

5.4 Biological Resources

BIOLOGICAL RESOURCES

Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

5.4.1 Setting

This section describes the biological resources in the proposed project area. It describes the existing biotic environment, including common plants and wildlife, sensitive habitats, special-status species and their locations in relation to the proposed project. Information used in preparing this section was derived from:

- Proponent’s Environmental Assessment for the Windsor Substation Project (PG&E 2010);
- Supplement to the Proponent’s Environmental Assessment for the Windsor Substation Project (PG&E 2011);
- Records of sensitive species locations from the California Natural Diversity Data Base for a five mile radius around project site (CNDDDB 2011);
- Records of sensitive species locations from the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California for Healdsburg USGS quad and eight surrounding quads (CNPS 2011);
- List of federally listed species for the Healdsburg quadrangle and around Sonoma County from the United States Fish and Wildlife Service (USFWS 2011);
- Technical information available through the USFWS, California Department of Fish and Wildlife (CDFW), and Sonoma County; and

- Biological surveys conducted by TRC Solutions, Inc. (TRC) in 2011 and 2012. General biological reconnaissance surveys were conducted in February and April. Wetland surveys were conducted February, April, May, and June 2011. Rare plant surveys were conducted in April, May, and June of 2011 and 2012. Segments of the Fulton No. 1 60 kV Power Line located in landscaped backyards of private residences were not surveyed. Survey areas on inaccessible private property were observed from public rights-of-way where possible. Biological survey results were field-verified by Aspen Environmental Group on October 19, 2011. For the purposes of this analysis, the survey area (and study area) for biological resources includes (see Figure 5.4-1):⁹
 - The entire substation parcel;
 - 75-foot radius around the proposed TSP;
 - 50-foot radius around existing wood poles along the Fulton No. 1 60 kV Power Line (plus the entire area to the railroad tracks at poles a23 through a28 and at pole a36);
 - 50-foot radius around the existing wood poles along the 12 kV power line on Old Redwood Highway; and
 - A 25-foot-wide corridor between the five northernmost poles on the Fulton No. 1 60 kV Power Line (for proposed access road); 10-foot-wide corridors between the rest of the wooden poles to be replaced on both the Fulton No. 1 60 kV Power Line and the 12 kV power line; a 40-foot-wide corridor between Joe Rodota Road and Windsor River Road (proposed underground conduit); a 100-foot-wide corridor between the substation parcel and the Fulton No. 1 60 kV Power Line; and 30-foot-wide corridor along the southern fenceline of the property west of the substation to Herb Road (for proposed access road).

Existing Conditions

The proposed project is located in the Santa Rosa Plain. The regional setting includes a mix of disturbed ruderal habitat, agricultural areas (i.e., vineyards), landscaped areas, commercial development and residential subdivisions.

Substation Site. The proposed substation site is relatively flat and is dominated by concrete foundations, asphalt, and gravel. The western and southern portions of the site contain ruderal/disturbed vegetation. There are mature trees along the northern, southern, and western property lines. There is a seasonal swale along parts of the southern and western boundaries, a small drainage ditch along the northern boundary, and a roadside ditch at the eastern edge of the property along Old Redwood Highway.

Fulton No. 1 60 kV Power Line. Habitat along the Fulton No. 1 60 kV Power Line is a mosaic of natural habitats such as annual grasslands, wetlands, and oak woodlands; rural, medium-, and high-density resi-

⁹ TRC used slightly different survey areas for general reconnaissance surveys, wetland surveys, and rare plant surveys. All of the surveys covered the substation parcel and the radii around the existing poles; however, the surveyed corridor areas varied. The reconnaissance surveys covered 10-foot corridors between poles along the Fulton No. 1 Power Line; a 10-foot corridor between Joe Rodota Road and Windsor River Road; and the 100-foot corridor between the substation site and the Fulton No. 1 60 Power Line. The wetlands surveys included a 25-foot corridor between the five poles west of the substation site; a 30-foot corridor along the southern boundary of the property west of the substation site; and 40-foot corridor for the area between Joe Rodota Road and Windsor River Road. Rare plant surveys covered the same survey areas for the substation site, vacant property west of the substation site, and the Fulton No. 1 60 kV Power Line. The rare plant surveys did not cover the 12 kV distribution line.

dential areas, livestock areas, public roadways and other developed/disturbed areas. The property directly west of the proposed substation (Alternative Site #6 in Section 4.18 of the Project Description) is where the TSP, three replacement poles, and an access road would be located. This area contains mostly annual grassland, along with some oak woodland as well as a seasonal swale and three vernal pools. Directly south of this vacant property is a parcel that is part of the proposed Kerry Conservation Site, which is a mitigation area in the Santa Rosa Plain Conservation Strategy (refer to Figure 5.4-1). CDFW intends for this parcel to serve as a special-status plant mitigation area. In January 2012, CDFW indicated that the title to 3.4 acres of this parcel will be transferred to CDFW (PG&E 2011-2013). In January 2013, CDFW indicated that the area would either serve as a mitigation bank or as site-specific mitigation and that the timing of transfer to CDFW would depend on which approach is used (CDFW 2013). The pending mitigation area parcel contains vernal pools and fairly dense oak woodland.

Old Redwood Highway 12 kV Distribution Line. The area along this distribution line between the substation site and Windsor River Road is largely residential, commercial, and industrial. The survey area along this alignment is adjacent to ruderal, grassland, and woodland habitats, as well as developed areas (including residences). The line spans and/or is adjacent to numerous roadside ditches, several drainage ditches and swales, and Starr Creek.

Habitat Types

Habitat types within the study area were classified according to Holland (1986), Sawyer and Keeler-Wolf (1995), or commonly accepted descriptions. Table 5.4-1 shows the acreage of terrestrial habitat types within the biological resources study area for the project. Wetland habitats and water features are shown in Table 5.4-2. Descriptions and acreage estimates are based on the Supplement to the PEA (PG&E 2011), rare plant surveys (TRC 2011), wetland delineation (TRC 2012), and Aspen Environmental Group’s site visit and analysis of the GIS data.

Semi-riparian Scrub. Semi-riparian scrub within the survey area is composed mainly of Himalayan blackberry (*Rubus discolor*) and can be found where storm-water runoff collects. Vegetation is usually at a younger successional stage than in a riparian forest due to current and ongoing disturbances or flooding. Semi-riparian scrub is found in the lower seasonal swale area in the western portion of the substation parcel, and along Old Redwood Highway near some of the drainages. Semi-riparian scrub habitat was not mapped separately from these water features, so it is not included in Table 5.4-1.

Table 5.4-1. Terrestrial Habitat Types in Windsor Substation Study Area

Habitat Type	Acres
Developed/Landscaped	7.5
Ruderal/Disturbed	20.1
Annual Grassland	2.2
Oak Woodland	0.6

Source: PG&E 2011, TRC 2011, and TRC 2012b.

Annual Grassland. The annual grassland vegetation community found within the survey area is characterized primarily by a mixture of non-native grasses and herbaceous species such as rigput brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), wild oats (*Avena fatua*), perennial ryegrass (*Lolium perenne*), Italian ryegrass (*Lolium multiflorum*), Italian thistle (*Carduus pycnocephalus*), English plantain (*Plantago lanceolata*), and common vetch (*Vicia sativa*).

Oak Woodland. Oak woodlands in the project area are composed of coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), black oak (*Quercus kelloggii*), and blue oak (*Quercus douglasii*). These range from dense stands to small clusters and isolated, savannah-like communities. Understory vegetation/

land uses include annual grassland habitat, wetland features, maintained landscapes, and disturbed/developed areas.

Disturbed/Ruderal. Disturbed vegetation can be found throughout the survey area. It is most prominent within the proposed substation site, livestock areas, rural residential areas, and mowed areas adjacent to roadways. The disturbed areas generally show evidence of previous development, vegetation management, or other periodic disturbances. The disturbed areas on the project site support various annual grassland species such as bromes and ryegrass and/or ruderal species such as English plantain, chicory (*Cichorium intybus*), fennel (*Foeniculum vulgare*), and bristly ox tongue (*Picris echioides*).

Developed/Landscaped Areas. Developed/landscaped areas are abundant throughout the project area within the medium- to high-density residential areas and their landscaped yards and paved roadways. These areas range from being completely devoid of vegetation to having a combination of barren land, paved surfaces, and maintained landscapes with planted ornamental species.

Wetlands and Water Features

Wetlands and water features were classified based on topography, vegetation, soils, and hydrologic regimes. The wetland delineation conducted by TRC is based on the *U.S. Army Corps of Engineers Wetland Delineation Manual* (USACE 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2007). In addition, TRC used the guidance provided by *Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in Rapanos v. United States & Carabell v. United States* (USACE and USEPA 2007). The mapped features within the survey area include a perennial creek (Starr Creek), two seasonal swales, nine vernal pools, nine drainage ditches and drainage swales, and 13 roadside ditches. The numbers and acreages of these features are listed in Table 5.4-2. The features and feature labels are shown in Figure 5.4-1.

Table 5.4-2. Wetlands and Water Features in Windsor Substation Project Area

Type	Number of Features	Acres
Perennial Creek (PC, Starr Creek)	1	0.023
Seasonal Swale (SS1 and SS2)	2	0.117
Vernal Pools (VP1-VP9)	9	0.072
Drainage Ditches (DD1-DD7)	7	0.061
Drainage Swale (DS1 and DS2)	2	0.016
Roadside Ditches (RD1-RD13)	13	0.060

Source: PG&E 2011, TRC 2011, TRC 2012a, and TRC 2012b.

Perennial Creek. Perennial creeks convey water throughout all or most of the year and exhibit a clear ordinary high-water mark. They are usually bordered by wetland vegetation communities. Starr Creek flows between two poles of the Fulton No. 1 60 kV Power Line north of the intersection of Park Glen Drive and Railroad Avenue. It also passes through a culvert under the 12kV distribution line along Old Redwood Highway near Dawn Way. Within the survey area, the creek supports water plantain (*Alisma plantago-aquatica*), willow weed (*Polygonum lapathifolium*), arroyo willow (*Salix lasiolepis*) and green wattle (*Acacia decurrens*).

Seasonal Swale. Seasonal swales convey a unidirectional flow of water during and shortly after storm events. Seasonal swales occur in topographical folds and typically have a moderately well-defined bed and bank. Similar to depressional seasonal wetlands, the plant species found growing in seasonal swales are typically adapted to saturated soil conditions rather than prolonged periods of inundation. Dominant plant species within these features on the site include perennial ryegrass, curly dock (*Rumex crispus*), and pennyroyal (*Mentha pulegium*). Seasonal swales occur on the substation site (see SS1 in Figure 5.4-1) and also on the property west of the substation site (see SS2 in Figure 5.4-1). Both seasonal

swales appear to be hydrologically connected to Sotoyome Creek, which is 400 feet north of the substation site.

Vernal Pools. Vernal pools are depressional seasonal wetland features that have a subsurface restrictive layer such as a hardpan or claypan, which causes water to pond for extended periods throughout the winter and spring months. Vernal pools are biologically unique habitats and support diverse plant and wildlife populations. Most of the plant species that grow in these features are adapted to withstand long periods of inundation and are only found in vernal pools. Within the surveyed areas, vernal pool habitat is limited to the southern boundary of the property located west of the substation site (VP1-VP3 and VP7 in Figure 5.4-1), the Kerry Conservation Site (VP4, VP5, VP8, and VP9 in Figure 5.4-1), and grazing land just south of the proposed Kerry Conservation Site, where a vernal pool surrounds an existing pole of the Fulton No. 1 60 kV line along Wilcox Road (VP6 in Figure 5.4-1). Dominant plant species within these vernal pool features include mannagrass (*Glyceria occidentalis*), spikerush (*Eleocharis macrostachya*), popcornflower (*Plagiobothrys stipitatus*), and curly dock.

Roadside Ditches. The survey areas along Old Redwood Highway contain earthen roadside ditches that collect and convey storm water runoff from the adjacent roadway and surrounding impervious surfaces. There is also one roadside ditch surrounding a pole on the Fulton No. 1 60 kV Power Line along Morofsky Road. The roadside ditches in the survey area likely receive water from irrigation runoff and other artificial sources; however, they show no signs of supporting continuous water flow for at least three consecutive months. The ditches along Old Redwood Highway contain many culverts before connecting with Starr Creek or unnamed tributaries of Starr Creek. Roadside ditches in the survey area are regularly maintained and either devoid of vegetation or support species such as perennial ryegrass, Bermuda grass (*Cyndon dactylon*), and nutsedge (*Cyperus eragrostis*). Roadside ditches are shown as RD1 through RD13 in Figure 5.4-1.

Drainage Ditches and Drainage Swales. Similar to roadside ditches, the drainage ditches and swales within the project survey area collect and convey storm water runoff. Two drainage ditches within the survey area along the 12 kV distribution line appear to be tributary to Starr Creek and serve as major collector and conveyance features for surrounding roadside ditches and underground storm water collection systems. One of these ditches is located near Miller Lane (see DD2 in Figure 5.4-1) and the other is approximately 470 feet northwest along the power line from Bark Street (see DD3 in Figure 5.4-1). These ditches are roughly 8 to 10 feet wide and dominated by Himalayan blackberry. Based on the presence of perennial wetland vegetation such as cattails (*Typha spp.*) within these features outside the survey areas, it is likely that these watercourses support a continuous flow of water for at least three consecutive months. The other drainage ditches mapped within the survey areas are located on the proposed substation parcel (DD1); across from Bark Street along the 12kV power line (DD4); within the underground segment of the 12 kV distribution line near Joe Redota Way (DD5); at the southern end of the 12 kV power line near Windsor River Road (DD6); and along the Fulton No. 1 60 kV Power Line near Morofsky Road (DD7). The two drainage swales (DS1 and DS2) are located along Old Redwood Highway between McClelland Drive and Market Street, just north of Windsor River Road. During the field surveys, there was no evidence that features DD1, DD4–DD7, DS1, or DS2 support a continuous flow of water for at least three consecutive months.

Jurisdictional Status

Wetlands and other water features may fall under the jurisdiction of the United States Army Corps of Engineers (USACE), CDFW, and/or the Regional Water Quality Control Board (RWQCB). More details regarding CDFW and RWQCB jurisdiction are provided in the Regulatory Setting section.

The final determination of the extent of USACE jurisdiction within the survey area for the proposed Windsor Substation Project would depend on the results of the field verification process and jurisdictional determination conducted by USACE. The preliminary class of the wetlands and water features in the survey area based on TRC’s wetland delineation and subsequent biological surveys are shown in Table 5.4-3. The Russian River is the nearest traditional navigable water. Starr Creek and the two relatively permanent drainage ditches (D2 and D3) appear to have relatively permanent water flow and, therefore, be potentially subject to USACE jurisdiction. Given that features SS1 and SS2 are less than 1.5 river miles from the Russian River (the traditional navigable water that receives flows from Sotoyome Creek) and the swales have the ability to filter pollutants that would otherwise enter the Russian River, both features appear to be potentially subject to USACE jurisdiction. Final determination of possible CDFW jurisdiction or RWQCD jurisdiction would also depend on consultation with those agencies.

The relatively flat topography surrounding the vernal pools in the study area suggests that these features do not collect water from a large enough area to fill and overtop their edges. During the field surveys, there was no sign of a surface water connection between the vernal pools and other nearby water features. Therefore, the vernal pools appear not to be USACE jurisdictional. The remaining features mapped within the survey areas (drainage ditches D1 and D4–D7; drainage swales DS1 and DS2; and all 13 roadside ditches) do not appear to support continuous flow of water for three consecutive months and appear to be restricted to upland areas. Therefore, these features also appear not to be USACE jurisdictional.

Table 5.4-3. Classification of Wetlands and Water Features in the Windsor Substation Project Area

Rapanos Class	Feature Location	Potentially USACE Jurisdictional Acreage	Non-USACE Jurisdictional Acreage
Non-navigable tributaries that are relatively permanent (perennial creek)	Starr Creek/PC	0.024	0
Non-navigable tributaries that are not relatively permanent (seasonal swales)	SS1, SS2	0.117	0
Isolated Wetlands (vernal pools)	VP1-VP9	0	0.072
Drainage Ditches – Relatively Permanent Waters	D2, D3	0.022	0
Drainage and Roadside Ditches/Swales – Non-Relatively Permanent Waters	D1, D4-D7, DS1, DS2, R1- R12	0	0.116
Total		0.163	0.188

Source: TRC 2012a and 2012b.

Special-Status Plants and Animals

Special-status species include those listed as threatened or endangered under the federal or California Endangered Species Acts, species proposed for listing, California Species of Special Concern, and other species that have been identified by the USFWS or CDFW or other agency as unique or rare. Based on database searches, a total of 72 special-status plant species and 40 special-status wildlife species were identified as having the potential to occur within the survey area. For 48 of the 72 plant species habitat in the survey area was not appropriate (because of habitat characteristics or elevation range). The remaining 24 species were analyzed for their potential to occur within the proposed project area. These species are described in Table 5.4-4 (Special-Status Plants with the Potential to Occur in the Survey Area). Twelve of the 40 wildlife species identified in database searches did not meet the habitat characteristics observed in the survey area. The remaining 28 species were analyzed for their potential to occur within the survey area. These species are described in Table 5.4-5 (Special-Status Wildlife with the

Potential to Occur in the Project Area). Proposed project work areas are not within designated critical habitat for any federally listed species.

Most of the special-status species in Tables 5.4-4 and 5.4-5 have low potential to occur within the proposed project area. However, eight plant and seven wildlife species have moderate potential to occur in the proposed project area, and six plant and two wildlife species have a high potential to occur. The likelihood of special-status species occurrence (low, moderate, high) in the analysis below is based on habitat requirements (such soils, hydrology, vegetation types, and disturbance factors) and known habitat range:

- **Low:** Habitat within the survey area and/or project vicinity satisfies very few of the species' requirements and/or the range of the species overlaps with the vicinity of the project, but not within the survey area itself. There are no nearby CNDDDB occurrences. The species' presence within the project corridor is unlikely.
- **Moderate:** Habitat within the survey area and/or project vicinity meets some of the species' requirements, and known locations for the species are found in the vicinity of the project corridor. Presence of the species within the survey area is moderately likely.
- **High:** Habitat within the survey area and/or project vicinity meets most or all of the species' requirements, and known locations for the species are found within 5 miles of the project corridor. Presence of the species within the survey area is highly likely.

Table 5.4-4. Special-Status Plants with Potential to Occur in Project Survey Area

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Requirements	Blooming Period	Potential to Occur
Sonoma alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE, 1B.1	Occurs in moist soils in freshwater marshes and in riparian scrub in Sonoma and Marin Counties; 5-365 meters.	May-July	Moderate. Potential habitat present in riparian areas. Nearest occurrence is < 7 miles away.
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	1B.2	Occurs in coastal bluff scrub, cismontane woodland, and valley and foothill grassland; 3-500 meters.	Mar-June	Low. Potential habitat present in grasslands, but no occurrences within 10 miles.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	1B.2	Occurs in chaparral, cismontane woodland, valley and foothill grassland, and sometimes serpentinite; 90-1,555 meters.	Mar-June	Low. Potential habitat present in grasslands but no occurrences within 10 miles.
Sonoma sunshine <i>Blechnosperma bakeri</i>	FE, SE, 1B.1	Occurs in wet areas in valley and foothill grassland, and vernal pools; 10-110 meters.	Mar-May	High. Potential habitat present in grasslands and wetlands. Present on Kerry Conservation Site (CDFW 2013).
Bristly sedge <i>Carex comosa</i>	2.1	Occurs in coastal prairie, marshes and swamps at lake margins, valley and foothill grassland; 0-625 meters.	May-Sep	Low. Potential habitat present in grasslands but no occurrences within 10 miles.
Pappose tarplant <i>Centromadia parryi</i> ssp. <i>parryi</i>	1B.2	Occurs in chaparral, coastal prairie, meadows and seeps, marshes and swamps, valley and foothill grassland (vernally mesic)/ often alkaline; 2-420 meters.	May-Nov	Low. Potential habitat present in grasslands but no occurrences within 10 miles.

Table 5.4-4. Special-Status Plants with Potential to Occur in Project Survey Area

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Requirements	Blooming Period	Potential to Occur
Vine Hill clarkia <i>Clarkia imbricata</i>	1B.1	Occurs in chaparral, valley and foothill grassland/acidic sandy loam; 50-75 meters.	June-Aug	Moderate. Potential habitat present in grasslands. Nearest occurrence is < 7.50 miles away.
Baker's larkspur <i>Delphinium bakeri</i>	FE, SE, 1B.1	Occurs in broadleaved upland forest, coastal scrub, valley and foothill grassland/decomposed shale, often mesic; 80-305 meters.	Mar-May	Low. Potential habitat present in grasslands but no occurrences within 10 miles.
Dwarf downingia <i>Downingia pusilla</i>	2.2	Occurs in valley and foothill grassland and vernal pools; 1-445 meters.	Mar-May	High. Potential habitat present in grasslands. Nearest occurrence is < 0.50 mile away.
Fragrant fritillary <i>Fritillaria liliacea</i>	1B.2	Occurs in cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland, often on serpentine soils; 3–401 meters.	Feb-Apr	Moderate. Potential habitat present in grasslands. Nearest occurrence is < 4 miles away.
Woolly-headed gilia <i>Gilia capitata</i> ssp. <i>tomentosa</i>	1B.1	Occurs in coastal bluff scrub, valley and foothill grassland/rocky, outcrops; 10-185 meters.	May-July	Low. Potential habitat present in grasslands but no occurrences within 10 miles.
Pale yellow hayfield tarplant <i>Hemizonia congesta</i> ssp. <i>congesta</i>	1B.2	Occurs in valley and foothill grassland, sometimes along roadsides; 20-560 meters.	Apr-Nov	High. Potential habitat present in grasslands. Two occurrences within < 0.50 mile of the project.
Thin-lobed horkelia <i>Horkelia tenuiloba</i>	1B.2	Occurs in broadleaved upland forest, chaparral, valley and foothill grassland/mesic openings, sandy; 50-500 meters.	May-Jun	Moderate. Potential habitat in grasslands. Nearest occurrence is < 7 miles away.
Burke's goldfields <i>Lasthenia burkei</i>	FE, SE, 1B.1	Occurs in meadows and seeps, vernal pools; 15-600 meters.	Apr-Jun	Present. Detected during 2012 surveys adjacent to Wilcox Road. Present on Kerry Conservation Site (CDFW 2013).
Baker's goldfields <i>Lasthenia californica</i> ssp. <i>bakeri</i>	1B.2	Occurs in closed-cone coniferous forest openings, coastal scrub, meadows and seeps, and marshes and swamps; 60-520 meters.	Apr-Oct	Low. Potential habitat in or near ditches and wetlands but no occurrences within 10 miles.
Woolly-headed lessingia <i>Lessingia hololeuca</i>	3	Occurs in broadleaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland on clay or serpentine soils; 15-305 meters.	Jun-Oct	Low. Potential habitat present in grasslands but no occurrences within 10 miles.
Pitkin Marsh lily <i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE, SE, 1B.1	Occurs in cismontane woodland, meadows and seeps, marshes and swamp/mesic, sandy; 35-65 meters.	Jun-Jul	Moderate. Potential habitat present in or near ditches and wetlands. Nearest occurrence is < 4.50 miles away.

Table 5.4-4. Special-Status Plants with Potential to Occur in Project Survey Area

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Requirements	Blooming Period	Potential to Occur
Sebastopol meadowfoam <i>Limnanthes vinculans</i>	FE, SE, 1B.1	Occurs in meadows and seeps, valley and foothill grassland, vernal pools/vernally mesic; 15-305 meters.	Apr-May	Moderate. Potential habitat present in grasslands, in or near ditches and wetlands. Nearest occurrence is < 4 miles away.
Mt. Diablo cottonweed <i>Micropus amphibolus</i>	3.2	Occurs in broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland/rocky; 45-825 meters.	Mar-May	Low. Potential habitat present in grasslands but no occurrences within 10 miles.
Marsh microseris <i>Microseris paludosa</i>	1B.2	Occurs in closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland; 5–300 meters.	Apr-Jun (uncommonly July)	High. Potential habitat in grasslands. Nearest occurrence is < 0.50 mile away.
Robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	1B.2	Occurs in broadleaved upland forest (openings), chaparral (openings), cismontane woodland, coastal scrub, and valley and foothill grassland; 100-915 meters.	Jun-Jul (Aug)	Moderate. Potential habitat in grasslands. Nearest occurrence is < 4 miles away.
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	1B.1	Occurs in wet areas in cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools; 5–1,740 meters.	Apr-Jul	Present. Detected during 2012 surveys within the proposed Kerry Conservation Site.
Two-fork clover <i>Trifolium amoenum</i>	FE, 1B.1	Occurs in coastal bluff scrub, valley and foothill grassland, sometimes on serpentine; 5-415 meters.	Apr-Jun	Moderate. Potential habitat occurs in grasslands. Nearest occurrence is < 7.50 miles away.
Saline clover <i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	1B.2	Occurs in marshes and swamps, wet, alkaline areas in valley and foothill grassland, vernal pools; 0-300 meters.	Apr-Jun	Low. Marginal habitat present in the grasslands but no occurrences within 10 miles.

STATUS CODES:

FE	Federally Endangered	SE	State Endangered
FT	Federally Threatened	SCE	State Candidate Endangered
		SSC	California Species of Special Concern
		FP	Fully Protected

CNPS	California Rare Plant Rank
1A	Plants Presumed Extinct in California
1B	Plants Rare, Threatened, or Endangered in California and elsewhere
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
3	Plants about which more information is needed
4	Plants of limited distribution
	Threat Rank
0.1	Seriously Threatened in California
0.2	Fairly Threatened in California
0.3	Not very Threatened in California

Table 5.4-5. Special-Status Animals with Potential to Occur in Project Survey Area

Species Common Name Scientific Name	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
Invertebrates			
California freshwater shrimp <i>Syncaris pacifica</i>	FE	Lives in streams of 12 to 36 inches in depth with exposed live roots of trees, such as alder and willow, along undercut banks greater than 6 inches with overhanging woody debris or stream vegetation and vines, such as stinging nettles, grasses, vine maple, and mint. Historically found in low elevation, perennial freshwater streams in Marin, Sonoma, and Napa counties. Now found in 16 stream segments within these counties, including tributary streams in the lower Russian River drainage.	Low. Marginal suitable habitat exists in Starr Creek. Drainage ditches do not support suitable habitat. No CNDDDB occurrences within 5 miles.
Fish			
Coho salmon-central CA coast <i>Oncorhynchus kisutch</i>	FE	Anadromous; migrates through and spawns in coastal rivers and streams from Santa Cruz to Mendocino County.	Low. Marginal suitable habitat may exist in Starr Creek, although no research found indicating populations there. Nearest CNDDDB occurrence is in the Russian River, approximately 1 mile away.
Central California coastal steelhead <i>Oncorhynchus mykiss</i>	FT	Anadromous; coastal rivers, streams, and creeks from Santa Cruz County north to Russian River basin.	Low. Marginal suitable habitat may exist in Starr Creek, although no research found indicating populations there. Nearest CNDDDB occurrence is approximately 3 miles away.
California coastal Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT	Anadromous; coastal rivers and streams of northern California from Russian River to Redwood Creek.	Low. Marginal suitable habitat may exist in Starr Creek, although no research found indicating populations there. No CNDDDB occurrences within 5 miles.
Amphibians/Reptiles			
Northwestern pond turtle <i>Actinemys marmorata marmorata</i>	SSC	Found in freshwater ponds, marshes, rivers, streams, and irrigation ditches. Requires exposed rocks and logs for basking. Range is throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries.	High. Suitable aquatic habitat exists within drainages and Starr Creek. Nearest CNDDDB occurrence is approximately 1 mile away.

Table 5.4-5. Special-Status Animals with Potential to Occur in Project Survey Area

Species Common Name Scientific Name	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
California tiger salamander, Sonoma County population <i>Ambystoma californiense</i>	FE, SE	Breeds in seasonal ponds and pools. Spends most of the year in rodent burrows or other subterranean refuges in grassland and oak savanna habitats. During breeding migrations, individuals are sometimes found under surface objects, such as rocks and logs. Postmetamorphic juveniles retreat to small-mammal burrows after spending a few hours or days in mud cracks near water or tunnels constructed in soft soil. Aquatic larvae seek cover in turbid water, clumps of vegetation, and other submerged debris. Species breeds in vernal pools and other temporary rainwater ponds, including cattle ponds, following relatively warm rains in November to February and on submerged debris in shallow water. In the coastal region, populations are scattered from Sonoma County in the northern San Francisco Bay Area to Santa Barbara County (up to elevations of 1,067 meters), and in the Central Valley and Sierra Nevada foothills from Yolo to Kern counties (610 meters). The Sonoma population appears to have been geographically isolated from the remainder of the California tiger salamander population by distance, mountains, and major waterway barriers for more than 700,000 years.	Low. Project area is located on the northern edge of the species' range in Sonoma County. Nearest occurrence is over 5 miles away.
California red-legged frog <i>Rana aurora draytonii</i>	FT, SSC	Occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Breeds January to July (peaks in February). Requires 11 to 20 weeks of permanent water for larval development. Females attach eggs to vegetation 2 to 6 inches below the surface. Requires access to aestivation habitat. Individuals have been found considerable distances from breeding sites on rainy nights. California red-legged frogs have been documented in 46 counties in California, but now remain in only 238 streams or drainages in 31 counties. Historically, occurred throughout Sonoma County; now only known in three creeks in Sonoma County (Upper Sonoma Creek, Petaluma Creek-Sonoma Creek).	Low. Occurrence in Sonoma County is unclear. Nearest CNDDDB occurrence is over 10 miles away.
Foothill yellow-legged frog <i>Rana boylei</i>	SSC	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 meadow types. Highly aquatic; spends most or all of life in or near streams, though some have been documented underground and beneath surface objects more than 50 meters from water. In California, historically distributed throughout the foothill portions of most drainages from the Oregon border to the San Gabriel. Elevation range in California extends from near sea level to 1,940 meters.	Low. Could utilize Starr Creek for breeding. Nearest CNDDDB occurrence is approximately 5 miles away.
Western spadefoot toad <i>Spea hammondi</i>	SSC	Occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood woodlands. Some populations persist for a few years in orchard or vineyard habitats. Grasslands with shallow temporary pools are optimal habitats. Most of the year is spent in underground burrows up to 36 inches deep, which they construct themselves. Some individuals also use mammal burrows. Recently metamorphosed juveniles seek refuge in the immediate vicinities of breeding ponds for up to several days after transformation. Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains. Ranges throughout the Central Valley and adjacent foothills. In the Coast Ranges it is found from Point Conception, Santa Barbara County south to the Mexican border. Elevations of occurrence extend from near sea level to 1,363 meters in the southern Sierra foothills.	Low. Survey area out of range of the species.

Table 5.4-5. Special-Status Animals with Potential to Occur in Project Survey Area

Species Common Name Scientific Name	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
Birds			
Cooper's hawk <i>Accipiter cooperii</i>	SSC	Hunts in broken woodland and habitat edges; catches prey in air, on ground, and in vegetation. Seldom found in areas without dense tree stands or patchy woodland habitat. Nests in crotches of deciduous trees and in the main crotch, horizontal branches of conifers. Usually nests in second-growth conifer stands, or in deciduous riparian areas, usually near streams.	Moderate. Suitable nesting habitat present in mature trees. Oak woodlands could be used for hunting.
Tri-colored blackbird <i>Agelaius tricolor</i>	SSC	Frequents fresh emergent wetlands. Nest may be located up to 4 miles from foraging areas. Seeks cover in emergent wetland vegetation, especially cattails and tules; also in trees and shrubs. Roosts in large flocks in emergent wetland or in trees. Usually nests in dense cattails or tules; also nests in thickets of willow, blackberry, wild rose, and tall herbs. Nest usually located a few feet over, or near, fresh water; also may be hidden on ground among low vegetation. Resident to California.	Low. Oak trees provide marginal habitat for roosting; no suitable nesting habitat in project area. May use drainage ditches for foraging.
Grasshopper sparrow <i>Ammodramus savannarum</i>	SSC	Frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. Uses scattered shrubs for singing perches. Thick cover of grasses and forbs is essential for concealment.	Low. Marginally suitable habitat in the grassland for breeding and nesting.
Great blue heron <i>Ardea herodias</i>	G5, S4	Frequents the shoreline of oceans, marshes, lakes, and rivers, and also stalks upland fields for rodents, especially in winter. Found throughout most of North America, as far north as Alaska and the southern Canadian provinces. From the southern United States southwards, and on the Pacific coast, they are year-round residents. Usually nesting in trees or bushes.	High. Suitable habitat exists throughout the survey area near aquatic features and open grasslands. Nearest CNDDDB occurrence is approximately 4 miles away.
Short-eared owl <i>Asio flammeus</i>	SSC	Suitable habitats may include salt- and freshwater marshes, irrigated alfalfa or grain fields, and ungrazed grasslands and old pastures. Tule marsh or tall grassland with cover 30 to 50 centimeters in height can support nesting pairs. Breeding is most regular in northeastern California and in Suisun Marsh; irregular on the southern coast. A fledged young was picked up injured at Annadel State Park, Sonoma County in 1995.	Low. No suitable nesting habitat present.
Long-eared owl <i>Asio otus</i>	SSC	Breeds from valley foothill hardwood up to ponderosa pine habitats. Species roosts and nests in riparian or other thickets with small, densely canopied trees. Old crow, magpie, hawk, heron, and squirrel nests in a variety of trees with dense canopy are used. Nest usually 10 to 50 feet above ground, rarely on ground or in tree or snag cavity. Breeding was confirmed at the Russian River near Windsor.	Moderate. Oak woodlands in the study area provide suitable nesting habitat; grasslands are suitable foraging habitat.
Burrowing owl <i>Athene cucularia</i>	SSC	Frequents open grasslands and shrublands with perches and burrows. Usually nests in old burrows of ground squirrels or other small mammals. May dig own burrow in soft soil. Pipes, culverts, and nest boxes may be used where burrows are scarce.	Low. Presumed extirpated as a breeding species in Sonoma county, but could utilize grassland for hunting and/or remnants of building foundations, and culverts for shelter; small rodent burrows are present in survey area.

Table 5.4-5. Special-Status Animals with Potential to Occur in Project Survey Area

Species Common Name Scientific Name	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
Northern harrier <i>Circus cyaneus</i>	SSC	Mostly found in flat, or hummocky, open areas of tall, dense grasses, moist or dry shrubs, and edges for nesting, cover, and feeding; seldom found in wooded areas. Nests on ground in shrubby vegetation, usually at marsh edge. Mostly nests in emergent wetland or along rivers or lakes, but may nest in grasslands, grain fields, or on sagebrush flats several miles from water.	Moderate. Suitable foraging habitat present in grassland.
Yellow warbler <i>Dendroica petechia brewsteri</i>	SSC	Frequents open to medium-density woodlands and forests with a heavy brush understory in breeding season. In migration, found in a variety of sparse to dense woodland and forest habitats. In summer usually found in riparian deciduous habitats: cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Currently occupy much of their former breeding range, except in the Central Valley.	Low. Marginal habitat exists in oak woodland; foraging habitat exists in annual grassland.
White tailed-kite <i>Elanus leucurus</i>	FP	Forages in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands. Nest placed near top of dense oak, willow, or other tree stand; usually 20 to 100 feet above ground. Nests located near open foraging area.	Moderate. Could utilize oak woodland and hunt for prey in annual grassland.
California horned lark <i>Eremophila alpestris actia</i>	SSC	Utilizes a wide variety of open habitats where trees and shrubs are sparse, including grasslands with low grass height. Builds cup-shaped, grass-lined nests on the ground. Found in grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line.	Low. Marginal habitat exists in grasslands in the project area for foraging, cover and nesting.
American peregrine falcon <i>Falco peregrinus</i>	DL, SE, FP	Known nesting sites occur along the Santa Barbara coast, Sierra Nevada, and in other mountains in northern California. In winter, found inland throughout the Central Valley, and occasionally on the Channel Islands. Breeds mostly in woodland, forest, and coastal habitats. Requires protected cliffs and ledges for cover. Usually breeds and feeds near water; may hunt over water.	Low. Less-than-marginal habitat exists for breeding and hunting.
Yellow-breasted chat <i>Icteria virens</i>	SSC	Nests in riparian habitats, usually on the borders of streams, creeks, sloughs, and rivers. Frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland. The nest is usually 2 to 8 feet above ground in dense shrubs along a stream or river. Known to breed in Sonoma County; confirmed nesting in Annadel State Park.	Low. Marginal nesting habitat occurs in riparian areas.
Loggerhead shrike <i>Lanius ludovicianus</i>	SSC	Inhabits open woodlands, farmland, pastures, annual grasslands, and salt marsh with elevated perches. Utilizes tall shrubs or trees (also use fences and power lines) for hunting perches. Present year round throughout most of the state.	Moderate. Suitable nesting, perching, and foraging habitat exists on existing structures and trees.
Purple martin <i>Progne subis</i>	SSC	Utilizes tree cavities, bridges, utility poles, and lava tubes for nesting. Prey on aerial insects near large wetlands and other waterbodies, and at upper slopes and ridges. Occurs in forest and woodland areas at low to intermediate elevations throughout much of the state. Have been reported in Sonoma County.	Moderate. Suitable nesting and perching habitat exists on existing structures and trees..

Table 5.4-5. Special-Status Animals with Potential to Occur in Project Survey Area

Species Common Name Scientific Name	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
Mammals			
Pallid bat <i>Antrozous pallidus</i>	SSC	Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Night roosts may be in more open sites, such as porches and open buildings. Few hibernation sites are known, but probably uses rock crevices.	Low. Marginal suitable roosting habitat present, may use grasslands for foraging. Nearest CNDDDB occurrence is 5 miles away.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SSC	Prefers mesic habitats. Gleans from brush or trees or feeds along habitat edges. Requires caves, mines, tunnels, buildings, or other manmade structures for roosting. May use separate sites for night, day, hibernation, or maternity roosts. Individuals may move within the hibernaculum to find suitable temperatures.	Low. Marginal suitable roosting habitat present.
Western red bat <i>Lasiurus blossevillii</i>	SSC	Prefers edges or habitat mosaics that have trees for roosting and open areas for foraging. Roosts primarily in trees, less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas. Preferred roost sites are protected from above, open below, and located above dark ground cover. Such sites minimize water loss. Roosts may be from 0.6 to 13 meters above ground level. Females and young may roost in higher sites than males.	Moderate. Suitable roosting habitat present and could use grasslands for foraging.
American badger <i>Taxidea taxus</i>	SSC	Occurs in herbaceous, shrub, and open stages of most habitats with dry, friable soils. Badgers dig burrows in friable soil for cover and frequently reuse old burrows, although some may dig a new den each night, especially in summer.	Low. No large burrows were observed in survey area; annual grassland and substation site are likely too small to support badger.

STATUS CODES:

U.S. Fish and Wildlife Service

FE Endangered
FT Threatened
DL De-listed

California Department of Fish and Game

FP California Fully Protected species: May not be taken or possessed without a permit from the California Fish and Game Commission
SSC California Special Species of Concern: Vulnerable to extinction in California due to declining population levels, limited range, or other threats
SCE State candidate listing for Endangered
ST State-listed as Threatened
SE State-listed as Endangered

Regulatory Setting

Federal Endangered Species Act. The Federal Endangered Species Act (FESA) prohibits “take” of federally listed Threatened or Endangered wildlife species. The FESA defines “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or attempt to engage in any such conduct” [16 U.S.C. §1532(19)]. The FESA requires that actions authorized, funded or carried out by federal agencies do not jeopardize the continued existence of a federally listed species or adversely modify designated Critical Habitat for such species. If a federal agency determines that a proposed federal action (*i.e.*, issuance of a CWA Section 404 permit for wetland fill) “may affect” a listed species and/or designated Critical Habitat,

the agency must consult with the USFWS and/or National Oceanic and Atmospheric Administration (NOAA) Fisheries for protected marine and anadromous fish species in accordance with Section 7 of the FESA. If take of a federally listed species may occur, the applicant may be required to obtain Incidental Take authorization from the USFWS. The Incidental Take authorization allows “incidental” taking of federally listed species if the take is “incidental to and not the purpose of, the carrying out of an otherwise lawful activity” [16 U.S.C. §1539(a)(1)(b)]. Incidental Take authorization is issued by USFWS only if the applicant, to the maximum extent possible, has minimized and mitigated for the impacts of the taking, provided adequate funding for the mitigation plan, and if the taking would not appreciably reduce the likelihood of the survival and recovery of the species in the wild [16 U.S.C. §1539(a)(2)(b)].

Santa Rosa Plain Conservation Strategy. The USFWS Santa Rosa Plain Conservation Strategy (SRPCS) is a conservation program put in place to mitigate adverse effects on listed species from development on the Santa Rosa Plain. The program is intended to contribute to the recovery of the Sonoma County distinct population segment of California tiger salamander (CTS), Burke’s goldfield, Sonoma sunshine, Sebastopol meadowfoam, and the many-flowered navarretia (listed plants), and to the conservation of their sensitive habitat. The SRPCS identifies eight conservation areas for CTS and listed plants, one CTS and listed plant preserve system, and one listed plant conservation area. The substation site, the Fulton No. 1 60 kV Power Line, and the existing 12 kV distribution line are all located within the study area boundary of the SRPCS. The maps in the SRPCS (dated 2005) show that the presence of CTS is unlikely at the substation site and along the Fulton No. 1 60 kV Power Line and 12 kV distribution line because these areas are out of the range of CTS, but listed plants may be present and may require mitigation. Burke’s goldfield was detected in the survey area in 2012. There is a pending mitigation bank and preserve, the Kerry Conservation Site, located between the proposed substation site and the vacant property to the west.

Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects That May Affect California Tiger Salamander and Three Plant Species on the Santa Rosa Plain, California. The Santa Rosa Plains Conservation Strategy is the biological framework on which the *Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects That May Affect California Tiger Salamander and Three Plant Species on the Santa Rosa Plain, CA* (PBO for USACE) is based. The PBO is issued to the USACE for permits, enforcement actions, or mitigation banks that are under their jurisdiction. Projects appended to this PBO must meet the permit qualifications and, thus have “relatively small effects” on the species, in order to obtain take authorizations. The PBO does not cover the many-flowered navarretia (one of the four species in the SRCPS) because of the limited distribution of the species. Also, projects that will impact occupied sites supporting Burke’s goldfields and Sonoma sunshine, where surveys have documented 2,000 plants or greater in any year in the past 10 years, may not be appended to the PBO for USACE, but will be evaluated on a case by case basis. The PBO provides the framework for mitigation, conservation, translocation, and appropriate minimization measures. USFWS and CDFW will track project impacts, mitigation and other pertinent information. If the PBO for ACE is not applicable, then a separate biological opinion from USFWS may be required for work at the proposed substation site.

Federal Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities, such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (e.g. rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits are in 50 CFR part 13

General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

Federal Clean Water Act. The purpose of the Federal Clean Water Act (CWA) is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA regulates activities that result in the discharge of dredged or fill material into waters of the United States, including wetlands. The primary intent of the CWA is to authorize the U.S. Environmental Protection Agency (EPA) to regulate water quality through the restriction of pollution discharges, which includes sediments. The U.S. Army Corps of Engineers (USACE) has the principal authority to regulate discharges of dredged or fill material into waters of the United States. However, EPA has oversight authority over the United States Army Corps of Engineers and retains veto power over the USACE’s decision to issue permits.

In 2007 and 2008 the USACE and USEPA developed new guidance regarding the jurisdiction of waters of the United States under the Clean Water Act in response to the Supreme Court’s decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (referred to collectively as "Rapanos"). Under current agency guidance (USACE and USEPA, *Rapanos* 2008), the agencies will typically assert jurisdiction over: (1) traditional navigable waters; (2) wetlands adjacent to traditional navigable waters; (3) non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (typically three months); and (4) wetlands that directly abut such tributaries.

USACE decides jurisdiction over the following waters based on a site-specific analysis that determines whether waters have a significant nexus (connection) with a traditional navigable water: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent; and (3) wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary. The agencies generally will not assert jurisdiction over the following features: (1) swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow); and (2) ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water. The agencies will apply the significant nexus standard as follows: (1) A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters; and (2) Significant nexus includes consideration of hydrologic and ecologic factors.

Waters of the United States include: (1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of tide; (2) all interstate waters including interstate wetlands; (3) all other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) tributaries of the above; and (5) territorial seas. Federally jurisdictional wetlands are defined as those areas that are inundated or saturated by surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, bogs, vernal pools, seeps, marshes, and similar areas. See Jurisdictional Status section under Wetlands and Water Features (above) for more information.

The California Regional Water Quality Board (RWQCB) has authority over “waters of the State” under the Porter-Cologne Water Quality Control Act. Furthermore, RWQCB typically, in practice, asserts jurisdiction similar to CDFW in creek or river systems, from top of bank to top of bank. The RWQCB also asserts authority over all wetlands, including isolated wetlands.

Any discharge of dredged or fill material into waters of the United States must be approved by the USACE pursuant to Section 404 of the CWA as either a discretionary Individual Permit or as part of a Nationwide Permit (NWP). Pre-defined Nationwide Permits are already in place, non-discretionary, and generally less time-consuming than a discretionary Individual Permit. NWPs may be grouped together or “stacked” with certain limitations. A standard Individual Permit is required if there are:

- Discharges that will result in the fill of any tidal waters or wetlands; or
- Impacts to more than one-half acre of non-tidal waters or wetlands, and/or impacts to greater than 300 linear feet of non-tidal waters or wetlands, including creeks (either perennial or ephemeral and generally intermittent as well), arroyos or vegetated and unvegetated tributaries.

California Endangered Species Act. The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, CESA applies the take prohibitions to species proposed for listing (called “candidates” by the State). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Section 2081 of the California Fish and Game Code allows CDFW to issue incidental take permits to otherwise lawful development projects, provided the take is minimized and fully mitigated and does not jeopardize the continued existence of the species. Section 2053 of the California Fish and Game Code requires state lead agencies to consult with the CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat.

California Fully Protected Species. The State of California first began to designate species as fully protected prior to the creation of CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFW prohibits any State agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

CDFW Streambed Alteration Agreement. Activities that result in the diversion or obstruction of the natural flow of a stream; or which substantially change its bed, channel, or bank; or which utilize any materials (including vegetation) from the streambed, may require that the Project applicant enter into a Streambed Alteration Agreement with the CDFW pursuant to California Fish and Game Code section 1600 et seq. CDFW potentially extends the definition of stream to include “intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife” (CDFG 1994a).

California Native Plant Protection Act. Regarding listed rare and endangered plant species, CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code Sections

1900-1913), which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. CESA includes an additional listing category for threatened plants that are not protected under NPPA. In this case, plants listed as rare or endangered under the NPPA are not protected under CESA, but can be protected under California Environmental Quality Act (CEQA). In addition, plants that are not state-listed, but meet the standards for listing, are also protected under CEQA (Guidelines, Section 15380). In practice, this is generally interpreted to mean that all species on lists 1B and 2 of the California Native Plant Society (CNPS) Inventory potentially qualify for protection under CEQA, and some species on lists 3 and 4 of the CNPS Inventory may qualify for protection under CEQA. List 3 includes plants for which more information is needed on taxonomy or distribution. Some of these are rare enough to qualify for protection under CEQA. List 4 includes plants of limited distribution that may qualify for protection if their abundance and distribution characteristics are found to meet the standards for listing.

Town of Windsor General Plan. The *Town of Windsor General Plan* lists and describes many policies to protect and conserve oak woodlands, riparian communities, open water, grasslands, seasonal wetlands, and vernal pools. Policy D.1 is designed to “protect unique and sensitive biotic features such as rare and endangered plants, dense oak woodlands, and vernal pools, and encourage sensitive design in these areas.” Policy D.1.6 focuses on tree preservation and states that the Town of Windsor should encourage the preservation of oak woodlands and significant stands of oaks and heritage trees, and encourages replacement of trees should removal be necessary. Policy D.1.1 states that “if sensitive resources are identified on the project site, proposals to protect them shall conform with applicable state and federal regulations regarding their protection and may include avoidance of the resource, installing vegetative buffers, providing setbacks, clustering development onto less sensitive areas, preparing restoration plans, and offsite mitigation.”

Town of Windsor Tree Preservation and Protection Ordinance. Chapter 27.36 of the Town of Windsor’s Zoning Ordinance, the Tree Preservation and Protection Ordinance (the Ordinance), regulates protection, preservation, maintenance, and removal of protected trees. The intent of the Ordinance is to avoid a reduction in tree canopy cover by requiring replacement trees for all protected trees that are approved for removal. Protected trees under the Ordinance include: Trees with a diameter at breast height (dbh) of six inches or more of the species black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), coast live oak (*Quercus agrifolia*), interior live oak (*Quercus wislizenii*), oracle oak (*Quercus morehus*), Oregon oak (*Quercus garryana*), valley oak (*Quercus lobata*), chase oak (*Quercus x chaseii*); and trees with a dbh of 12 inches or more of the species California buckeye (*Aesculus californica*) and California bay (*Umbellularia californica*); heritage or landmark trees as identified by Council resolution; significant groves or stands of trees; mature trees located on a parcel of one acre or more; and any tree required, to be planted or preserved, as environmental mitigation for a discretionary permit. Section 27.36.061, Tree Mitigation, is an amendment to the Ordinance. The amendment will “generally replace a smaller quantity of larger trees by replanting a larger quantity of smaller trees, with the goal of restoring the original canopy area and volume after ten years.” The amendment also states that to obtain a tree removal permit, an arborist report is required for all development projects with protected trees. The arborist will make recommendations on the removal as well as on the mitigation to offset the loss of the tree(s).

5.4.2 Environmental Impacts and Mitigation Measures

PG&E proposes to implement measures during the design, construction, and operation of the proposed project to ensure it would occur with minimal environmental impacts in a manner consistent with applicable rules and regulations. Applicant Proposed Measures (APMs) are considered part of the proposed

project in the evaluation of environmental impacts. CPUC approval would be based upon PG&E adhering to the proposed project as described in this document, including this project description and the APMs (see Table 4-5 in the Project Description), as well as any adopted mitigation measures identified by this Initial Study.

a. *Would the project 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?*

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed project site, which comprises the 4.11-acre substation property and existing distribution line alignments, contains suitable habitat for some special-status plants and animals. Special-status species potentially affected by proposed project are discussed below.

Special-Status Plants

There are 14 special-status plants with moderate/high potential to occur in the survey area (refer to Table 5.4-4). Three of the special-status plant species with moderate or high potential to occur in the project area — Burke’s goldfields, Sebastopol meadowfoam, and Sonoma sunshine — are included in the *Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects That May Affect California Tiger Salamander and Three Plant Species on the Santa Rosa Plain, CA* (PBO for USACE). There is potential habitat for these species to occur in seasonal wetlands/vernal pools and nearby grassland in the project area.

Burke’s goldfields (Federally Endangered/State Endangered) were found in a vernal pool adjacent to Wilcox Road during protocol-level rare plant surveys in 2012. Between 100 and 150 individuals were identified in this area. In addition, Baker’s navarretia (CNPS 1B.1) were found in two vernal pools in the proposed Kerry Conservation Site; one vernal pool contained 800 to 1,000 individuals and the other contained 1,500 to 2,000. In addition, according to CDFW both Sonoma sunshine and Burke’s goldfields have been found on the Kerry Conservation Site (CDFW 2013).in the past. The Kerry Conservation Site is slated to eventually become a mitigation bank and preserve for these species because it is presumed to be occupied habitat. In addition, according to the PBO for USACE, if a site had listed plants in the past, it is considered occupied. Therefore, even if protocol-level surveys find no Sonoma sunshine for two consecutive years, vernal pools onsite would be treated as suitable habitat for this species by USFWS according to the PBO for USACE because a persistent seed bed may be present even if plants are not detected (USFWS 2007).

There are nine vernal pools within the biological survey area for the proposed project: four are south of the substation site near the Kerry Conservation Site property, at the southern boundary of the property west of the substation site; four are on the Kerry Conservation Site property; and one surrounds an existing pole of the Fulton No. 1 60 kV line along Wilcox Road (See Figure 5.4-1). The four vernal pools along the southern fenceline of the property west of the proposed substation site are within a potential route for a proposed temporary access road. As shown on Figure 5.4-1, all or part of the two vernal pools (VP4 and VP5) in the proposed Kerry Conservation Site are within 50 feet of pole a8.

PG&E intends to avoid any direct impacts (e.g., excavations and fills) and indirect impacts (e.g., alternation of drainage patterns) to wetland features, including the vernal pools containing listed plants. However, if special-status plants, including species covered by the PBO for USACE, are present within the proposed project disturbance areas they could be directly impacted by removal of vegetation or by

trampling or crushing during construction activities. Indirect impacts to special-status plants could include alterations in existing topography and hydrology, sedimentation and erosion, soil compaction, the accumulation of fugitive dust (which could impact plant photosynthesis and respiration), disruptions to native seed banks from ground disturbance, and colonization by non-native, invasive plant species. Ongoing operational impacts could include trampling or crushing of special-status plants by vehicular or foot traffic and the introduction of non-native, invasive plants due to increased human presence.

PG&E has committed to several APMs that would reduce potential impacts to special-status plants. These APMs include **APM BIO-1** (special status species/sensitive habitat education program), **APM BIO-2** (minimize soil and vegetation disturbance), **APM BIO-3** (color brochure for construction crews), **APM BIO-4** (pre-construction wildlife and plant surveys), **APM BIO-5** (biological monitor during grading and silt fence installation), **APM BIO-7** (avoid impacts to special-status plants), **APM BIO-8** (restrictions on equipment near aquatic habitat), **APM BIO-13** (minimize noxious weeds), **APM AQ-1** through **APM AQ-5** (reduce fugitive dust through watering sites, cover trucks, sweeping), and **APMs WQ-1 to WQ-6** (develop and implement Stormwater Pollution Prevention Plan, Best Management Practices, Spill Prevention and Control Plan, and obtain water quality permits), **APM WQ-8** (proper handling of vehicle maintenance wastes), and **APM WQ-7** (avoid wetlands, swales and drainages or perform work outside of wet season if feasible). The full text of all APMs is in Section 4.15 in the Project Description.

While these APMs would reduce potential impacts to special-status plants, they do not include sufficient detail, timelines, and performance standards to ensure that impacts would be reduced to a less-than-significant level. Mitigation Measure B-1 supplements APM BIO-4 and APM BIO-5 and specifies that environmental training would also address California Species of Special Concern. In addition, **Mitigation Measure B-2** (Preserve special-status plants, wetlands, and vernal pools) requires avoidance of occupied special-status plant habitat and compensation for impacts to suitable or occupied habitat where impacts cannot be avoided. This measure specifies that project activities adjacent to vernal pools would only take place between June 15 and September 30 and that the exposed hole from the removal of pole a10 (Figure 5.4-1) would be filled with clay material that supports vernal pool reestablishment. New poles would be installed as far outside vernal pools as possible. With the implementation of this measure, impacts to special-status plants would be less than significant.

Mitigation Measure for Special-Status Plant Species

B-1 Conduct environmental training, pre-construction surveys, and biological resources monitoring. As described in APM BIO-1, ongoing special-status species/sensitive habitat education program for construction crews will be conducted by a qualified biologist (approved by CPUC) prior to the commencement of the project and during construction activities. Sessions will include discussion of the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA), the consequences of noncompliance with these acts, identification and values of habitats, and the importance of keeping all project activities and sediments within the designated work area. These requirements are supplemented by the following: training shall also address California Species of Special Concern and brochures addressing all potentially affected special-status species shall be provided to all crew members (in multiple languages if appropriate).

As described in APM BIO-4, pre-construction surveys for special-status species shall be conducted prior to the start of construction. These requirements are supplemented by the following: pre-construction surveys shall be conducted by a qualified biologist (approved by CPUC) within 7 days of construction activities. If special-status species are found, CDFW, USFWS, and the CPUC shall be notified within 24 hours and consulted, as

appropriate, to confirm appropriate avoidance measures. Project construction (in area where a special-status species is found) shall not begin until the qualified biologist determines that the required or appropriate avoidance, minimization, and mitigation measures have been implemented.

As described in APM BIO-5, a biological monitor shall be present during grading activities and installation of the silt fence around the proposed substation site perimeter and needed areas along the distribution line alignment. The monitor will complete daily reports summarizing construction activities and environmental compliance. These requirements are supplemented by the following: monitoring shall be conducted by a qualified biologist (approved by CPUC). Daily biological monitoring shall be required during all construction activities near sensitive resources, including special-status species, wetlands, vernal pools, and oak woodlands. If appropriate (based on the phase and location of construction activities), PG&E may request that the CPUC allow less frequent monitoring.

B-2 Preserve special-status plants, wetlands and vernal pools. Special-status plants identified in the survey area were all located within vernal pools. The following avoidance and minimization measures will be used to protect both listed special-status plants and to avoid impacts to wetlands and vernal pools:

- Design project and construction activities to avoid impacts to wetlands and water features to the extent feasible.
- Prior to the onset of construction activities, a qualified biologist (approved by the CPUC) shall delineate any wetland or water features within the right of way as environmentally sensitive areas using clear markers. Construction crews shall be provided with maps of environmentally sensitive areas.
- PG&E shall employ best management practices to avoid wetland impacts. These BMPs may include using padding or vehicles with balloon tires or other protective measures if temporary access roads or other construction activities occur in wetland areas.
- There are three pole replacement locations that are located near vernal pool habitat (see *Biological Resources Figure, map set – poles a7, a8 and a10*). The following additional avoidance measures will be used in these particular locations and in any additional areas where work is required in or adjacent to a vernal pool:
 - Any project activities at these locations shall only take place between June 15 and September 30, after a qualified biologist (approved by CPUC) determines that vernal pools are dry and special-status plant species have completed their entire lifecycle for the year (i.e., seeds have set).
 - A qualified biologist (approved by the CPUC) shall be present during construction activities within the vicinity of these three locations. The biologist shall ensure that fencing remains intact and that construction activities do not affect the delineated vernal pool areas.
 - In the event that it is infeasible to completely avoid a vernal pool, and any associated listed plant species, PG&E will use the following additional avoidance measures: (1) No construction equipment will enter the vernal pool; and (2) Tarps will be placed over the vernal pool to ensure that no excavated soil mixes with the vernal pool vegetation and soils when the pole is removed.

- The following additional avoidance measures will be used at one pole replacement (see *Biological Resources Figure, map set – pole a10*), which is located adjacent to a vernal pool: (1) The exposed hole from the removed pole will be filled with a clay material that supports vernal pool re-establishment; and (2) The new pole will be installed as far outside of the vernal pool as feasible.

Compensatory mitigation for special-status plants. If impacts to listed plants cannot be avoided, PG&E shall work with CDFW and USFWS to ensure that the impact is fully mitigated with compensation measures that are consistent with the Santa Rosa Plain Conservation Strategy, as applicable; these measures may include: habitat acquisition and long-term habitat enhancement, purchase of mitigation credits at mitigation banks approved by CDFW and USFWS to mitigate for the plant species impacted. Any necessary mitigation strategy will include adequate funding to ensure long-term management and monitoring.

Compensatory mitigation for vernal pools. If impacts to wetlands and vernal pools cannot be completely avoided, PG&E will consult with the appropriate agencies to ensure that there is no net loss of wetlands or vernal pools. In consultation with the appropriate resource agencies, PG&E may take the following actions to ensure the no net loss of wetlands or vernal pools, including (1) purchase of mitigation credits in an agency-approved wetlands mitigation bank with a service area that includes the project site, or (2) creation of wetlands according to an agency-approved plan. Any created wetlands shall emulate wetlands affected by the project. Any wetland preserve established on or offsite shall be permanently protected through fee title transfer to a qualified agency or conservation organization, through recordation of a conservation easement deed over the protected property, or some similar deed restriction. Prior to any ground disturbance, a wetland creation and preservation plan shall be approved by the applicable resource agencies.

Special-Status Wildlife

There are nine special-status wildlife species with moderate/high potential to occur in the project area (see Table 5.4-5 for more detail); none of these nine species are state or federally-listed. However, white-tailed kite, which is California fully protected, has moderate potential to forage and nest in the study area. Direct mortality of some wildlife could occur during construction as a result of increased vehicular and foot traffic, use of heavy construction equipment, grading and excavation for the proposed substation, pulling of new circuits, trenching and/or boring for the underground distribution line, and other project activities. Potential impacts to special-status wildlife are discussed in more detail below.

Invertebrates. There is low potential for California freshwater shrimp in the study area; however, there is suitable habitat for the species in Starr Creek. The Fulton No. 1 60 kV Power Line crosses Starr Creek and one of its tributaries. The 12 kV power line along Old Redwood Highway also crosses Starr Creek. Potential impacts to this species include habitat degradation or asphyxiation from water quality impacts related to erosion or contamination during construction activities. With the implementation of APMs related to reducing sedimentation and other impacts to aquatic habitat (**APMs WQ 1-8** and **APMs BIO-1, 2, 5 and 8**), potential impacts to freshwater shrimp would be adverse, but less than significant, and no mitigation is required.

Fish. There is low potential for three special-status fish species (Coho salmon, central California steelhead, and central coastal Chinook salmon) in the study area. Suitable habitat for these species occurs in Starr Creek. However, research conducted during the preparation of this study found no evidence of special-status fish populations in Starr Creek. Potential impacts to fish include habitat degradation or asphyxiation from water quality impacts related to erosion or contamination during construction activities. With the implementation of APMs related to reducing sedimentation and other impacts to aquatic habitat (**APMs WQ 1-8** and **APMs BIO-1, 2, 5 and 8**) potential impacts to special-status fish would be adverse, but less than significant, and no mitigation is required.

Amphibians/Reptiles. There is low potential for California tiger salamander, California red-legged frog, and western spadefoot toad to occur in the project area based on species range and closest known occurrences. Because no impacts to these species are anticipated, no specific APMs or mitigation measures have been proposed for these species. Foothill yellow-legged frog may use Starr Creek for breeding. Potential impacts to this species include habitat degradation or asphyxiation from water quality impacts related to erosion or contamination during construction activities. With the implementation APMs for reducing sedimentation and other possible impacts to aquatic habitat (**APMs WQ 1-8** and **APMs BIO-1, 2, 5 and 8**) impacts to foothill yellow-legged frog would be adverse, but less than significant, and no mitigation is required.

Northwestern pond turtle has high potential to occur in the project area. There is suitable habitat for the species within drainages and in Starr Creek. Potential impacts to this species include habitat degradation or asphyxiation from water quality impacts related to erosion or contamination during construction activities. **APMs WQ 1-8** and **APMs BIO-1, 2, 5 and 8** would reduce potential indirect impacts to this species. Northwestern pond turtles could also be directly impacted by disturbance of occupied grasslands, being crushed by construction equipment and vehicles, or destruction of nests during ground-disturbing activities. **Mitigation Measure B-3** (Identify and relocate northwestern pond turtles) requires preconstruction surveys for northwestern pond turtles and relocation of individuals found in work areas. This mitigation measure is necessary because none of the APMs specifically address this species. With the implementation of **Mitigation Measure B-3**, impacts to northwestern pond turtles would be less than significant.

Birds. Cooper's hawk, short-eared owl, long-eared owl, northern harrier, white-tailed kite, loggerhead shrike, and purple martin have moderate potential to use foraging habitat in the project area. Great blue heron has high potential to occur. Burrowing owls have low potential to forage in the survey area (CDFW 2013). A small amount of ruderal/disturbed foraging habitat for these species within the 2.6 acre substation footprint would be permanently lost. In addition, a small amount of annual grassland and oak woodland foraging habitat would be temporarily disturbed. Foraging birds would be expected to leave the immediate vicinity of the project during construction activities. These species would likely use unaffected habitat nearby. Given the small amount of habitat lost relative to the availability of habitat near the project, impacts to foraging special-status birds would be adverse but less than significant and no mitigation is required.

Raptors and other large aerial perching birds, including those afforded state and/or federal protection, are susceptible to electrocution by distribution lines. Electrocutions occur when a bird simultaneously contacts two conductors of different phases or a conductor and the ground. This may happen if a bird attempts to perch on a structure with insufficient clearance between these elements. Most lines that electrocute raptors are energized at voltage levels between 1 kV and 69 kV. The project power lines are insulated for operation at 115 kV and the resulting phase separation (greater than 60 inches) effectively precludes bird electrocutions. Although the non-energized metal structures in a substation are grounded,

birds may also be electrocuted by reaching energized conductors from grounded equipment. The electrocution of State and/or federally protected bird species would constitute a significant impact. PG&E would design the distribution poles/lines to be avian-safe by installing anti-perch devices (**APM BIO-9**) and ensuring at least 60 inches of separation between energized phases and grounded components (PG&E 2010; pg. 6-36), per the construction design recommendations provided in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* (APLIC 2006). With the implementation of these measures, impacts related to electrocution of special-status birds would be adverse, but less than significant and no mitigation is required. Because of the existing residential setting and areas of existing trees near distribution lines, raptors are unlikely to collide with power lines. Therefore, impacts related to special-status birds colliding with power lines would also be less than significant.

The Migratory Bird Treaty Act prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Further, raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and State regulations. Construction disturbance during the breeding season (February 1 through August 31) could adversely affect breeding birds through direct take or indirectly through disruption or harassment. Nesting habitat is present in the project area for Cooper's hawk, long-eared owl, loggerhead shrike, white-tailed kite, and purple martin. In addition, other migratory birds, including raptors, may nest in the trees on and around project work areas. Noise and activity associated with the proposed substation construction and trenching and boring could disturb avian species. Construction activity could cause nest abandonment if nests are present; this would be a potentially significant impact.

PG&E would avoid tree removal and tree trimming when feasible. PG&E (2011) estimates that they would need to remove three trees within the substation site and that two or three trees along the distribution lines may need to be trimmed. The potential for impacts to breeding birds from tree removal, tree trimming, and general construction activity, would be minimized by implementation of **Mitigation Measure B-4** (Protect nesting birds). This measure requires pre-construction surveys, monitoring during construction, and the establishment of a buffer around active nests. Implementation of Mitigation Measure B-4 would reduce impacts to nesting birds to a less than significant level.

Mammals. Pallid bat and Townsend's big-eared bat are not expected to occur in the study area. Western red bat is moderately likely to occur. Potential impacts to breeding and roosting bats would be similar to the disturbance impacts described above for special-status birds. Impacts on special-status bats would be minimized by the implementation of **Mitigation Measure B-5**. This measure requires pre-construction surveys, biological monitoring, and the establishment of buffer zones for roosting bats. With the implementation of this measure, impacts to special status bats would be less than significant. In addition, **APM BIO-13** requires flagging and feasible avoidance of American badger dens, and **APM BIO-14** requires consultation with CDFW if an American badger den cannot be avoided in order to discuss possible relocation. Since there is low potential for American badger to occur in the project area, these APMs are adequate to minimize impacts, and no additional mitigation is required.

Mitigation Measure for Special-Status Animal Species

B-3 **Identify and relocate northwestern pond turtles.** If northwestern pond turtles are found near any proposed construction areas, impacts to individuals and their habitat shall be avoided to the extent feasible. To avoid impacts to occupied habitat, an exclusion zone shall be established around the habitat and temporary plastic fencing shall be installed around the buffer area with "Sensitive Habitat Area" signs posted and clearly visible on the outside of the fence. If avoidance is not possible and the species is determined to be present in work areas, the biologist (approved by the CPUC) shall capture turtles prior to

construction activities and relocate them to nearby, suitable habitat (the closest water body) out of harm's way (e.g., upstream or downstream from the work area). PG&E shall consult with CDFW regarding any required relocation of western pond turtles.

If deemed necessary by the on-site biological monitor, exclusion fencing shall be installed to prevent turtles from re-entering the work area. For the duration of work in these areas the biologist should conduct regular follow-up visits (at least once per week) to monitor effectiveness and take appropriate corrective action if protection measures are not adequate.

Milestones and Monitoring. Preconstruction surveys shall be conducted by qualified biologist (approved by CPUC) before ground disturbance. Any exclusion fencing that is installed to prevent western pond turtles from entering the work areas will be inspected by the on-site biological monitor to maintain the integrity of the fence. Monitoring of habitat and exclusion fencing shall be conducted by a qualified biological monitor during construction activities as necessary.

B-4

Protect nesting birds. If construction activities occur during the avian nesting season (February 1 through September 15), a preconstruction survey for nesting birds (including raptors) shall be conducted by a qualified wildlife biologist (approved by the CPUC) 7 days or less before the start of vegetation removal or trimming and ground-disturbing construction activities, and prior to the start or re-start of construction in any new work area. If there is no work in an area for 7 days, it will be considered a new work area if construction or vegetation trimming or removal begins again. At least 10 days before construction activities begin during nesting season, PG&E shall confer with CPUC and CDFW on nesting bird survey methodology. Survey will be submitted to CPUC for record keeping.

No additional measures will be implemented if active nests are more than the following distances from the nearest work site: (a) 500 feet for raptors, or (b) 250 feet for passerine birds. Buffers shall not apply to construction-related traffic using existing roads that is not limited to project-specific use (i.e., county roads, highways, farm roads, etc.).

All references in this mitigation measure to wildlife biologists refer to qualified biologists approved by the CPUC; these biologists may be PG&E employees or subcontractors. References to independent avian biologists refer to qualified avian biologists approved by the CPUC who report directly to CPUC.

Buffer reduction. The specified buffer sizes for birds may be reduced on a case-by-case basis if, based on compelling biological or ecological reasoning (e.g. the biology of the bird species, concealment of the nest site by topography, land use type, vegetation, and level of project activity) and as determined by a qualified wildlife biologist that implementation of a specified smaller buffer distance will still avoid project-related "take" (as defined by Fish and Game Code Section 86). Requests to reduce standard buffers must be submitted to the independent avian biologist(s) to be reviewed in coordination with the California Department of Fish and Wildlife (CDFW). Requests to reduce buffers must include: the species, location, size and expected duration of proposed buffer reduction, reason for the buffer reduction, the name and contact information of the qualified wildlife biologist(s) who request the buffer reduction and will conduct subsequent monitoring. The independent avian biologist shall respond to PG&E's request for a buffer reduction within 24 hours.

Non-special status species found building nests within the standard buffer zone *after specific project activities begin*, shall be assumed tolerant of that specific project activity and such nests will be protected by the maximum buffer practicable (as determined by the qualified biologist). However, these nests shall be monitored on a daily basis by a qualified biologist until the qualified biologist has determined that the young have fledged, are no longer dependent upon parental care, or construction ends within the buffer zone (whichever occurs first). If the qualified biologist determines that the nesting bird(s) are not tolerant of project activity, the standard buffer shall be implemented. As appropriate, exclusion techniques may be used for any construction equipment that is left unattended for more than 24 hours to reduce the possibility of birds nesting in the construction equipment.

If nesting birds show signs of distress within a reduced buffer zone and that stress appears to be related to construction activities, the qualified wildlife biologist shall reinstate the recommended buffers. The recommended buffers may only be reduced again following the same process as identified above after the qualified biologist has determined that the nesting birds are no longer exhibiting signs of stress. Reporting regarding reduction of buffers will be documented in the monthly report.

Listed and Fully Protected Species. If the qualified wildlife biologist determines that there are nests of listed or fully protected bird species within 500 feet of project activities, consultation with CPUC and CDFW (and USFWS as appropriate) shall be required to discuss how to implement the project and avoid “take.” If avoidance of state or federally listed species is not feasible, the applicant shall work with CDFW and and/or USFWS (as appropriate) to determine the necessary avoidance measures and possibly to obtain take authorization, as appropriate and necessary.

Monitoring and reporting. All nests with a reduced buffer shall be monitored on a daily basis by a qualified wildlife biologist until the biologist has determined that the young have fledged, are no longer dependent upon parental care, or construction ends within the reduced buffer (whichever occurs first). A monthly written report shall be submitted to CDFW and CPUC. Monthly reports shall include: all of the information included in buffer reduction requests in addition to duration of buffer reduction, and outcomes for nests, eggs, young and adults during construction within a reduced buffer. No reporting will be required if construction activities do not occur within a reduced buffer during any calendar month. A final report shall be submitted to CDFW and CPUC at the end of each nesting season summarizing all monitoring results and outcomes for the duration of project construction.

- B-5 Protect special-status bats.** Before the spring breeding season and prior to construction, a qualified biologist (approved by the CPUC) shall conduct a survey for roosting bat habitat. The survey shall include work areas adjacent to appropriate roosting habitat and are accessible from public or project areas within 200 feet of a work area. For trees considered to have a high or moderate probability for bat roosting, acoustic monitoring shall be conducted before any construction activities begin during the breeding season to determine if there are any roosting sites present. Surveys shall be conducted at the appropriate times to maximize detectability. At least ten days before surveys begin, PG&E shall confer with CPUC and CDFW on bat survey methodology. Survey will be submitted to CPUC for record keeping.

Note: All references in this mitigation measure to biologists or biological monitors refer to qualified biologists approved by the CPUC; these biologists may be PG&E employees or contractors. References to independent biologists refer to qualified biologists approved by the CPUC who report directly to the CPUC.

If an active roost or maternity roost is found within 100 feet of a work area, the limits of the work area will be clearly marked and a qualified biological monitor shall remain on-site during construction activities within the vicinity of the roost or maternity roost. The biologist shall ensure that construction activities do not encroach upon the 100 foot buffer around an active roost or maternity colony site. Buffers shall remain in place until the qualified biologist has determined that bats have vacated the occupied roost sites.

Trees containing maternity roosts shall not be removed during the breeding season (March 1 through August 31) to avoid disturbing females with young that cannot fly. No trees containing maternity roosts may be removed until the qualified biologist determines that breeding is complete and young are able to fly.

Requests to reduce buffers or exclude bats shall be submitted to CPUC for review by the CPUC's independent biologist in consultation with CDFW. The CPUC's independent biologist shall respond to requests to reduce buffers within 24 hours and shall respond to requests to exclude bats within 5 days. Exclusion plans may include the following:

- If fall/winter hibernacula cannot be avoided, humane techniques may be implemented to passively vacate bats from roosts. Methods to passively evict bats from tree roosts may include incrementally trimming limbs to alter the air flow and temperature around the roost feature where slight changes to the surrounding environment of roost features encourage bats to vacate roost features on their own.
- If acoustic monitoring detects that bats are using trees that need to be cut down, exclusionary one-way doors shall be installed in late August, after completion of the maternity season. Roost trees shall be removed after it has been confirmed that roosting bats have departed.
- If a roost is lost, PG&E shall consult with the CDFW to see if additional compensation for loss of habitat is required. Required compensation may include bat boxes be installed in the vicinity of the cut tree.

If an exclusion plan is approved by the independent biologist (in consultation with CDFW), PG&E shall submit a report to CPUC and CDFW after exclusion activities are completed describing the exclusion process and bat behavior after the implementation of the exclusion plan. All exclusion activities shall be closely monitored by the qualified biologist.

If buffer reductions are requested and approved, a monthly report shall be submitted to CPUC and CDFW with all of the information in the buffer reduction requests, monitoring results, and effects on bats. Reports shall be submitted for the duration of construction activities within buffer areas.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The primary sensitive natural communities in the study area are associated with wetlands and water features, which may be CDFW jurisdictional under California Fish and Game Code Section 1600 et seq. Oak woodlands are also considered a sensitive natural community according to the Town of Windsor's Tree Preservation and Protection Ordinance and are addressed in Section 5.4.2(e). Wetlands and water features within the survey area are listed in Table 5.4-2 (Wetlands and Water Features in the Windsor Substation Project Area) and Table 5.4-3 (Classification of Wetlands and Water Features in the Windsor Substation Project Area) and shown on Figure 5.4-1. These features include perennial Starr Creek, two seasonal swales, nine vernal pools, seven drainage ditches, two drainage swales, and 13 roadside ditches. There is also a small amount of semi-riparian scrub habitat on and near the proposed substation site associated with seasonal swale and drainages. One existing pole from the Fulton No. 1 60 kV Power Line near Wilcox Road is surrounded by a vernal pool (VP6).

Temporary impacts to wetlands, including vernal pools, other waters, and riparian habitat would result if water quality were impaired as a result of construction discharges or contamination or erosion. Direct, permanent impacts to wetlands, waters, and riparian habitat would occur if replacement poles are located within vernal pools or seasonal swales, if the temporary access road requires filling of vernal pools, or if the substation footprint affects the seasonal swale on the substation site. Potential impacts to vernal pools are discussed in more detail in Section 5.4.2(a) under special-status plants. Potential impacts to jurisdictional waters are discussed in more detail in Section 5.4.2(c).

As described in Section 5.9, Hydrology and Water Quality, water quality impacts would be avoided or minimized with implementation of **APMs WQ 1-8** and **APMs BIO-1, 2, 5 and 8**, and best management practices. These measures prohibit vehicular and equipment maintenance within 100 feet of water and wetlands, avoid and minimize potential spillage, and establish erosion controls, including a Stormwater Pollution Prevention Plan (SWPPP).

Both direct and indirect impacts to vernal pools would be minimized by **Mitigation Measure B-2** (Preserve special-status plants, wetlands, and vernal pools) as described above in the discussion of listed plants. This measure requires clear marking of all wetlands and water features as environmentally sensitive areas and the use of BMPs to avoid wetland impacts. If complete avoidance of vernal pools is not feasible, any permanent impacts to wetlands/vernal pools would be mitigated through purchase of mitigation credits or creation of wetlands based on an agency-approved plan. With implementation of APMs and **Mitigation Measure B-2**, impacts to sensitive natural communities (i.e., wetlands and other waters) would be less than significant.

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The wetlands and water features within the survey area include perennial creeks, tributaries to Starr Creek, seasonal swales, vernal pools, and drainage and roadside ditches. Starr Creek and the two relatively permanent drainage ditches (DD2 and DD3) appear to be potentially subject to USACE jurisdiction. Seasonal swales SS1 and SS2 have a hydrological connec-

tion to Sotoyome Creek and also appear to be potentially subject to USACE jurisdiction. There are six vernal pools within the biological survey area, none of which appear to be USACE-jurisdictional.

These wetlands and water features could be temporarily or permanently affected by construction of the proposed project. Potential indirect impacts to wetlands and waters of the U.S. would be the same as described for State-jurisdictional wetlands and waters under Section 5.4.2(b). Accordingly, implementation of **APMs WQ 1-8** and **APMs BIO-1, 2, 5 and 8** and best management practices would reduce most potential impacts. However, **Mitigation Measure B-2** is required to reduce impacts to wetlands and waters of the U.S. to a less than significant level.

d. Would the project 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 wildlife nursery sites?

LESS THAN SIGNIFICANT. The study area does not include any established wildlife corridor or wildlife nursery sites. The proposed substation site and associated distribution lines provide marginal upland wildlife habitat near seasonal wetlands and Starr Creek. As noted in Section 5.4.2(a), there is low potential for special-status fish in Starr Creek. Potential impacts to these species would be less than significant with the implementation of **APMs WQ 1-8** and **APMs BIO-1, 2, 5 and 8** related to reducing sedimentation and other impacts to aquatic habitat. Flows in Starr Creek would not be blocked by construction or operation of the proposed project.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

LESS THAN SIGNIFICANT. The Town of Windsor’s Tree Preservation and Protection Ordinance (Ordinance), regulates protection, preservation, maintenance, and removal of protected trees. Trees that occur within the survey area that are protected under the Ordinance include oaks with a diameter at breast height (dbh) of six inches or more. Construction of the proposed project would require removal of at least three trees, which may be covered by the Ordinance.

According to the Ordinance Amendment (section 27.36.061), mitigation for impacts to protected trees should “generally replace a smaller quantity of larger trees by replanting a larger quantity of smaller trees, with the goal of restoring the original canopy area and volume after ten years.” In addition, the Ordinance Amendment requires preparation of an arborist report for all development projects with protected trees. The arborist report would provide recommendations on the removal of trees and mitigation to offset loss of protected trees. PG&E has committed to comply with the Ordinance. **APM BIO-15** commits PG&E to marking valley oaks and oak woodlands as environmentally sensitive and avoiding these areas to the extent practical. If any protected oak trees are removed, they would be replaced during landscaping consistent with the Town of Windsor’s Ordinance for Tree Mitigation.

The proposed project would be consistent with the Town of Windsor’s Tree Preservation and Protection Ordinance. With implementation of **APM BIO-15**, impacts to protected trees would be potentially adverse, but less than significant, and no mitigation is required.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The Santa Rosa Plain Conservation Strategy (SRPCS) is a long-term conservation strategy intended to mitigate adverse impacts to California tiger salamander

and four listed plant species from development on the Santa Rosa Plain (USFWS 2005). The SRPCS identifies several conservation areas and preserves. Figure 5.4-1 shows the location of the proposed Kerry Conservation Site. CDFW intends to eventually have this parcel serve as a special-status plant mitigation bank and preserve (CDFG 2007). In January 2012, CDFW indicated that the title to 3.4 acres of this parcel will be transferred to CDFW (PG&E 2011-2013). As of May 2012, the Kerry Conservation Site is on hold as a result of funding constraints (PG&E 2011-2013). The pending mitigation bank parcel contains oak woodland and at least four vernal pools. The proposed project would require the replacement of two poles from the Fulton No. 1 60 kV Power Line that occur within the conservation site. See Section 5.4.2(a) for details regarding potential impacts to SRPCS plant species from the proposed project.

Numerous APMs would reduce potential impacts to listed plant habitat on the Kerry Conservation Site. These include **APM BIO-1** (special status species/sensitive habitat education program), **APM BIO-2** (minimize soil and vegetation disturbance), **APM BIO-3** (color brochure for construction crews), **APM BIO-4** (pre-construction wildlife and plant surveys), **APM BIO-5** (biological monitor during grading and silt fence installation), **APM BIO-7** (avoid impacts to special-status plants), **APM BIO-9** (restrictions on equipment near aquatic habitat), **APM BIO-19** (minimize noxious weeds), **APM AQ-1 through APM AQ-5** (reduce fugitive dust through watering sites, cover trucks, sweeping; full text in Section 4.15 in the Project Description), and **APM WQ-1 through APM WQ-6** (develop and implement Stormwater Pollution Prevention Plan, Best Management Practices, Spill Prevention and Control Plan, and obtain water quality permits), **APM WQ-8** (proper handling of vehicle maintenance wastes), and **APM WQ-7** (wetland avoidance.). The full text of all APMs is in Section 4.15 in the Project Description. **Mitigation Measure B-1** (protect special-status plants) and **Mitigation Measure B-4** (preserve wetlands) would further minimize and mitigate potential impacts. With implementation of these measures, proposed project conflicts with the SRPCS would be less than significant.