally forage along Coyote Creek or around the Metcalf Substation within and adjacent to the project alignment in small numbers. The American badger (a California species of special concern) may occur as an occasional dispersant or forager along the project alignment southeast of Forsum Road, but is not expected to establish breeding dens along the project alignment or make use of these areas regularly due to high levels of human disturbance. The pallid bat (a California species of special concern) may be present along the project alignment southeast of Forsum Road as an occasional forager, but is not expected to breed within the project alignment due to a lack of suitable habitat, and there are no known maternity colonies within or adjacent to the alignment. Nevertheless, individuals from more remote colonies could potentially forage over the open grassland habitat on the site on rare occasions.

Activities under the proposed project would have some potential to impact foraging habitats and/or 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 habitats along the project alignment do not provide important foraging habitat used regularly or by large numbers of individuals of any of these species. As a result, impacts under 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.

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

6.2.4 Impacts on the Yellow Warbler and White-Tailed Kite (Less than Significant)

The yellow warbler (a California species of special concern) could potentially nest in riparian habitat within and immediately adjacent to the project alignment along Coyote Creek southeast of Forsum Road, and individuals may forage in this habitat during migration and winter. The white-tailed kite (a state fully protected species) may nest in trees along this reach of Coyote Creek and in grassland areas near the Metcalf Substation, and individuals may forage in grasslands near the substation year-round. The yellow warbler and white-tailed kite 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 along the project alignment, and known breeding densities of these species, it is likely that no more than two pairs of yellow warblers and one pair of white-tailed kites could potentially nest within or immediately adjacent to the project alignment. The project would not result in the loss of suitable nesting habitat for these species, as no riparian trees will be removed by the project and only minor tree trimming will occur. The project would result in temporary and permanent impacts on a small area of suitable foraging habitat for white-tailed kites. In addition, activities that occur during the nesting season and cause a substantial increase in noise or human activity near active nests of yellow warblers or white-tailed kites 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 also 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 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 this species or its habitat under CEQA. All native bird species, including white-tailed kites, are protected from direct take by federal and state statutes, and the project will comply with VHP Condition 1 either by restricting work to the non-nesting season (September 1 through January 31) or by conducting preconstruction surveys prior to project activities and maintaining appropriate buffers around active nests of protected birds.

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

6.2.5 Impacts on the California Red-Legged Frog and Western Pond Turtle (Less than Significant)

Two VHP-covered wildlife species, the California red-legged frog (federally listed as threatened and a California species of special concern) and the western pond turtle (a California species of special concern), potentially occur along the project alignment. These species are assessed together because compliance with VHP conditions is expected to avoid and minimize impacts on these species and their habitats.

California Red-Legged Frog

Recent surveys have not detected California red-legged frogs in Coyote Ranch Pond and along Coyote Creek adjacent to the project alignment, and the presence of predatory fish and bullfrogs in these areas likely precludes the presence of viable breeding populations. Nevertheless, Coyote Creek provides a potential avenue for dispersal for red-legged frogs, and given the ostensibly suitable breeding habitat conditions (aside from predator abundance) in Coyote Creek and Coyote Ranch Pond the possibility that red-legged frogs may occur in along the project alignment southeast of Forsom Road as occasional dispersants cannot be ruled out. California red-legged frogs are absent from the project alignment northwest of Forsom Road, as these areas are entirely developed.

Project activities would result in the temporary loss of California red-legged frog foraging and dispersal habitat, and could potentially result in the loss of individuals (e.g., during construction activities). For example, project activities may result in the injury or mortality of individuals as a result of worker foot traffic, equipment use, or vehicle traffic. Seasonal movements may be temporarily affected during project activities because of disturbance, and substrate vibrations may cause individuals to move out of refugia, exposing them to a greater risk of predation or desiccation. In addition, petrochemicals, hydraulic fluids, and solvents that are spilled or leaked from construction vehicles or equipment may kill individuals, although BMPs to control releases of such chemicals make this unlikely. Additionally, 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. Movement of project personnel along the project alignment, and between on-site and off-site areas, could also spread pathogens such as chytrid fungus, which can impair the health of amphibians.

Western Pond Turtle

Coyote Creek provides dispersal and foraging habitat for pond turtles year-round, and basking sites for pond turtles are present along the banks of the channel and where emergent vegetation or woody debris are present to provide cover from predators. Western pond turtles occurring along Coyote Creek may nest in adjacent grasslands and riparian habitats along the project alignment or disperse across these areas. Project activities may disturb upland habitat used for nesting. Individual turtles or their eggs that are present in the work areas may be harmed or killed due to crushing by construction personnel or equipment, or as a result of desiccation or burying (e.g., during grading). Although western pond turtles are widespread in the project region, the species

is not particularly abundant, and the loss of individuals could reduce the viability of a population to the extent that it would be extirpated.

Summary for VHP-Covered Wildlife Species

With the exception of the tricolored blackbird, the VHP does not provide species-level avoidance and minimization measures for covered wildlife species that potentially occur along the project alignment. Nevertheless, the project would adhere to the general conditions of the VHP described in Section 6.1 above, which will help to reduce proposed project impacts on VHP-covered species and their habitats. Applicable VHP Conditions that will minimize potential project impacts on the California red-legged frog and western pond turtle are Conditions 3, 7, and 11. In addition, the project would pay VHP fees for impacts; these fees would contribute to the VHP's conservation program, which includes habitat acquisition, restoration, preservation, and management targeted at the California red-legged frog and western pond turtle to help compensate for any residual impacts through conservation of these species' populations and habitats. As a result, impacts on these species will be less than significant under CEQA.

6.2.6 Impacts Due to Bird Collisions with Overhead Power Lines (Less than Significant)

The proposed project includes the installation of 130-foot tall riser poles to support overhead transmission lines that would span Coyote Creek and connect to the existing Metcalf Substation. Horizontal power lines are known to be a significant cause of avian collisions and mortality (Avian Power Line Interaction Committee 2012).

Many of the birds moving through the project alignment at Coyote Creek during spring and fall are nocturnal migrants, which would be flying at altitudes well above the proposed height of the transmission lines. However, Coyote Creek provides habitat for numerous birds, many of which make north-south movements along the creek corridor at elevations similar to that of the proposed transmission lines and thus risk encountering the lines.

Existing transmission lines extend across Coyote Creek approximately 780 feet downstream of the proposed project alignment creek crossing to connect with the PG&E Metcalf Substation. These lines vary in height from approximately 60–120 feet as they cross Coyote Creek, and birds moving along Coyote Creek likely collide with these lines periodically. Given that the proposed project transmission lines will be installed at a similar height to these existing lines (up to approximately 120 feet, given anticipated sag of lines attached to 130-foot poles) and relatively close to the existing lines crossing the creek, the construction of the new lines is not expected to substantially increase bird collisions along Coyote Creek compared to existing conditions. As a result, the potential impacts of the proposed overhead transmission line due to bird strikes are considered less than significant under CEQA.

6.2.7 Nitrogen Deposition Impacts (Less than Significant)

The USFWS has identified critical habitat for the federally threatened Bay checkerspot butterfly immediately adjacent to the project alignment southeast of Forsum Road (Unit 6 at Tulare Hill) (USFWS 2008). This unit overlaps the alignment slightly approximately 0.3 mile southeast of Metcalf Road, although as discussed in Table 1 no suitable habitat for Bay checkerspot butterflies occurs within the project alignment. Critical habitat for the Bay checkerspot butterfly occurs on extensive areas of nutrient-poor serpentine or serpentine-like grasslands that support at least one of the three butterfly's larval host plants, dwarf plantain (*Plantago erecta*), dense flower owl's clover (*Castilleja densiflora*) and purple owl's clover (*Castilleja exserta*). In addition, these serpentine habitats support a number of special-status plant species. Non-native grasses have been reported to increase in these habitats, crowding out native special-status plants and the native forbs needed by the Bay checkerspot butterfly, due to increased nitrogen deposition from human sources throughout San José and the greater Bay Area.

Nitrogen deposition contribution estimates in Santa Clara County were made as a part of the development of the VHP (ICF International 2012). About 46% of nitrogen deposition on habitat areas of concern for the base years (2005–2007) was estimated to come from existing development and traffic generated locally within the VHP study area, which includes all of San José. The remainder of Santa Clara County was estimated to contribute a substantially smaller amount (17% of the nitrogen deposition) while the other eight Bay Area counties account for about 11%. Nitrogen deposition modeling completed for future years (2035 and 2060) as a part of the VHP process assumed that urban and rural development in the County and broader San Francisco Bay Area is expected to increase air pollutant emissions due to an increase in passenger and commercial vehicle trips and other new industrial and nonindustrial sources.

Construction of the project will result in an estimated four new vehicle trips per month to the new facility. This increased activity will result in an increase in NO_x emissions, which in turn will contribute to the effects of nitrogen deposition on the serpentine grassland ecosystem. However, due to the extremely low number of vehicle trips per month that are anticipated as a result of project construction (i.e., 36 trips per year or 0.1 trip per day), this impact represents a *de minimis* contribution to nitrogen emissions and deposition both locally and regionally, and is considered less than significant under CEQA. Although no mitigation is necessary to reduce project impacts due to an increase in NO_x emissions under CEQA, the project may be required to pay nitrogen deposition fees (this would be determined during project permitting with the City of San Jose and the Santa Clara Valley Habitat Agency).

6.3 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)

6.3.1 Impacts on Riparian Habitat or Other Sensitive Natural Communities (Less than Significant)

The CDFW defines sensitive natural communities and vegetation alliances using NatureServe's standard heritage program methodology (CDFW 2019), 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.

Coyote Creek flows from south to north through the project alignment and along portions of the project alignment located on Monterey Road. The riparian corridor of Coyote Creek is directly adjacent to Monterey Road for the southern half of the project alignment along Monterey Road. The majority of ground-disturbing project impacts (i.e., trenching for the underground transmission lines and construction of the two riser poles located east of Coyote Creek) will occur in either existing pavement or landscaped areas, or in California annual grassland outside of the riparian corridor. However, because the road shoulder of Monterey Road forms the top of bank of Coyote Creek on the west side, the riser pole next to Monterey Road will be situated within riparian habitat on the southwest bank of Coyote Creek. The installation of this riser pole will require construction of a 10-foot diameter concrete footing (for a total area of 79 square feet of permanent impacts in the riparian habitat). The pole location has been sited in an existing clearing approximately 10 feet off of Monterey Road such that there will be no required removal of trees within the riparian corridor and only minor tree trimming to support the riser pole installation. The clearing is occupied by a dense cover of non-native poison hemlock, milk thistle, and black mustard (*Brassica nigra*). A 1,219 square-foot area surrounding the pole will be utilized as a staging and work area as well as an access path from Monterey Road. This area will be temporarily impacted by vegetation clearing, minor tree trimming, light grading, installation of a temporary ballast rock pad for supporting the excavator/auger, and staging of equipment and materials. Upon completion of the pole installation, the temporary ballast rock pad will be removed, the area will be restored to previous grades, and the area will be reseeded with a native grass and forb seed mix to prevent erosion per the requirements of Conditions 3 and 4 of the VHP. Thus, the proposed project will only temporarily impact this 1,219 square-foot staging/work area because the area will be altered for less than one year and the impacted areas will be restored or recover to pre-project or ecologically improved conditions within one year.

Although project activities will temporarily impact 1,219 square feet and permanently impact 79 square feet of sensitive riparian habitat along Coyote Creek, impacts will be minimized through implementation of VHP Conditions 3 and 4, which require implementation of design phase, construction phase, and post-construction phase measures, including programmatic BMPs, performance standards, and control measures, to minimize increases of peak discharge of storm drain water and to reduce runoff of pollutants to protect water quality, including during construction. In addition, required construction period BMPs and post-construction

stormwater requirements will apply to the project as discussed above in Section 6.2.2, and these requirements would further avoid and reduce these impacts. Work will be brief, and vegetation removal would not include vegetation such as trees and shrubs that would take longer than one year to recover.

Also, the project will pay VHP impact fees for impacts of the project on natural habitats, including riparian/stream impact fees. Those fees will contribute to the VHP's conservation program, which includes restoration, enhancement, and management of riparian habitats, thus compensating for impacts of VHP-covered projects on riparian habitats. Thus, with implementation of the avoidance and minimization measures included in the VHP conditions and payment of fees into the VHP for permanent impacts to riparian habitat, potential project impacts on sensitive natural communities are considered less than significant under CEQA.

6.4 Impacts on Wetlands: 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 (Less than significant)

Wetlands and other waters of the U.S./state are present along the project alignment within the Coyote Creek corridor. The project design avoids all direct impacts on state or federally protected wetlands and aquatic habitats by spanning the Coyote Creek corridor with an overhead transmission line and avoiding the placement of riser poles to support the transmission line within wetland and aquatic habitats. Two riser poles to support the overhead portion of the alignment will be installed 35 feet northeast of the Coyote Creek bike path and in between the Metcalf Substation and Coyote Ranch Road; these poles are located well away from wetlands within the creek. One riser pole will be located within the banks of Coyote Creek, but this pole will be placed high on the banks outside of wetlands or aquatic habitats.

The project will comply with all VHP conditions, including Conditions 3 and 4, which requires implementation of design phase, construction phase, and post-construction phase measures, including programmatic BMPs, performance standards, and control measures, to minimize increases of peak discharge of storm drain water and to reduce runoff of pollutants to protect water quality, including during construction. In addition, required construction period BMPs and post-construction stormwater requirements will apply to the project as discussed above in Section 6.2.2, and these requirements would further avoid and reduce these impacts. Thus, with compliance with VHP Conditions 3 and 4, and permit requirements, potential project impacts on wetlands would be less than significant under CEQA.

6.5 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)

In the proposed project region, the vegetation communities along streams and rivers often function as environmental corridors. Along the project alignment, Coyote Creek functions as a wildlife movement corridor,

and Figure 5–6 of the VHP depicts landscape linkages along the project alignment associated with movement of animals along Coyote Creek.

By temporarily disturbing habitats southeast of Forsum Road along the project alignment, project activities could temporarily discourage some wildlife species from easily moving between suitable habitat patches during the construction period. In addition, noise and disturbance associated with construction activities could cause species that commonly use habitats along the project alignment for dispersal to avoid dispersal through the area, at least temporarily. Once construction activities are complete, however, wildlife movement conditions would be similar to pre-project conditions, and wildlife dispersal along and across the project alignment southeast of Forsum Road is expected to return to existing conditions. In addition, any discouragement of wildlife movement as a result of project activities would have a low effect, as there is ample open space surrounding the project alignment providing alternative wildlife movement pathways while project activities are being performed in a particular area.

Numerous animals breed within and around the project alignment, but no particularly important wildlife nursery areas are present in the project vicinity or would be impacted by the project.

Although proposed project activities may temporarily affect wildlife movement southeast of Forsum during construction, animals would still be able to move through or around the project work areas during construction, and no permanent impacts on wildlife movement would result from the project. Thus, the project will not interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, and this impact is less than significant. Although no mitigation is necessary to reduce project impacts on wildlife movement to less-than-significant levels, the VHP conservation program will assemble a Reserve System with landscape linkages and wildlife movement in mind to protect and, where possible, enhance movement pathways on a regional scale. The project's impact fees will thus contribute to the maintenance and improvement of opportunities for movement and genetic exchange of native plants and animals within and between natural communities inside and connecting to areas outside of the VHP Reserve System.

6.6 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)

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

Implementation of the proposed project would result in the removal of a small number of ordinance-sized trees that are present along the project alignment. Because this type of tree removal conflicts with the City of San José Municipal Code, it would be considered a significant impact under CEQA. The project proponent will be required to submit permit applications for tree removal for this project once it determines exactly which, and how many trees will be removed as part of the project. In accordance with the provisions of the San José Municipal Code, the Standard Permit Conditions listed below would be implemented by the project.

Standard Permit Conditions

- Trees impacted by the project will be replaced in accordance with all applicable laws, policies or guidelines, including Chapter 13 of the San José Municipal Code, General Plan policies MS-21.4, MS-21.5, MS-21.6, and CD-1.24, and City tree replacement ratios outlined in Table 2 below.

Table 2. City of San José Standard Tree Replacement Ratios

Diameter of Tree to Be Removed	Type of Tree to be Removed ¹			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
18 inches or greater	5:1	4:1	3:1	24-inch box
12-18 inches	3:1	2:1	none	24-inch box
Less than 12 inches	1:1	1:1	none	15-gallon container

¹x:x = tree replacement to tree loss ratio; Trees greater than 18" diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

- Where applicable, the project proponent will implement a Tree Protection Plan and include measures to implement during project construction to minimize impacts to trees to remain. The measures include marking trees to remain in place in project plans and have tree protection zones established around the canopy drip line zone to avoid serious injury or loss.
- Table 2 shows tree replacement ratios required by the project proponent. The species of trees to be planted shall be determined in consultation with the City Arborist and the Department of Planning, Building and Code Enforcement.

In the event the project alignment does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures would be implemented during the final design phase of the project, to the satisfaction of the City Arborist and the Director of Planning, Building and Code Enforcement:

- During the final design phase, the size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees to be planted along the project alignment.
- Pay Off-Site Tree Replacement Fee(s) to the City, prior to the issuance of Public Works grading permit(s), in accordance to the City Council approved Fee Resolution. The City will use the off-site tree replacement fee(s) to plant trees at alternative sites.

With the incorporation of the above measures to insure compliance with the City of San José tree ordinance, any potential impacts related to conflict with local policies or ordinances protecting trees would be less than significant.

6.6.2 Impacts Due to Encroachment into the Stream/Riparian Buffer (Less than Significant)

To protect the ecological functions and values of a stream, buffers are often prescribed between new development and the stream (or its banks or associated riparian habitat). These buffers provide habitat for plants and animals associated with the stream, provide habitat connectivity (i.e., areas used for wildlife movement, including flight paths for birds), reduce indirect effects of adjacent development (e.g., noise, lighting, human activity, or invasive species) on the natural stream and riparian habitats, allow for the possible future expansion of natural habitat, help to maintain site hydrology, and in some areas allow for runoff to be treated (e.g., by flowing through vegetated areas) before it enters the stream. In addition, along streams such as Coyote Creek, vegetative communities within stream buffers may provide important refugia for animals associated with wetland and riparian habitats along the river during flood events, when little to no such refugia may be present within the banks of the river itself.

In general, larger buffers protect more of the ecological functions and values of the stream than smaller buffers. Encroachment into the riparian buffer, such as development within the buffer, or landscaping or planting with non-native vegetation within the buffer, would represent a significant impact because of the currently high ecological value of Coyote Creek and the degradation to that value that would occur due to encroachment.

The City of San José's riparian buffer policy is administered through use of a Riparian Corridor Policy Study document that describes suggested buffer widths (City of San José 1999). The study, which was incorporated into the City's Envision San José 2040 General Plan (City of San José 2012) and further clarified by the Riparian Corridor Protection and Bird Safe Design Council Policy (City of San José 2016), states that riparian setbacks for the types of projects proposed under the Amendment should be measured 100 feet from the outside edges of riparian habitat or the top of bank, whichever is greater. However, the study also states that setback distances for individual sites may vary if consultation with the City and a qualified biologist, or other appropriate means, indicates that a smaller or larger setback is more appropriate for consistency with riparian preservation objectives (City of San José 1999). Goal E2.2 of the City's General Plan also requires a 100-foot setback in all but a limited number of circumstances, which are only applicable if no significant environmental impacts would occur from reduction of the setback distance (City of San José 2011).

Similarly, the City Council-adopted VHP, specifically Condition 11, includes an analysis of relevant literature and studies informing the applicant of appropriate setbacks based on stream hydrology and function that are adequate to provide protection of habitat functions and values (ICF International 2012). The VHP-defined standard setback for the Coyote Creek, which is a Category 1 stream, adjacent to the project alignment is 150 feet. The VHP provides for exceptions to standard stream setbacks, including an exception to prevent denying an owner economically viable use of their land or adversely affecting recognized real property interests (ICF International 2012), which the SCVHA may grant in the case of the project. However, regardless of project location, the VHP does not allow a stream setback to be reduced to a distance less than 50 feet for new development or 35 feet for existing development.

In our opinion, the proposed construction of a 130-foot tall riser pole within the banks of Coyote Creek will not substantially reduce the quality of riparian habitat along the creek, as this structure is located on the outer edge of riparian habitat and is expected to result in only minor short-term impacts (e.g., due to minor tree trimming) and no long-term impacts (e.g., due to tree removal or shading) impacts on the riparian habitat. Although this structure may provide a perching site for corvids such as common ravens (*Corvus corax*) and raptors such as red-tailed hawks, a number of similar structures are present in the project vicinity and construction of the new riser pole is not expected to substantially increase predation of wildlife along Coyote Creek compared to existing conditions. As a result, the potential impacts of the proposed construction of the new transmission line riser pole due to encroachment within the riparian setback is considered less than significant under CEQA.

Coordination with the City of San José and SCVHA is likely to be needed to determine if the project qualifies for an exception to riparian setback requirements.

6.7 Impact 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 (Less Than Significant)

The City of San José is a signatory to the VHP, which is a Habitat Conservation Plan and Natural Community Conservation Plan. As described in Section 6.1, the project is considered a “covered project” under the VHP. All VHP-covered species that may be affected by the proposed project are discussed in this report, including the California red-legged frog and western pond turtle (Section 6.2.5 above). Similarly, impacts on sensitive habitats, such as stream and serpentine habitats for which the VHP requires specific impact fees, are discussed in this report. The project will apply for VHP coverage and will adhere to all applicable VHP Conditions during project implementation. Therefore, the proposed project would not be in conflict with the VHP.

Because the proposed project is a covered activity under the VHP, it will adhere to all applicable VHP Conditions, and thus will not conflict with the VHP. The proposed project would not be in conflict with any other adopted habitat conservation plans or natural community conservation plans, or with any other approved local, regional, or state habitat conservation plans or natural community conservation plans. Thus, impacts associated with conflicts between the proposed project and any adopted habitat conservation plan or natural community conservation plan are less than significant.

6.8 Cumulative Impacts

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 City of San José and development activities covered by the VHP 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 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; compensatory mitigation and proactive conservation measures associated with each project, and the benefits to biological resources accruing from the VHP. In the absence of such avoidance, minimization, compensatory mitigation, and conservation measures, cumulatively significant impacts on biological resources would occur.

However, the San José General Plan contains conservation measures that would benefit biological resources, as well as measures to avoid, minimize, and mitigate impacts on these resources and the VHP includes numerous conservation measures to offset adverse effects on covered activities. Many projects in the region that impact resources similar to those impacted by the proposed project will be covered activities under the VHP and will mitigate impacts on sensitive habitats and many special-status species through that program, which will require payment of fees for habitat restoration.

Further, the project would implement a number of BMPs and mitigation measures to reduce impacts on both common and special-status species, as described above. Thus, the project will not contribute to substantial cumulative effects on biological resources.

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Appendix A. Tree Inventory Report



Tree Inventory Report

Hummingbird Energy
San Jose, CA 95139

PREPARED FOR
H. T. Harvey & Associates | Ecological Consultants
7983 University Avenue, Building D
Los Gatos, CA 95032

PREPARED BY:
HortScience | Bartlett Consulting
325 Ray Street
Pleasanton, CA 94566

July 16th, 2019

Tree Inventory Report Hummingbird Energy San Jose, CA

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Tree Assessment

Tree Inventory Report Hummingbird Energy San Jose, CA

Introduction and Overview

H. T. Harvey & Associates | Ecological Consultants is planning an environmental review of the Hummingbird Energy Utility Storage project in San Jose. The project entails work at four distinct locations. One site around Coyote Creek is undeveloped with dense tree cover. A second site is a paved parking lot. The two remaining sites are along Monterey Road. HortScience | Bartlett Consulting, divisions of The F.A. Bartlett Tree Expert Company, was asked to prepare a Tree Inventory Report for this project for permit submittal to the City of San Jose.

This report provides the following information:

1. Assessment of the health, structural condition, and suitability for preservation of the trees located on and adjacent to the proposed project area based on a visual inspection from the ground.
2. Standard tree replacement requirements.
3. General tree preservation guidelines during the design, construction, and maintenance phases of development.

Tree Survey Methods

Trees were assessed on July 22nd and July 29th 2019. The assessment included all trees located within and adjacent to the four proposed project areas. Off-site trees with canopies extending over the worksite boundaries were included in the assessment and viewed from the subject property. The survey procedure consisted of the following steps:

1. Identifying the tree species;
2. Tagging each tree with an identifying number and recording its location on a map;
3. Measuring the trunk diameter of each tree 6-feet and taller at a point 54-inches above grade; for off-site trees diameters were estimated.
4. Evaluating health and structural condition using a three-point rating scale based on a visual inspection from the ground:

Good A healthy tree that may have a slight decline in vigor, small amount of twig dieback, and minor structural defects that could be corrected.

Fair Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, and moderate structural defects that might be mitigated with regular care.

Poor Tree in decline, epicormic growth, extensive dieback of medium to large branches, and significant structural defects that cannot be abated.

5. Rating the suitability for preservation as “high”, “moderate”, or “low”. Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

High: Trees with good health and structural stability that have the potential for longevity at the site.

Moderate: Trees with somewhat declining health and/or structural defects that can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in ‘high’ category.

Low: Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes and generally are unsuited for use areas.

Description of Trees

One hundred and thirty-six (136) trees representing 11 species were evaluated (Table 1). Of these, 28 appeared to be located off-site with canopies overhanging the adjacent workspaces. Descriptions of each tree are found in the **Tree Assessment** and approximate locations are plotted on the **Tree Assessment Maps** (see Exhibits).

Of the trees assessed, 9% were dead, 36% were in poor condition, 44% were in fair condition, and 11% were in good condition. Seventeen (17) trees were along Monterey Road, nine were in parking lot planters at 6321 San Ignacio Avenue, and 110 were growing around Coyote Creek. Coast live oak, valley oak, and California black walnut were among the native species present.

**Table 1. Condition ratings and frequency of occurrence of trees
 Hummingbird Energy Utility Storage, San Jose, CA**

Common Name	Scientific Name	Condition				Total
		Dead	Poor	Fair	Good	
Paper birch	<i>Betula papyifera</i>	-	-	-	1	1
European white birch	<i>Betula pendula</i>	-	-	1	1	2
California black walnut	<i>Juglans hindsii</i>	2	41	45	2	90
Crape myrtle	<i>Lagerstroemia indica</i>	-	-	-	9	5
Fremont cottonwood	<i>Populus fremontii</i>	8	2	2	1	13
Purpleleaf plum	<i>Prunus cerasifera</i>	-	1	3	-	3
Coast live oak	<i>Quercus agrifolia</i>	-	-	-	1	1
Valley oak	<i>Quercus lobata</i>	-	-	-	2	2
Arroyo willow	<i>Salix lasiolepis</i>	1	-	3	-	4
Elderberry	<i>Sambucus nigra</i>	-	3	5	-	8
Mexican fan palm	<i>Washingtonia robusta</i>	-	-	-	2	2
Total		11	47	59	19	136

California black walnut was the most common species assessed (90 trees, 66% of the inventory). Of these, 80 water stressed walnuts were growing around Coyote Creek and ranged in condition from poor (40 trees) to fair (37 trees) (Photo 1). Two of the Coyote Creek California black walnuts (#18 and 137) were standing dead. The remaining ten walnuts (#8-17) were located in between Monterey Road and Caltrain railroad tracks. These walnuts were generally larger and in better condition than those growing around the creek.



Photo 1 – The Coyote Creek California black walnuts exhibited signs of water stress and canopy dieback.



Photo 2 – Fremont cottonwoods #54-56 were old, weathered snags with low suitability for retention.

Thirteen (13) Fremont cottonwoods were growing in clumps around Coyote Creek as well. Like the California black walnuts in the area, they exhibited varying degrees of canopy dieback and water stress. Eight (8) were dead standing snags (62% of the cottonwood population, Photo 2), two were in poor condition, two were in fair condition, and a single cottonwood, tree #60, was observed to be in good condition. Trunk diameters ranged from 12-inches to 42-inches and averaged 19-inches. Should these trees be located where damage to people or property is likely, then the majority are poor candidates for retention due to the presence of structural defects.

The remaining nine species comprised 29% of the trees assessed. The most noteworthy of these included

- Three birch trees (trees #1-3) and four crape myrtles (#4-7) were assessed in the landscaped median of Old Monterey Road. The birches had thin canopies and exhibited symptoms of water stress. The crape myrtles were vigorous and shrubby in form.
- Four purpleleaf plums (#79-82) and six crape myrtles (#83-87) were assessed in the paved parking lot of 6321 San Ignacio Avenue. The purpleleaf plums were in poor (1 tree) to fair (3 trees) condition and presented varying degrees of canopy dieback, sunscald, and water stress. The six crape myrtles were in good condition and had full, vigorous crowns.

The City of San Jose protects live and dead trees with trunk diameters of 12-inches or greater measured at 54-inches above ground level (Municipal Code Chapter 13.32). For multi-trunked trees, the trunk diameters were added together. Based on this definition, 71 *Ordinance Sized* trees were included in this assessment. These trees cannot be removed without a permit. Protected status of trees is provided in the **Tree Assessment** exhibit.

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.
- **Structural integrity**
Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. For instance, the structural integrity of many of the California black walnuts and Fremont cottonwoods around Coyote Creek was compromised.
- **Species response**
There is a wide variation in the response of individual species to construction impacts and changes in the environment. For example, California black walnuts are very susceptible to construction impacts while coast live oaks are more tolerant.
- **Tree age and longevity**
Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees such as the crape myrtles included in this assessment are better able to generate new tissue and respond to change.
- **Species invasiveness**
Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database <http://www.cal-ipc.org/plants/inventory/> lists species identified as being invasive. San Jose is part of the Central West Floristic Province. Mexican fan palm was the only assessed species listed as invasive. It is considered *moderately* invasive.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (see **Tree Assessment** exhibit). We consider trees with high suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

**Table 2. Tree suitability for preservation
 Hummingbird Energy, San Jose, CA**

High These are trees with good health and structural stability that have the potential for longevity at the site. Eleven (11) trees considered highly suitable for preservation including all nine crape myrtles and valley oaks #45 and 108.

Moderate Trees in this category have fair health and/or structural defects that may be abated with treatment. These trees require more intense management and monitoring, and may have shorter life-spans than those in the “high” category. Fourteen (14) trees considered moderately suitable for preservation included Fremont cottonwood #60, Mexican fan palms #59 and 67, purpleleaf plums #80-82, coast live oak #109, blue elderberries 140-141, and California black walnuts #139 and 142.

Low Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. One hundred and eleven (111) trees considered poor candidates for preservation included blue elderberries #75-76, 106-107, 118-119, and Arroyo willows #49, 57, 70, 77, and the majority of the California black walnuts and Fremont cottonwoods around Coyote Creek.

Tree Replacement Requirements

The City of San Jose requires that trees that are removed be replaced following the ratios shown in Table 4.

**Table 3. City of San Jose Mitigation Requirements
 Hummingbird Energy, San Jose, CA**

Diameter of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
12-inches or greater	5:1	4:1	3:1	15-gallon container
6 to 11-inches	3:1	2:1	none	15-gallon container
less than 6-inches	1:1	1:1	none	15-gallon container
x:x = tree replacement to tree loss ratio Note: Trees greater than 12-inches diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.				

Summary

The project entails work at four distinct locations in San Jose. One hundred and thirty-six (136) trees 6-feet in height and taller were evaluated across the four sites. One site around Coyote Creek is undeveloped with dense tree cover. A second site is a paved parking lot. The two remaining sites are along Monterey Road.

The nine crape myrtles assessed in the Monterey Road median and in the San Ignacio Avenue parking lot were young, vigorous trees with high suitability for preservation.

The three birches and four purpleleaf plums growing in the Monterey Road median and in the San Ignacio Avenue parking lot, respectively, were generally moderately suitable for preservation. The paper and European white birches had thin canopies as a result of water stress. The sun scalded purpleleaf plums also exhibited water stress.

Eighty (80) California black walnuts and 13 Fremont cottonwoods assessed along Coyote Creek were also water stressed and exhibited varying degrees of canopy dieback. This coupled with the two species' poor tolerance of construction impacts makes these trees poorly suited for preservation.

The remaining 17 trees were located at the Coyote Creek site and included 4 Arroyo willows, 8 blue elderberries, 2 Mexican fan palms, 2 valley oaks, and 1 coast live oak. Overall, tree condition varied from good (29%), to fair (47%), to poor/dead (23%) (Table 1, page 2). Four Arroyo willows and six blue elderberries were poorly suited for preservation, two valley oaks were highly suitable, while the remaining Coyote Creek trees were moderately suitable.

In total, 11 trees were highly suitable for preservation, 14 were moderately suitable, and 111 were poorly suited (Table 2, Page 5).

Seventy-one (71) of the 136 assessed trees met the City of San Jose's criteria for Protected *Ordinance Size* status per Municipal Code Chapter 13.32: all trees with a trunk diameter of 12-inches or greater. Protected *Ordinance Size* trees are identified in the **Tree Assessment** (see exhibits).

General Tree Preservation Guidelines

The following recommendations will help reduce impacts to trees from development as well as maintain and improve their health and vitality through the clearing, grading and construction phases. The key elements of a tree preservation would include:

1. Retaining select trees with high or moderate suitability for preservation, including trees around the perimeter of proposed work areas and those along Monterey Road and in the paved parking lot of 6321 San Ignacio Avenue.
2. Establishing **TREE PROTECTION ZONES** for each tree to be preserved. **TREE PROTECTION ZONES** are identified by the Consulting Arborist based on species tolerances, tree condition, trunk diameters, and the nature and proximity of the proposed disturbance.
3. Providing supplemental irrigation prior to and during the demolition and construction phases, especially for any of the birches, California black walnuts, and Fremont cottonwoods identified for preservation.

Design recommendations

1. Any changes to the plans affecting the trees should be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, site plans, improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans.
2. Plan for tree preservation by designing adequate space around trees to be preserved. This is the **TREE PROTECTION ZONE**: No grading, excavation, construction or storage of materials should occur within that zone. Route underground services including utilities, sub-drains, water or sewer around the **TREE PROTECTION ZONE**.
3. Irrigation systems must be designed so that no trenching severs roots larger than 1" in diameter will occur within the **TREE PROTECTION ZONE**.

4. **Tree Preservation Guidelines** prepared by the Consulting Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans.
5. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
6. Do not lime the subsoil within 50' of any tree identified for preservation. Lime is toxic to tree roots.
7. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.
8. Ensure adequate but not excessive water is supplied to trees; in most cases occasional irrigation will be required. Avoid directing runoff toward trees.

Pre-demolition and pre-construction treatments and recommendations

1. The demolition and construction superintendents shall meet with the Consulting Arborist before beginning work to review all work procedures, access routes, storage areas, and tree protection measures.
2. Fence all trees to be retained to completely enclose the Tree Protection Zone prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link. Fences are to remain until all grading and construction is completed. The Tree Protection Zones radii are listed in Table 4.
3. Apply and maintain 4-6" wood chip mulch within the **TREE PROTECTION ZONE**. Keep the mulch 2' from the base of tree trunks.
4. Fences are to remain until all grading and construction is completed. Where demolition must occur close to trees, such as removing curb and pavement, install trunk protection devices such as winding silt sock wattling around trunks or stacking hay bales around tree trunks.
5. Prune trees to be preserved to clean the crown of dead branches 1" and larger in diameter, raise canopies as needed for construction activities.
 - a. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300).
 - b. The Consulting Arborist will provide pruning specifications prior to site demolition.
 - c. Branches extending into the work area that can remain following demolition shall be tied back and protected from damage.
 - d. While in the tree the arborist shall perform an aerial inspection to identify any defects, weak branch and trunk attachments and decay not visible from the ground. Any additional work needed to mitigate defects shall be reported to the property owner.
6. Tree(s) to be removed that have branches extending into the canopy of tree(s) or located within the **TREE PROTECTION ZONE** of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker and not by the demolition contractor. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade.
7. Trees to be removed shall be felled so as to fall away from **TREE PROTECTION ZONE** and avoid pulling and breaking of roots of trees to remain. If roots are entwined, the

- Consulting Arborist may require first severing the major woody root mass before extracting the trees, or grinding the stump below ground.
8. All down brush and trees shall be removed from the **TREE PROTECTION ZONE** either by hand, or with equipment sitting outside the **TREE PROTECTION ZONE**. Extraction shall occur by lifting the material out, not by skidding across the ground. Brush shall be chipped and spread beneath the trees within the **TREE PROTECTION ZONE**
 9. Structures and underground features to be removed within the **TREE PROTECTION ZONE** shall use equipment that will minimize damage to trees above and below ground, and operate from outside the **TREE PROTECTION ZONE**. Tie back branches and wrap trunks with protective materials to protect from injury as directed by the Project arborist. The Project arborist shall be on-site during all operations within the **TREE PROTECTION ZONE** to monitor demolition activity.
 10. All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.

Recommendations for tree protection during construction

1. Any approved grading, construction, demolition or other work within the **TREE PROTECTION ZONE** should be monitored by the Consulting Arborist.
2. All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved.
3. Tree protection devices are to remain until all site work has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Consulting Arborist.
4. Construction trailers, traffic and storage areas must remain outside **TREE PROTECTION ZONE** at all times.
5. Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Project Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2" in diameter should be avoided.
6. If roots 2" and greater in diameter are encountered during site work and must be cut to complete the construction, the Project Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.
7. Prior to grading or trenching, trees may require root pruning outside the **TREE PROTECTION ZONE**. Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the Project Arborist.
8. Spoil from trench, footing, utility or other excavation shall not be placed within the **TREE PROTECTION ZONE**, neither temporarily nor permanently.
9. All grading within the dripline of trees shall be done using the smallest equipment possible. The equipment shall operate perpendicular to the tree and operate from outside the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.
10. All trees shall be irrigated on a schedule to be determined by the Consulting Arborist (every 3 to 6 weeks is typical). Each irrigation shall wet the soil within the **TREE PROTECTION ZONE** to a depth of 30".
11. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

12. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.
13. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.
14. Trees that accumulate a sufficient quantity of dust on their leaves, limbs and trunk as judged by the Consulting Arborist shall be spray-washed at the direction of the Project Arborist.

Maintenance of impacted trees

Our procedures included assessing trees for observable defects in structure. This is not to say that trees without significant defects will not fail. Failure of apparently defect-free trees does occur, especially during storm events. Wind forces, for example, can exceed the strength of defect-free wood causing branches and trunks to break. Wind forces coupled with rain can saturate soils, reducing their ability to hold roots, and blow over defect-free trees. Although we cannot predict all failures, identifying those trees with observable defects is a critical component of enhancing public safety.

Furthermore, trees change over time. Our inspections represent the condition of the tree at the time of inspection. As trees age, the likelihood of failure of branches or entire trees increases. Annual tree inspections are recommended to identify changes to tree health and structure. In addition, trees should be inspected after storms of unusual severity to evaluate damage and structural changes. Initiating these inspections is the responsibility of the client and/or tree owner.

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority.

If you have any questions about my observations or recommendations, please contact me.

HortScience | Bartlett Consulting



Jillian Keller
Certified Arborist #WE-12057A



Exhibits

**Tree Assessment Map 1
Coyote Creek**

**Tree Assessment Map 2
Monterey Road and San Ignacio Avenue**

Tree Assessment



Tree Assessment Map

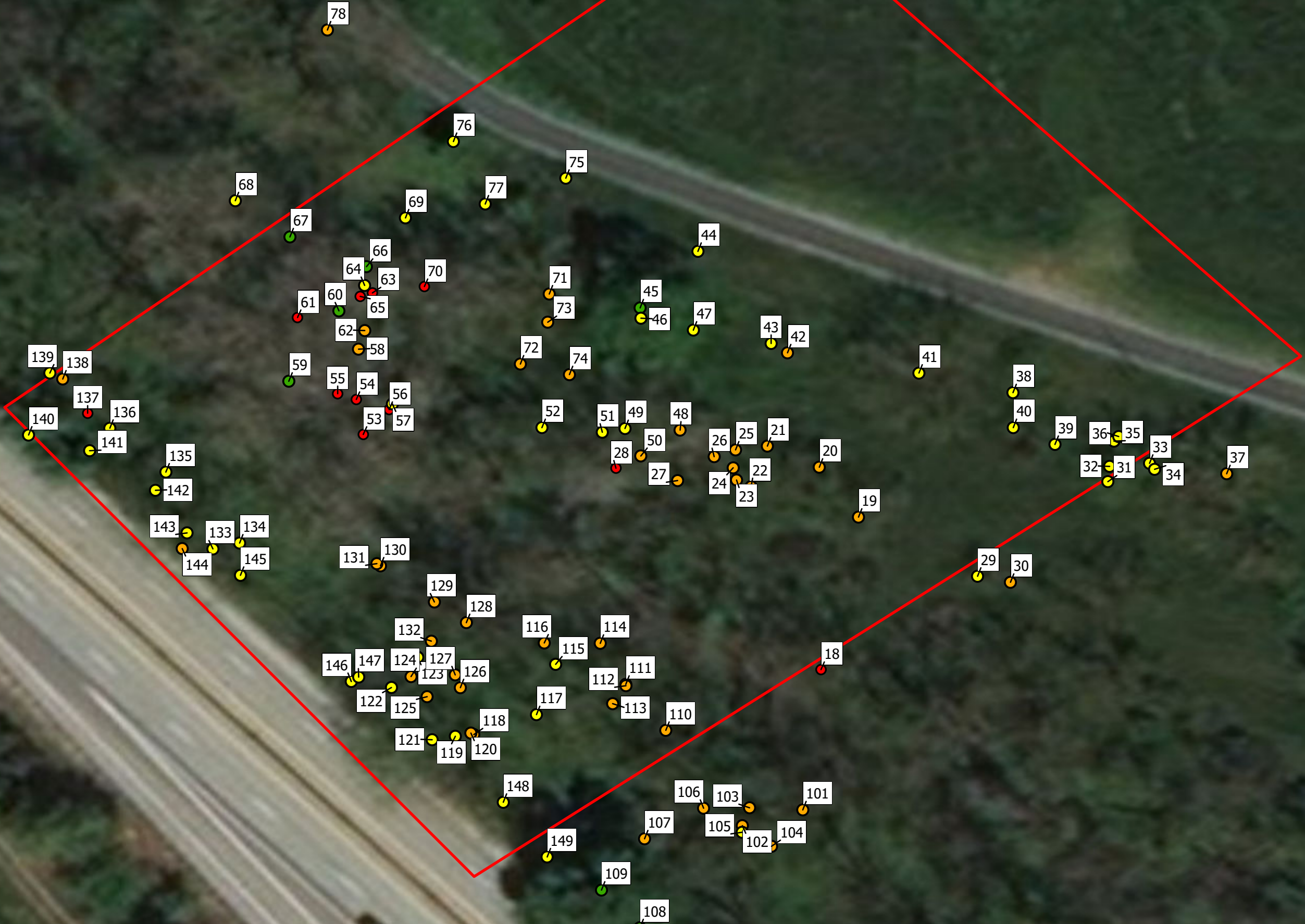
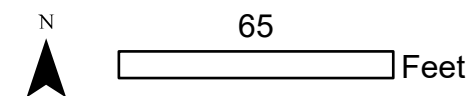
Map 1 Hummingbird Energy San Jose, CA

Prepared for:
H.T. Harvey & Associates
July 2019

- Notes:
1. Tree locations are collected by HBC on a Geo 7x decimeter GPS.
 2. Project area provided by H.T. Harvey.
 3. Aerial photo provided by ESRI.

Condition

- Dead
- Fair
- Good
- Poor




Tree Assessment Map

Map 2 Hummingbird Energy San Jose, CA



Prepared for:
H.T. Harvey & Associates
July 2019

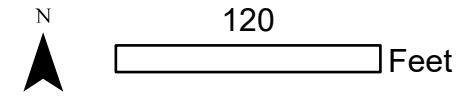
- Notes:
1. Tree locations are collected by HBC on a Geo 7x decimeter GPS.
 2. Project area provided by H.T. Harvey.
 3. Aerial photo provided by ESRI.

Legend

 ProjectArea

Condition

-  Fair
-  Good
-  Poor



 **HORT SCIENCE**
BARTLETT CONSULTING
325 Ray Street
Pleasanton, CA 94566
925-484-0211

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Tree Assessment

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
1	Paper birch	6	No	Good	Moderate	Median tree; Good form; Irrigation; Minor twig dieback.
2	European white birch	8	No	Good	Moderate	Median tree; Minor twig dieback; Codominant at 6'; Thin canopy; Water stressed.
3	European white birch	6	No	Fair	Moderate	Minor twig dieback; Thin upper crown; Water stressed.
4	Crape myrtle	3,2,2,2,1,1,1,1,1	Protected	Good	High	Multistem median tree with multiple attachments at base; Full vigorous canopy; White flowering; Shrubby.
5	Crape myrtle	2,2,2,2,2,2,1,1,1,1	Protected	Good	High	Shrub form; Interior dead wood.
6	Crape myrtle	2,1,1,1,1,1,1,1,1,1,1	No	Good	High	Pink flowering; Shrubby; Median tree; Multiple attachments at base; Full vigorous crown.
7	Crape myrtle	3,3,2,2,2,1,1,1,1,1	Protected	Good	High	Shrub form.
8	California black walnut	38	Protected	Fair	Low	In between road and railroad tracks; Codominant at 7'; 3.5' healing wound on east side of trunk; Branch dieback; Deadwood in canopy; Beneath overhead electrical lines.
9	California black walnut	7	No	Good	Low	Overhead utility lines; Swelling on south side of root flare; Growing 2' north of similar tree.
10	California black walnut	6	No	Fair	Low	In between road and railroad tracks; 2' from adjacent walnut; Decaying wound at base on northern side of trunk; Codominant at 13'; Beneath overhead electrical lines.
11	California black walnut	46	Protected	Fair	Low	Codominant at 5'; Guy wires; Buried root flare; Overhead utility lines.
12	California black walnut	45	Protected	Fair	Low	In between road and railroad tracks; Branch dieback; Large deadwood in canopy; Codominant at 7'; 1' decaying wound 7' up on southern side of trunk; Epicormic growth; Topped beneath overhead electrical.
13	California black walnut	33	Protected	Poor	Low	Wound on southern root flare; Epicormic growth; Topped pruning; Buried root flare; Also tagged 415; Overhead utility lines.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
14	California black walnut	29	Protected	Fair	Low	In between road and railroad tracks; Branch dieback; Deadwood in canopy; Epicormic growth; Codominant at 7'; Topped beneath overhead electrical; Burrows around base of tree; Walnut sapling volunteers growing nearby.
15	California black walnut	19,16,11	Protected	Fair	Low	Multiple pruning wounds below 6'; Buried root flare; Overhead utility lines.
16	California black walnut	13,13,12,11,11	Protected	Fair	Low	Multiple attachments at 1'; In between road and railroad tracks; Branch dieback; Deadwood in canopy; Topped beneath overhead electrical; Trunk close to guardrail on eastern side of tree; Poor structure; Many codominant stems throughout canopy.
17	California black walnut	37	Protected	Fair	Low	Overhead utility lines; Buried root flare; 3' from utility pole; Epicormics from basal mass (north side); Dead wood in canopy.
18	California black walnut	16	Protected	Dead	Low	Adjacent to creek; Dead standing; Pink flagging on trunk; Orange lichen on branches.
19	California black walnut	13,9,8	Protected	Poor	Low	Thin canopy; Branch dieback and deadwood in canopy; Multiple attachments at base; Woody debris against trunk; Codominant at 1'.
20	California black walnut	20,9	Protected	Poor	Low	Significant dieback on larger stem; Codominant at 1'; Poor structure; Water stressed; Live sprouts at base.
21	California black walnut	4	No	Poor	Low	Significant branch dieback; Water stressed; Main trunk dieback.
22	California black walnut	4	No	Poor	Low	Thin canopy and branch dieback; Water stressed; Codominant at 6'.
23	California black walnut	4	No	Poor	Low	Thin canopy and branch dieback; Water stressed; Codominant at 5'.
24	California black walnut	4	No	Poor	Low	Thin canopy and branch dieback; Water stressed.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
25	California black walnut	5	No	Poor	Low	Thin canopy and branch dieback; Water stressed; Main trunk dieback.
26	California black walnut	5	No	Poor	Low	Thin canopy and branch dieback; Water stressed; Main trunk dieback; Dead hanging branches.
27	California black walnut	5	No	Poor	Low	Very little live foliage; Significant branch dieback; Adjacent dead tree present in canopy.
28	Fremont cottonwood	12,11	Protected	Dead	Low	Main trunk laying on ground; 2 upright dead stems grew vertically from main trunk; Dead standing, No live foliage.
29	California black walnut	8,7,5	Protected	Fair	Low	Tip and branch dieback; Codominant at 3.5'; Water stressed; Basal swelling; Leaning slightly west.
30	California black walnut	3	No	Poor	Low	Significant branch and main trunk dieback; Only the bottom half of canopy is alive; Water stressed.
31	California black walnut	11	No	Fair	Low	Moderate branch dieback; Codominant 7'; Water stressed.
32	California black walnut	5	No	Fair	Low	Moderate branch and main trunk dieback; Leaning away from #31; Water stressed.
33	California black walnut	7	No	Fair	Low	Moderate branch dieback; Moderate trunk decay; Codominant at 10'; Downhill from path; Water stressed.
34	California black walnut	8	No	Fair	Low	Moderate branch and main trunk dieback; Downhill from path; Water stressed.
35	California black walnut	8	No	Fair	Low	Moderate branch dieback; Moderate trunk decay; Downhill from path; Codominant at 5'; Water stressed.
36	California black walnut	5	No	Fair	Low	Moderate branch and main trunk dieback; Downhill from path; Leaning away from #35; Water stressed.
37	California black walnut	28,14	Protected	Poor	Low	Half of canopy is dead; Large dead branches leaning against trunk; Significant deadwood in canopy; Water stressed; Codominant at 6.5'; Adjacent to path.
38	California black walnut	12,8	Protected	Fair	Low	Moderate branch dieback and deadwood in canopy; Water stressed; Codominant at 2'; Adjacent to path.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
39	California black walnut	4	No	Fair	Low	Moderate branch dieback; Moderate trunk decay; Deadwood in canopy; Water stressed.
40	California black walnut	6,5	No	Fair	Low	Moderate branch and main trunk dieback; Deadwood in canopy; Water stressed; Codominant at 3' and 6'.
41	California black walnut	40	Protected	Fair	Low	Moderate branch dieback; Moderate trunk decay; Deadwood in canopy; Water stressed; Codominant with 3 stems at 4'; Poor structure with multiple narrow branch attachments; Woody debris against trunk.
42	California black walnut	8,8	Protected	Poor	Low	Significant branch and main trunk dieback; Only the bottom half of the canopy is live; Downhill from path; Codominant with narrow angle of attachment at 3'.
43	California black walnut	5	No	Fair	Low	Moderate branch dieback; Moderate trunk decay; Downhill from path; Water stressed; Leaning away from #42.
44	California black walnut	6	No	Fair	Low	Moderate main trunk dieback; Adjacent to path; Suppressed and water stressed.
45	Valley oak	24	Protected	Good	High	Minor twig dieback; Full vigorous canopy; Codominant large stems with seam at 16'.
46	California black walnut	2	No	Fair	Low	Volunteer with cracked main trunk; Suppressed; Water stressed.
47	California black walnut	3	No	Fair	Low	Sapling volunteer; Moderate branch dieback.
48	California black walnut	4,4,3	No	Poor	Low	Significant branch and main trunk dieback; Some live sprouts at base; A dead tree is leaning over this tree; epicormic sprouts.
49	Arroyo willow	9	No	Fair	Low	Large trunk of adjacent walnut is resting on willow branch crotch; Tall with low live crown ratio.
50	California black walnut	7	No	Poor	Low	Top half of canopy is dead; Live sprouts; Water stressed.
51	California black walnut	20,19,16	Protected	Fair	Low	Moderate twig and branch dieback; Large codominant stems at 3'.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
52	California black walnut	13,8,8	Protected	Fair	Low	Upright stems growing off of fallen trunk; Adjacent to woody debris pile; 13' long stem lying on ground; 8" stems have full vigorous canopies.
53	Fremont cottonwood	16	Protected	Dead	Low	Old tall snag; No lateral branches; Several dead and dried stems resting against trunk.
54	Fremont cottonwood	16	Protected	Dead	Low	Old, 6' tall standing snag; No lateral branches; Several dead and dried stems resting against trunk.
55	Fremont cottonwood	19	Protected	Dead	Low	Old, 15' tall standing snag; No lateral branches; Several dead and dried stems resting against trunk.
56	Fremont cottonwood	17	Protected	Dead	Low	Old, tall standing snag; No lateral branches; Several dead and dried stems resting against trunk; Bark sloughing off.
57	Arroyo willow	16	Protected	Fair	Low	Several large stems against trunk; Leaning east away from #56; Asymmetric vigorous crown.
58	Fremont cottonwood	18	Protected	Poor	Low	Dead standing snag; Several large trunks leaning against it; Bark is sloughing off; Large dead stem is resting in branch crotch at the top of the tree.
59	Mexican fan palm	18	Protected	Good	Moderate	5' of bare trunk; Adjacent to creek.
60	Fremont cottonwood	16	Protected	Good	Moderate	Part of cottonwood grouping; Full vigorous crown; Adjacent to creek; Many dead and dried branches resting against trunk.
61	Fremont cottonwood	20	Protected	Dead	Low	Part of cottonwood grouping; Dead standing with lateral branches still attached; Bark sloughing off.
62	Fremont cottonwood	18,12	Protected	Poor	Low	Part of cottonwood grouping; Many dead and dried branches resting against trunk; 12" stem has decay column on south side; Full vigorous crown.
63	Fremont cottonwood	18	Protected	Dead	Low	Part of cottonwood grouping; Dead standing snag; Bark sloughing off.
64	Fremont cottonwood	12	Protected	Fair	Low	Part of cottonwood grouping; Full vigorous crown; Previously lost central leader; structural defects.
65	Fremont cottonwood	18	Protected	Dead	Low	Part of cottonwood grouping; Dead standing; Bark sloughing off; Lateral branches still attached.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
66	California black walnut	1	No	Good	Low	Small volunteer adjacent to cottonwood grouping; tag is zip-tied to tree.
67	Mexican fan palm	16	Protected	Good	Moderate	2' of bare brown trunk.
68	Fremont cottonwood	42	Protected	Fair	Low	Moderate branch and twig dieback; Codominant stems at 20'; Deadwood in canopy; Cracks along branches and visible decay; Appears to be an off-site tree.
69	California black walnut	4	No	Fair	Low	Moderate branch and twig dieback; Codominant stems at 1'; Deadwood in canopy; Water stressed; Main trunk leaning east.
70	Arroyo willow	14,13,12,9,9,7	No	Dead	Low	Dead standing willow with multiple trunks; Lateral branches still attached; Branches cracking and bark sloughing off.
71	California black walnut	19	Protected	Poor	Low	Live sprouts at base; Dead canopy; Lateral branches still attached.
72	California black walnut	5	No	Poor	Low	Live sprouts at base; Top half and main trunk of tree are dead; Water stressed.
73	California black walnut	12	Protected	Poor	Low	Live sprouts at base; Canopy of tree is dead; Water stressed.
74	California black walnut	11	No	Poor	Low	Codominant at 14'; Significant branch and main trunk dieback.
75	Blue elderberry	5,4,2,2	Protected	Fair	Low	Shrubby volunteer along path; Multiple attachments at base.
76	Blue elderberry	10,10,6,3	Protected	Fair	Low	Shrubby volunteer along path; Multiple attachments at base; decay at base.
77	Arroyo willow	6	No	Fair	Low	6" main trunk is lying on ground; Many small stems growing vertical off of main stem.
78	California black walnut	65	Protected	Poor	Low	No tag and inaccessible; Bee hive in large lateral branch; Approximately 20' from path; 3/4 of canopy is dead; Live sprouts at base; May be an off-site tree; Base is not visible; Deadwood in canopy; Cracked and splitting branches.
79	Purpleleaf plum	5	No	Poor	Low	Fruiting tree in parking lot planter; sun burnt bark on west side of trunk; bark sloughing off; codominant at 6.5'; slight lean east; internal decay; twig dieback.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
80	Purpleleaf plum	6	No	Fair	Moderate	Fruiting tree in parking lot planter; Multiple attachments at 6.5'; Slight lean south, Minor twig dieback.
81	Purpleleaf plum	11	No	Fair	Moderate	Multiple attachments at 4'; Moderate twig dieback; Water stressed.
82	Purpleleaf plum	5,5,4,4,3,3	Yes	Fair	Moderate	Multiple attachments at 2.5'; Bark damage on western side of trunk; Tree in parking lot planter, Minor twig dieback; Water stressed.
83	Crape myrtle	2	No	Good	High	In parking lot planter; Young and vigorous; White flowering; planted too high ; Codominant at 5'.
84	Crape myrtle	2	No	Good	High	In parking lot planter; Young and vigorous; White flowering; Codominant at 5'; Good form and structure; Zip tied tag.
85	Crape myrtle	2	No	Good	High	In parking lot planter; Young and vigorous; White flowering; Codominant at 5'; Good form and structure; Zip tied tag.
86	Crape myrtle	2	No	Good	High	In parking lot planter; Young and vigorous; White flowering; Codominant at 5'; Good form and structure; Zip tied tag; Compartmentalizing damage at base on south aide of trunk.
87	Crape myrtle	2	No	Good	High	In parking lot planter; Young and vigorous; White flowering; Codominant at 5'; Good form and structure; Zip tied tag.
101	California black walnut	48	Protected	Poor	Low	Creek side; Only epicormic sprouts alive.
102	California black walnut	14	Protected	Poor	Low	Grouped with 103 and 104; Epicormic sprouts only alive.
103	California black walnut	16	Protected	Poor	Low	Only epicormic root sprouts alive.
104	California black walnut	15	Protected	Poor	Low	Only epicormic root sprouts alive.
105	California black walnut	10	No	Fair	Low	Leaning to west.
106	Blue elderberry	9,9,9,7,4,4	Protected	Poor	Low	Significant deadwood on lower canopy.

Tree Assessment

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
107	Blue elderberry	9,9,6,4	Protected	Poor	Low	Significant decay in trunks.
108	Valley oak	26	Protected	Good	High	Upright form; Overhead utility lines; On fence line.
109	Coast live oak	20,14	Protected	Good	Moderate	Most of canopy over Right-of-Way; Overhead utility lines; Codominant at 1'.
110	California black walnut	26	Protected	Poor	Low	Only epicormic sprouts alive; Near creek bank.
111	California black walnut	10	No	Fair	Low	Leaning east; On eroding river bank.
112	California black walnut	14	Protected	Poor	Low	On river bank; Deadwood in upper canopy.
113	California black walnut	21	Protected	Poor	Low	Only epicormic sprouts alive.
114	California black walnut	5	No	Poor	Low	Top dead; 10 foot tall; Substantial dead stems at base.
115	California black walnut	12	Protected	Fair	Low	Upright canopy; Bifurcates at 6 feet.
116	California black walnut	6	No	Poor	Low	Top is dead; On creek bank.
117	California black walnut	16	Protected	Fair	Low	Upright canopy; Overextended branches.
118	Blue elderberry	3,2,1,1	No	Poor	Low	All canopy leaning west; Basal decay.
119	Blue elderberry	3,3,2,1,1	No	Fair	Low	Eastern portion dead; Western portion growing upright.
120	California black walnut	15,12,12,10	Protected	Poor	Low	Fence line; Overhead utility lines; Only epicormic sprouts alive.
121	California black walnut	18,16,14,14,12,12,10	Protected	Fair	Low	Overhead utility lines; Most of canopy growing towards or over the Right-of-Way.
122	California black walnut	11	No	Fair	Low	Canopy growing west; Overextended branches; Overhead utility lines.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
123	California black walnut	9,7	Protected	Fair	Low	Upright canopy; Bifurcates at 3 feet.
124	California black walnut	7	No	Poor	Low	Top dead; Inferior branching.
125	California black walnut	6	No	Poor	Low	Top dead; Inferior branching; 8 feet south of tree #124.
126	California black walnut	3	No	Poor	Low	Top dead; Only lower branches alive.
127	California black walnut	7,4	No	Poor	Low	Decaying branch at bifurcation (3 feet above grade); Overextended branch to east.
128	California black walnut	40	Protected	Poor	Low	Creek bank; Only live part is lower canopy sprouts.
129	California black walnut	7	No	Poor	Low	Leaning towards north; Tip dieback; Creek bank.
130	California black walnut	6	No	Poor	Low	Codominant at 4 feet; Top dead; Creek bank.
131	California black walnut	6,6	Protected	Poor	Low	Leaning towards south; Tip dieback; Partially failed; Creek bank.
132	California black walnut	6	No	Poor	Low	Leaning west; Tip dieback; Growing under other canopies.
133	California black walnut	17,14,12,12,10,10,9	Protected	Fair	Low	Overhead utility lines; Most of canopy growing towards or over the Right-of-Way; Tip dieback; Fence line.
134	California black walnut	3	No	Fair	Low	Codominant at 5 feet; South side dead.
135	California black walnut	6	No	Fair	Moderate	Creek bank; Overextended branches.
136	California black walnut	3	No	Fair	Low	Main stem broke at 3 feet; Creek bank; Near steep drop off.
137	California black walnut	7,5	Protected	Dead	-	Leaning towards west; Trunk In creek.

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Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition	Suitability for Preservation	Comments
138	California black walnut	8,8	Protected	Poor	Low	Leaning towards west; Codominant trunk in creek.
139	California black walnut	10	No	Fair	Moderate	Leaning towards west; Tip dieback; Creek bank.
140	Blue elderberry	12,10,7,5,3,3,3	Protected	Fair	Moderate	Fence line; Western canopy pruned by vehicles; Epicormic sprouts at base; Dense canopy.
141	Blue elderberry	13,9,6,5,3,3	Protected	Fair	Moderate	Fence line; Western canopy pruned by vehicles; Dense canopy.
142	California black walnut	18	Protected	Fair	Moderate	Upright canopy; Abuts Right-of-Way; Overhead utility lines.
143	California black walnut	7	No	Fair	Low	Leaning towards road.
144	California black walnut	7	No	Poor	Low	Leaning towards road; Topped at 8 feet.
145	California black walnut	8,8	Protected	Fair	Low	Codominant at base; Dead wood in canopy; Leaning towards road.
146	California black walnut	7	No	Fair	Low	Leaning west towards road; One sided canopy due to close proximity to tree #147.
147	California black walnut	8,7	Protected	Fair	Low	Codominant at base; Dead wood in canopy; Leaning towards road.
148	California black walnut	12,8	Protected	Fair	Low	Codominant at base; 4' decay at base; Deadwood in canopy; Leaning towards road; Fence line.
149	California black walnut	2,2,2	No	Fair	Low	Fence line; One lateral growing toward Right-of-Way.

Appendix B. Photos of the Project Alignment Area



Photo 1. Urban-suburban land use along Monterey Road where the majority of the project alignment is located.



Photo 2. Eucalyptus trees on the edge of the parking lot in the proposed substation location.



Photo 3. California annual grassland in between the Coyote Creek riparian corridor and the Metcalf Substation.



Photo 4. Disturbed annual grassland in between the riser pole and the Metcalf Substation where trenching for the transmission line will occur.



Photo 5. Mixed riparian forest and woodland along Coyote Creek where the transmission line will span the creek corridor.



Photo 6. Freshwater emergent wetlands along the edges of the Coyote Creek channel.

Appendix C. Plants Observed

Family	Scientific Name	Common Name	Native/Cal-IPPC status ¹
Eudicots			
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Elderberry	Native
Anacardiaceae	<i>Toxicodendron diversilobum</i>	Pacific poison-oak	Native
Apiaceae	<i>Conium maculatum</i>	Poison-hemlock	Non-native/M
	<i>Foeniculum vulgare</i>	Sweet fennel	Non-native/H
Apocynaceae	<i>Asclepias fascicularis</i>	Narrow leaf milkweed	Native
Asteraceae	<i>Artemisia douglasiana</i>	Douglas' wormwood	Native
	<i>Baccharis pilularis</i>	Coyote brush	Native
	<i>Baccharis salicifolia</i>	Mule's-fat	Native
	<i>Carduus pycnocephalus</i>	Italian thistle	Non-native/M
	<i>Carduus tenuiflorus</i>	Slender flowered thistle	Non-native/L
	<i>Centaurea solstitialis</i>	Yellow starthistle	Non-native/H
	<i>Cirsium vulgare</i>	Bull thistle	Non-native/M
	<i>Crepis vesicaria</i> ssp. <i>taraxacifolia</i>	Weedy hawksbeard	Non-native
	<i>Dittrichia graveolens</i>	Stinkwort	Non-native/M
	<i>Erigeron bonariensis</i>	Flax-leaved horseweed	Non-native
	<i>Erigeron canadensis</i>	Canadian horseweed	Native
	<i>Helenium puberulum</i>	Rosilla	Native
	<i>Helminthotheca echioides</i>	Bristly ox-tongue	Non-native/L
<i>Lactuca serriola</i>	Prickly lettuce	Non-native	
<i>Xanthium strumarium</i>	Rough cocklebur	Native	
Brassicaceae	<i>Hirschfeldia incana</i>	Summer mustard	Non-native/M
	<i>Lepidium latifolium</i>	Broad-leaf pepperwort	Non-native/H
	<i>Raphanus sativus</i>	Cultivated radish	Non-native/L
Dipsacaceae	<i>Dipsacus fullonum</i>	Fuller's teasel	Non-native/M
Euphorbiaceae	<i>Eremocarpus setiger</i>	Turkey-mullein	Native
Fagaceae	<i>Quercus agrifolia</i>	Coast live oak	Native
	<i>Quercus lobata</i>	Valley oak	Native
Geraniaceae	<i>Erodium cicutarium</i>	Red stemmed filaree	Non-native/L
Juglandaceae	<i>Juglans hindsii</i>	Northern California black walnut	Native
Juncaceae	<i>Juncus effusus</i>	Common rush	Native
Lamiaceae	<i>Mentha arvensis</i>	American wild mint	Native
	<i>Mentha pulegium</i>	Pennyroyal	Non-native/M
	<i>Stachys ajugoides</i> var. <i>rigida</i>	Rigid hedge nettle	Native
Malvaceae	<i>Malva nicaeensis</i>	Bull mallow	Non-native
Myrsinaceae	<i>Lysimachia arvensis</i>	Scarlet pimpernel	Native
Onagraceae	<i>Ludwigia peploides</i>	Floating primrose willow	Non-native/H
Plantaginaceae	<i>Veronica americana</i>	American brooklime	Native
Polygonaceae	<i>Persicaria lapathifolia</i>	Common knotweed	Native
	<i>Persicaria maculosa</i>	Spotted ladythumb	Native

Family	Scientific Name	Common Name	Native/Cal-IPPC status ¹
	<i>Rumex crispus</i>	Curly dock	Non-native/L
Rosaceae	<i>Rosa californica</i>	California wild rose	Native
Rubiaceae	<i>Galium porrigens</i>	Climbing bedstraw	Native
Salicaceae	<i>Populus fremontii</i>	Fremont cottonwood	Native
	<i>Salix lasiolepis</i>	Arroyo willow	Native
	<i>Salix laevigata</i>	Red willow	Native
Sapindaceae	<i>Aesculus californica</i>	California buckeye	Native
Scrophulariaceae	<i>Verbascum thapsus</i>	Woolly mullein	Non-native/L
Urticaceae	<i>Urtica dioica</i>	Stinging nettle	Native
Monocots			
Araceae	<i>Lemna</i> sp.	Duckweed	Native
Arecaceae	<i>Washingtonia robusta</i>	Washington fan palm	Non-native/M
Cyperaceae	<i>Cyperus eragrostis</i>	Tall flatsedge	Native
Poaceae	<i>Avena fatua</i>	Wild oats	Non-native/M
	<i>Bromus diandrus</i>	Ripgut brome	Non-native/M
	<i>Bromus hordeaceus</i>	Soft brome	Non-native/L
	<i>Festuca perenne</i>	Italian rye grass	Non-native/M
	<i>Leersia oryzoides</i>	Rice cutgrass	Native
	<i>Leymus triticoides</i>	Creeping wild rye	Native
	<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	Non-native/L
	<i>Stipa millacea</i>	Smilo grass	Non-native/L
Typhaceae	<i>Typha latifolia</i>	Broadleaf cattail	Native
¹ Cal-IPPC status (Cal-IPPC 2019): L = Limited. These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. M = Moderate. These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. H = High. These species have 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. Most are widely distributed ecologically.			