

3.0 SITE 8 ENVIRONMENTAL IMPACT ASSESSMENT

3.1 AESTHETICS

3.1.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to the visual character or quality of the landscape setting, or would have less-than-significant impacts to visual resources with the incorporation of the proposed APM AE-1.

The following discussions detailed in the PEA are the same for Site 8:

- Methodology used for the evaluation of Site 8 (Section 4.2 of the PEA)
- Overview of project characteristics and component dimensions (Section 4.3 of the PEA)
- Lighting (Section 4.3.2 of the PEA)
- Regional setting (Section 4.4.1 of the PEA)
- Definition of a project viewshed (Section 4.4.3 of the PEA)
- Standards of significant impacts (Section 4.6.1 of the PEA)
- Simulation methods (Section 4.6.2 of the PEA)

3.1.2 Methodology

Field observations were conducted in February 2011 to document existing visual conditions in the project area and to identify potentially-affected sensitive viewing locations.

3.1.3 Physical Characteristics of the Project

As detailed in Section 2.2.2.2 of this document, PG&E would construct two new distribution lines in addition to the substation. A wood pole adjacent to the site would be replaced with a new tubular steel pole (TSP) to connect to the substation. New poles would be approximately 20 feet taller than the existing poles. Circuit 1 would extend south over 1.5 miles on approximately 34 replaced poles on the Fulton No. 1 60 kV Power Line parallel to the railroad corridor and then tie into the existing distribution line along Windsor River Road. Circuit 2 would extend south along replaced poles on Old Redwood Highway to south of Arata Lane. A total of approximately 43 existing distribution poles would be replaced with taller poles along the route.

3.1.4 Project Landscaping

Project landscaping is generally the same as described in Section 4.3.1 of the PEA. As part of the landscape plan, a new 8-foot-tall, earth-tone colored, prefabricated wall would be installed along the north and east sides of the substation with an entrance gate on the eastern side of the substation. The wall would be set back at least 175 feet from Old Redwood Highway and approximately 80 feet from Herb Road, which could allow for additional trees to be planted along these roadways.

3.1.5 Existing Conditions

3.1.5.1 Substation Project Site

The project lies in northern Windsor at the town's edge, approximately 1.40 miles from the downtown area (see Figure 3.1-1). The surrounding ridges and hills are partially visible in the backdrop from some places within the general vicinity.

Located in a relatively flat area along Old Redwood Highway, the substation site occupies a 268-foot by 220-foot area near the southwest corner of an approximately 4.11-acre rectangular-shaped property between Herb Road on the north, the NWPRR corridor on the west, and a school bus yard to the south. Both roads afford relatively unobstructed, close-range but limited views of the project site. Although currently vacant and covered with weeds and grasses, the property contains the remnants of a former industrial use, including concrete paving with scattered trees along the northern and western edges along Herb Road and the railroad. Adjacent land uses include residences, agricultural, and commercial/industrial uses.

3.1.5.2 Project Viewshed and Potentially Affected Public View Corridors

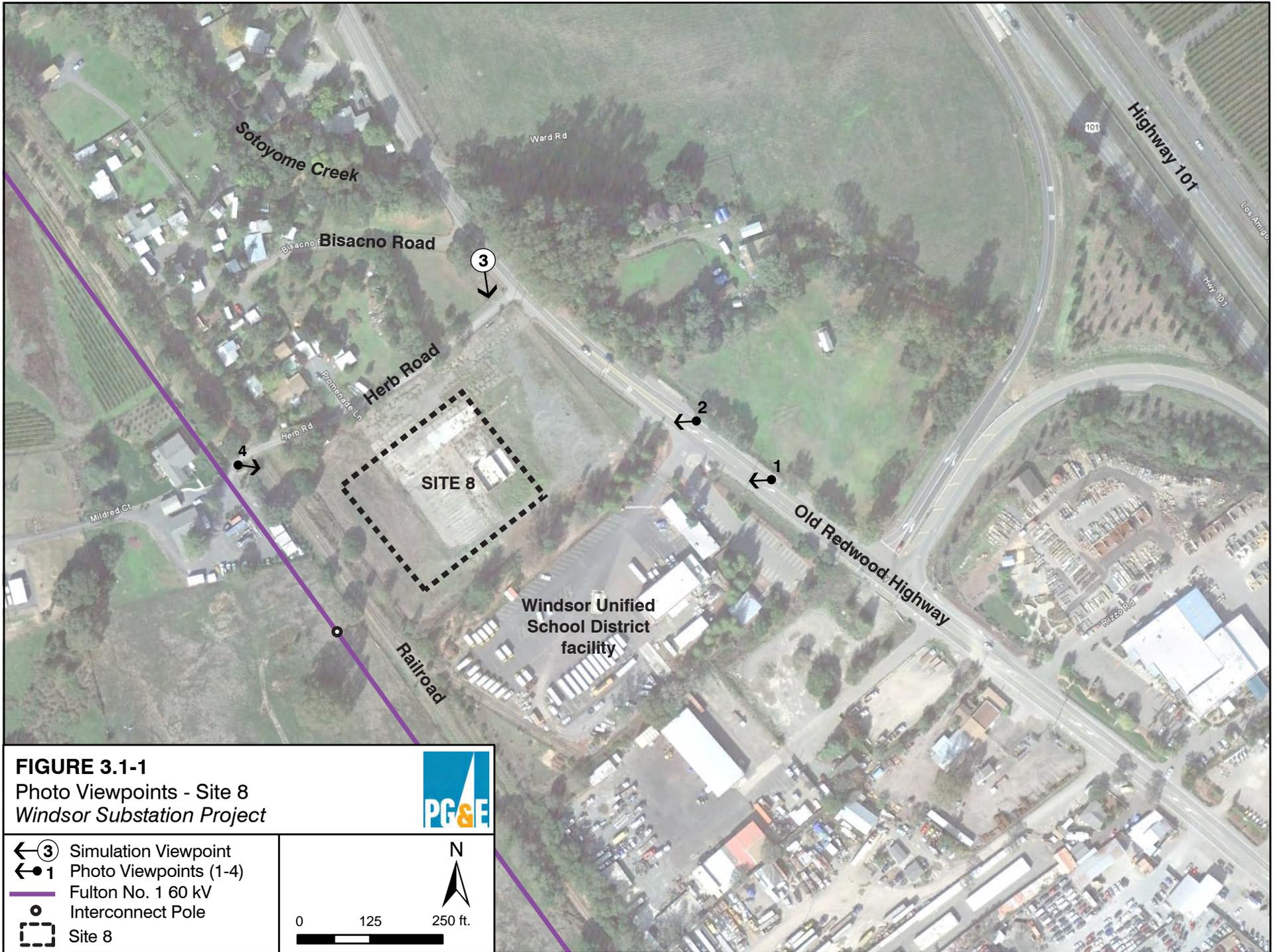
Figure 3.1-1 delineates the project site and photo viewpoint locations. A set of four photographs presented on Figure 3.1-2 portray representative visual conditions and public views in the project area.

Views from the North

The area immediately north of the site lies in unincorporated Sonoma County and includes Herb Road (a single lane private gravel road), an adjacent unpaved private residential road, and low-density residential development. Bisacno Road, a narrow private road with several residences, lies approximately 250 feet north of Herb Road; vegetation and structures generally screen views of the site from this area. One residence along Herb Road has a relatively unobstructed view of the site that is only partially screened by mature trees. Photo 3 in Figure 3.1-2 depicts a view of the site that is visible to a traveler proceeding south along Old Redwood Highway (visible for approximately 700 feet). Vegetation located along Sotoyome Creek, which lies north and east of the site and crosses Old Redwood Highway, generally screens views from these directions.

Views from the East

Old Redwood Highway, a two-lane, north-south corridor with posted speeds of 40 miles per hour (mph), borders the site to the east. A residence and open grazing fields lie to the east, across Old Redwood Highway. Views from this residence are screened by dense trees that are situated on the property and along Sotoyome Creek. A brief glimpse of the project site is available from the Highway 101 off ramp, but views from Highway 101 are generally screened by existing mature vegetation and structures.



BACK OF FIGURE 3.1-1

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1. Old Redwood Highway near Highway 101 offramp looking north



2. Old Redwood Highway near corner of site looking north



3. Old Redwood Highway near Bisacno Road looking south *



4. Herb Road near corner of site looking east

FIGURE 3.1-2
Photographs of the Project Site and Vicinity - Site 8
Windsor Substation Project

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Note: Refer to Figure 3.1-1 for viewpoint location
*Simulation view



BACK OF FIGURE 3.1-2

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Views from the West

Photo 4 in Figure 3.1-2 shows the NWPRR corridor, which borders the site on the west. Further west, across the railroad tracks are two rural residences at the end of Herb Road and an open field currently used for grazing. Another residential neighborhood along the southern portion of Herb Road lies approximately 900 feet to the south of the site. A number of mature trees located on-site and to the west of the railroad corridor partially screen views from this area toward the site.

Views from the South

To the south of the property is the Windsor Unified School District transportation department maintenance and operations facility. Other industrial/commercial land uses located nearby along Old Redwood Highway include a building supply warehouse and an auto dismantler. Existing vertical elements in the landscape include wood pole power lines along Old Redwood Highway and overhead lighting poles associated with nearby industrial/commercial properties. A row of mature trees along the school district property screens views from the property and from locations further south along Old Redwood Highway (refer to Photos 1 and 2 in Figure 3.1-2).

Views of the Power Line Underbuild

As described above in Section 3.1.3 Physical Characteristics of the Project, the project includes replacement of a number of existing poles with taller poles to accommodate two new distribution lines. As shown on Figure 2.3-1, a distribution line underbuild would extend south from the proposed substation paralleling the NWPRR corridor along the existing Fulton No. 1 60 kV Power Line right-of-way to Windsor River Road. The route passes in proximity to a number of residential properties. The second distribution line extends south along Old Redwood Highway, passing near a mixture of commercial, industrial and residential properties.

3.1.5.3 Potentially Affected Viewers

Motorists, the largest viewer group that could be affected by the project, primarily include people traveling on Old Redwood Highway. Travelers on smaller residential streets, such as Herb Road and Bisacno Road are also included. Local travelers who are familiar with the visual setting are likely the primary motorists in the project area. Other motorists may include those using the roadway on a less regular basis. Given the posted speed limits of 40 mph on Old Redwood Highway, the view duration for this group is relatively short—estimated at less than 30 seconds (approximately 700 feet). Viewer sensitivity is considered low to moderate.

Within the project vicinity, pedestrians and cyclists are another viewer group. Although currently undeveloped, the railroad corridor is planned as a Class 1 bicycle and hiking trail. Old Redwood Highway is posted as a bike lane immediately south of the site and is a proposed Class 2 bike path (Sonoma County Transit Authority, 2008). Currently there are no sidewalks along this roadway. With their travel speeds slower than those of motorists, the view duration of pedestrians and cyclists is generally longer; therefore, this viewer group may be more likely to notice detail with respect to visual change in the environment. There are relatively few pedestrians and cyclists in this area, and viewer sensitivity of this group is considered moderate.

The third viewer group includes a limited number of residents within the neighborhood to the north and west of the site on Herb Road and one on the western side of the railroad corridor. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

3.1.6 Relevant Plans and Policies and Project Consistency

The California Public Utilities Commission (CPUC) has exclusive jurisdiction over the siting and design of the project because it authorizes the construction and maintenance of investor-owned public utility (IOU) facilities. Although such projects are exempt from local land use and zoning regulations, PG&E has considered local plans and policies, and local land use priorities and concerns, as part of its environmental review process. Specific provisions of local plans and policies related to aesthetics are described in Section 4.5 of the PEA.

3.1.6.1 Town of Windsor General Plan 2015

Scenic Corridors

See Section 4.5.1 of the PEA for a discussion of provisions in the *Town of Windsor General Plan 2015*.

Figure 6-3 in the Town of Windsor General Plan identifies nearby Highway 101 as a scenic corridor.

Site 8 lies approximately 850 feet from Highway 101. Mature trees associated with a riparian corridor and existing buildings substantially screen views from Highway 101. Project landscaping as well as a new earth-tone, prefabricated wall would provide additional screening from this roadway.

Gateways

In addition to provisions identified Section 4.5.1 of the PEA, Figure 6.3 of the *Town of Windsor General Plan 2015* also identifies this portion of Old Redwood Highway as a “gateway” to the Town of Windsor. Chapter 4, Community Development includes provisions for “gateway” areas of the town. These include the following:

- A.1 Make Windsor’s unique natural setting central to its identity.

A.1.1 The Town should create a strong sense of transition at Windsor's boundaries by encouraging the preservation of agriculturally productive lands outside the proposed Sphere of Influence and by announcing entry into the Town through appropriate design of the Town's gateways. (p. 4-2)

A.4 Establish attractive gateway commercial development that communicates Windsor's place in the wine country region.

A.4.1 The Town should encourage high-quality architecture and landscaping that draws on the regional landscape and building traditions.

A.4.2 Structures, landscaping, lighting and fencing in recreational open space areas should create a positive image for Windsor. (p. 4-3)

The project would only be visible from a short segment of Old Redwood Highway. The removal of an abandoned industrial structure and the addition of landscaping proposed as part of the project would contribute to improving the area's appearance. APM AE-1 would provide additional landscaping that would enhance views from Old Redwood Highway.

3.1.6.2 Sonoma County General Plan 2020

The project site is at the far northern edge of Windsor, adjacent to unincorporated Sonoma County; therefore, this discussion considers policies for Sonoma County. The *Sonoma County General Plan 2020* Land Use and the Open Space and Resource Conservation Elements contain many references to visual resources and the scenic qualities of the County. In particular, the plan calls for the preservation of the visual and scenic qualities of Scenic Corridors. Located approximately 850 feet from Site 8, Highway 101 is designated as a scenic corridor on Figure OSCR-1 Scenic Resource Areas (Sonoma County, 2008).

Views of Site 8 from Highway 101 are largely screened by mature trees associated with the creek corridor located to the east, near the interchange.

3.1.6.3 California Department of Transportation (Caltrans) Scenic Highways Program

California's Scenic Highway Program was created by the California Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that will diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from "eligible" to "officially designated" when the local jurisdiction: 1) adopts a scenic corridor protection program, 2) applies to Caltrans for scenic highway approval, and 3) receives the designation from Caltrans. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways. However, state legislation is required for designation.

Site 8 is not visible from any officially designated or eligible State Scenic Highway in Sonoma County. The site is located 7 miles (and on the other side of a ridgeline) from Highway 116, a

designated Scenic Highway, and over 10 miles from Highway 12, portions of which are designated and eligible.

3.1.7 Impacts

3.1.7.1 Visual Simulation Methods

As part of the aesthetic impact evaluation of Site 8, a computer-generated visual simulation was produced to show this alternative from Old Redwood Highway (see Figures 3.1-3A, 3.1-3B, and 3.1-3C). Refer to Figure 3.1-1 for simulation viewpoint location. The visual simulation photograph was taken using a digital single lens reflex camera with a 35-millimeter equivalent lens, which represents a horizontal view angle of 54 degrees.

The simulations portray conceptual project landscaping as described in Section 4.3.1 of the PEA.

3.1.7.2 Visual Change

The project at Site 8 would introduce a new substation on a disturbed and currently vacant site. The following discussion provides an evaluation of the visual changes associated with the project as seen from a key representative vantage point.

Figures 3.1-3A, 3.1-3B, and 3.1-3C portray “before,” “after without landscaping,” and “after with landscaping” views of the project from Old Redwood Highway looking south. The Figure 3.1-3A photo shows a relatively close-range, unobstructed view toward the project site, which lies on the west (right) side of the roadway.

The 3.1-3B simulation portrays the new substation facility without proposed project landscaping. On the right side of the view, portions of the new earth-tone prefabricated perimeter wall appear. Substation equipment, including the takeoff structure, is also partially visible. At the left side of the view, the modified existing distribution pole appears with an additional crossarm. The simulation indicates that the project without new landscaping would be visible from this roadway location; however, because it would be set back from the roadway and is partially screened by vegetation, the facility would not appear prominent. The Figure 3.1-3C simulation shows the project with proposed landscaping that would be planted outside the substation perimeter wall, along Old Redwood Highway and along Herb Road, as described in APM AE-1. This simulation portrays new redwood trees and oaks along the roadways and several deciduous accent trees near the Herb Road intersection. In this simulation, landscaping enhances the site’s appearance and provides considerable screening. As a result, only part of the new earth-tone wall at the substation perimeter is visible. The simulations demonstrate that, with the proposed landscaping included as part of the project, views of the substation would be screened from Old Redwood Highway.



Existing view from Old Redwood Highway looking south

Note: Refer to Figure 3.1-1 for viewpoint location

FIGURE 3.1-3A
Existing View - Site 8
Windsor Substation Project
042011





Visual simulation of proposed project without landscaping

Note: Refer to Figure 3.1-1 for viewpoint location
Preliminary and subject to change based on California Public Utilities
Commission requirements, final engineering, and other factors.

FIGURE 3.1-3B
Visual Simulation without Landscaping - Site 8
Windsor Substation Project

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Visual simulation of proposed project with landscaping shown at 8 years maturity

Note: Refer to Figure 3.1-1 for viewpoint location
Preliminary and subject to change based on California Public Utilities
Commission requirements, final engineering, and other factors.

FIGURE 3.1-3C
Visual Simulation with Landscaping - Site 8
Windsor Substation Project

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In addition, approximately three residences located on Herb Road may have close-range views of the project. Existing mature trees, an earth-tone prefabricated wall, and trees planted as part of the project would provide screening of the project, so that the project would be largely screened from these residences.

3.1.7.3 Visual Impact Assessment

Construction

Construction-related visual impacts would result from the presence of equipment, materials, and work crews at the project site. Although these effects are relatively short-term, they would be most noticeable to residents who live in close proximity to the project and to motorists traveling along Old Redwood Highway.

As described in Section 2.5.4 of the PEA, PG&E and its contractors would make every effort during construction to keep construction activities as clean and inconspicuous as practical. Construction activity would be kept within the project area. Short-term visual impacts would be less than significant, and no mitigation would be required.

Scenic Vista Impacts

For purposes of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality. As such, there are no recognized scenic vistas within the project viewshed. Although glimpses of the surrounding ridgelines and hills to the east and west are available from some locations in the project area, these distant views are generally screened by existing mature vegetation. The project would not substantially alter existing views of distant landforms. Therefore, the project would not obstruct or substantially affect a scenic vista or substantially alter views of the hillsides and ridgelines that are currently experienced by the public, and no mitigation would be required.

Scenic Resources

As documented in Section 3.1.5.3, there are no designated State Scenic Highways within the project viewshed; therefore, the project at Site 8 would not substantially damage scenic resources within a State Scenic Highway.

Although not a designated State Scenic Highway, Highway 101 is listed as local scenic roadway in the Town of Windsor general plan and the Sonoma County general plan. In views from Highway 101, the project would be well screened by existing vegetation and new landscaping as well as existing structures. The project would not have a substantial adverse effect on views from this roadway; therefore, no mitigation would be required.

Visual Character

The project would involve installation of a new landscaped substation on a previously disturbed, vacant site. The new substation would not be highly visible from public view corridors because it would be set back at least 175 feet from Old Redwood Highway and 80 feet from Herb Road, and because the substation components would be largely screened from public views by project

landscaping and existing vegetation. Portions of the substation would be seen from a limited number of existing residences. Existing vegetation and project landscaping would largely screen views of the substation facilities from residences located along Herb Road. In public views of the site from surrounding roadways and residential areas, the project would generally not be visible beyond a distance of 0.25 mile. The scale and appearance of the project are compatible with the visual character found in the surrounding area. In addition, given the nearby light industrial and commercial development on Old Redwood Highway south of the site, and the commercial zoning of this site, the project's appearance would not be out of context with the landscape setting.

The replacement poles along the railroad corridor would be somewhat taller than the existing poles and potentially more noticeable. However, these poles would not be particularly noticeable from public roadways. Likewise, pole replacements along Old Redwood Highway would represent an incremental change and would not substantially alter the existing visual character or landscape composition seen in the area.

Therefore, the project at Site 8 would not substantially degrade the existing visual character or quality of the site and its surroundings. With APM AE-1, this effect would be less than significant.

Project Lighting

Project lighting and general measures to reduce light and glare effects are described in Section 4.6.4.5 of the PEA. Existing vegetation, project landscaping, and the wall enclosure would provide additional visual screening of project lighting from Old Redwood Highway and nearby residential properties.

The site is in an area with low-density residential and industrial uses. Current nighttime lighting in the project area includes overhead street lighting on Old Redwood Highway at the intersection with the Highway 101 off ramp, parking lot and site lighting at nearby industrial properties, and lighting localized around individual residences.

The project security lighting would create an additional source of nighttime light that may be visible from some nearby locations off-site. With project landscaping and the use of non-glare fixtures directed on-site, these project-related light and glare effects would be considered incremental changes that are less than significant.

3.1.8 Avoidance and Protection Measures

Implementation of the following APM would minimize potential visual effects.

APM AE-1. Additional landscaping comprised of trees and shrubs would be included along Herb Road and along the eastern edge of the site in the setback area from Old Redwood Highway to provide additional screening and reduce project visibility. Suggested plant material includes a mix of redwood trees and evergreen native oaks with a small number of deciduous accent trees. Landscaping under transmission lines would consist of smaller trees and/or shrubs

to allow for overhead clearance. All planting would be consistent with PG&E operational requirements for landscaping in proximity to electric transmission facilities.

3.1.9 References

References for this section are the same as those listed in Section 4.7 of the PEA with the following additional sources:

Pacific Gas and Electric Company. *Plan at Site 8: General Arrangement Outdoors*. Drawing. January 28, 2010.

Environmental Resources Management. 2011. *Phase I Environmental Site Assessment*. (Project No. 0126648.) Prepared for Pacific Gas and Electric Company, January 2011.

Sonoma County Transit Authority. 2008. *Windsor Bicycle and Pedestrian Master Plan*. December 2008.

3.2 AIR QUALITY

3.2.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts from short-term emissions from project construction.

The Bay Area Air Quality Management District (BAAQMD) issued new California Environmental Quality Act Air Quality Guidelines in June 2010 which supersede the previous guidelines issued in 1999. The new guidelines apply to projects for which environmental analysis begins, on or after June 2, 2010. PG&E's application for the Windsor Substation Project was deemed complete on May 20, 2010 and therefore, the new guidelines do not apply; however, emissions of the project would be under the threshold for construction-related impacts defined in the new guidelines. Installing a substation and associated facilities at Site 8 would result in air emissions impacts similar to those described in the PEA. The primary difference is that a project at Site 8 would require additional equipment for demolition of the existing building foundation and more associated power line and distribution work resulting in higher emissions of carbon dioxide (CO₂), although still at levels below applicable thresholds and less than significant.

The following discussions detailed in the PEA are the same for Site 8:

- Methodology used for the evaluation of Site 8 (Section 5.2 of the PEA)
- Regulatory framework (Section 5.3 of the PEA)
- Existing conditions (Section 5.4 of the PEA)
- Standards of significant impacts (Section 5.5.1 of the PEA)
- Impacts resulting from operations and maintenance (Section 5.5.3 of the PEA)
- Avoidance and Protection Measures (Section 5.6 of the PEA)
- References (Section 5.7 of the PEA)

3.2.2 Temporary Construction Impacts

Temporary construction impacts at Site 8 would be similar to those described in the PEA with the exception of emissions of CO₂. The same construction equipment and personnel would be required as described in Section 1.6.1 and 1.6.8, and Attachment B of the PEA, with the exception of additional equipment needed for demolition of the existing building foundation on Site 8 and work associated with distribution line installation (overhead and underground). The distribution line installation would require an additional three months of effort (approximately four to five months in total). Documentation of the inputs to and results from the construction analysis are included in Attachment B.

Construction phase unmitigated emissions of CO₂ were estimated using emissions factors from URBEMIS 9.2.4 and EMFAC2007 Ver. 2.3. A total of 354 metric tons carbon dioxide equivalent (CO₂e) of emissions is estimated for construction activities at Site 8. Incorporation of the APMs listed in Section 5.6 of the PEA would further reduce emissions from construction to approximately 301 metric tons CO₂e. The emissions from the construction phase of the project at Site 8 would be well below California Air Resources Board's proposed threshold of 7,000 metric tons CO₂e per year. Although the BAAQMD has no threshold specifically addressing temporary

construction impacts, and although the new BAAQMD regulations would not apply to this project in any event, estimated emissions of approximately 301 metric tons of CO₂e would nevertheless fall well under the BAAQMD's operational-related threshold for projects other than stationary sources of 1,100 metric tons of CO₂e per year. Impacts from temporary construction emissions at Site 8 would thus be less than significant.

3.3 BIOLOGICAL RESOURCES

3.3.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to botanical resources, wildlife, and aquatic features, or would have less-than-significant impacts with the incorporation of the proposed APMs described in Section 6.6 of the PEA.

The following information is the same for Site 8 as is detailed in the PEA:

- Standards of significant impacts (Section 6.5.1 of the PEA)
- Impacts to general wildlife and impacts resulting from noxious weeds (Sections 6.5.5 and 6.5.9 of the PEA)

Several special-status species have the potential to occur at Site 8, including 24 special-status plant species and 28 special-status wildlife species (see Tables 3.3-1 and 3.3-2). Additional information about the special-status wildlife species listed in Table 3.3-2 can be found in Section 6.5.8 of the PEA. In addition, the following species are also potentially present at Site 8 and are discussed below in Section 3.3.4.3 of this document: California freshwater shrimp (*Syncaris pacifica*), Coho salmon (Central CA coast, *Oncorhynchus kisutch*), Central California coastal steelhead (*Oncorhynchus mykiss*), and California coastal chinook salmon (*Oncorhynchus tshawytscha*). None of the work for a project at Site 8 would occur in any designated critical habitat for any federally listed species; therefore, no proposed or designated critical habitat would be adversely modified or destroyed.

3.3.2 Regulatory Background

Although PG&E's substation and related utility projects are not subject to local land use and zoning regulations, certain of those regulations may be relevant to the CEQA discussion. The listing of local regulations, policies, and plans pertaining to biological resources would be the same for a project at Site 8 as those described in Section 6.2.3 of the PEA.

3.3.2.1 Federal Regulations

A project at Site 8 would be subject to the same federal regulations as described in Section 6.2.1 of the PEA. However, the applicability of 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, California* discussed in Sections 6.2.1.2 of the PEA would depend on the results of the rare plant surveys to be conducted in 2011. If the programmatic biological opinion is not applicable, then a separate biological opinion from the U.S. Fish and Wildlife Service (USFWS) may be required for work at Site 8.

Table 3.3-1: Site 8 - Special-status Plants with the Potential to Occur in the Project Area

Species Common Name <i>Scientific Name</i>	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur in the Project Area
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. Nearest occurrence is < 4 miles away.
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.

Species Common Name Scientific Name	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur in the Project Area
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 site.

Species Common Name Scientific Name	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur in the Project Area
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	High; potential habitat in or near ditches or wetlands. Nearest occurrence is < 0.50 mile away.
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.

Species Common Name <i>Scientific Name</i>	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur in the Project Area
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	Moderate; potential habitat in grasslands. Nearest occurrence is < 4 miles away.
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.

Species Common Name <i>Scientific Name</i>	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur in the Project Area
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.

¹ **Listing Status**

U.S. Fish and Wildlife Service

FE Endangered

California Department of Fish and Game

SE Endangered

California Native Plant Society

- 1B Plants are rare, threatened, or endangered in California and elsewhere
- 2 Plants are rare, threatened, or endangered in California but more common elsewhere
- 3 Plants about which more information is needed to determine their status
- 0.1 Plants are seriously endangered in California
- 0.2 Plants are fairly endangered in California

Table 3.3-2: Site 8 - Special-status Wildlife Species with Potential to Occur in the Project Area

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
<i>Invertebrates</i>			
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; suitable habitat exists in Starr Creek. Drainage ditches most likely do not support suitable habitat. No CNDDDB occurrences within 5 miles.
<i>Fish</i>			
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; 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.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
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; 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; suitable habitat may exist in Starr Creek, although no research found indicating populations there. No CNDDDB occurrences within 5 miles.
<i>Amphibians/Reptiles</i>			
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.

Species Common Name <i>Scientific Name</i>	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.	Unlikely; 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,	Unlikely; occurrence in Sonoma County is unclear. Nearest CNDDDB occurrence is over 10 miles away.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
		Petaluma Creek-Sonoma Creek).	
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.	Unlikely; survey area appears to be out of the current range of the toad.
Birds			
Cooper's hawk <i>Accipter 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	Moderate; marginal nesting habitat present. Oak

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
		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.	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. 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; 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 CNDDB 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	Moderate; no suitable nesting habitat present. Annual grasslands in project area have been ungrazed for a few

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
		Annadel State Park, Sonoma County in 1995.	years.
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; could potentially use the oak woodlands in the survey area for nesting, and the grasslands for hunting.
Burrowing owl <i>Athene cunicularia</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.
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 the 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	Low; marginal habitat exists in oak woodland and they

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
		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.	could forage in the 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.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
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. Occur sin forest and woodland areas at low to intermediate elevations throughout much of the state. Have been reported in Sonoma County.	Moderate; could use utility poles and oak woodlands for perching/nesting.
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.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
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 noticed at the time of the assessments, and the annual grassland area and Site 8 are likely too small of an area for the badger to inhabit.

Listing Status:

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
 G,N,S The conservation status of a species or community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = Global, N = National, and S = Subnational). The numbers have the following meaning: 1 = critically imperiled, 2 = imperiled, 3 = vulnerable to extirpation or extinction, 4 = apparently secure, 5 = demonstrably widespread, abundant, and secure

3.3.2.2 State/Regional Regulations

A project at Site 8 would be subject to the same state and regional regulations as described in Section 6.2.2 of the PEA. However, while 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 Santa Rosa Plains Conservation Strategy (Conservation Strategy), they are not within a conservation area. The maps in the USFWS Conservation Strategy (dated 2005) show that the presence of California tiger salamander is unlikely at Site 8 and along the Fulton No. 1 60 kV Power Line and 12 kV distribution line because these areas are out of the range of the California tiger salamander, but mitigation for listed plants may be required. Both the power line and distribution line alignments also pass through or are adjacent to areas that are already developed and, therefore, there is no potential for impact.

The Kerry Conservation Bank, a proposed mitigation bank and preserve, is being proposed between the vacant property west of Site 8 and Promenade Lane. The Conservation Strategy defines pending preserves as: preserves that are proposed as mitigation in CEQA documents currently being processed; preserves in pending Section 7 consultations or in Army Corps of Engineers applications; or, proposed mitigation banks that have a Banking Enabling Instrument in review. It appears that two poles of the Fulton No. 1 60 kV Power Line are located in the proposed Kerry Conservation Bank. PG&E, which has an existing easement that would be impacted by this proposed Bank, has apparently not been contacted about it.

3.3.3 Methodology

A biological reconnaissance survey for both non-special-status and special-status wildlife species and plant communities was conducted in February and April 2011 by TRC Solutions, Inc (TRC). The survey area included: Site 8, the Fulton No. 1 60 kV Power Line within the vacant property west of Site 8 (a 75-foot radius around the TSP, 50-foot radius around wood poles, and a 10-foot-wide corridor between poles), and the 12 kV distribution line along Old Redwood Highway (a 75-foot radius around the TSP, 50-foot radius around wood poles, and a 10-foot-wide corridor for underground conduit between Joe Rodota Road and Windsor River Road). Segments of the Fulton No. 1 60 kV Power Line located in landscaped backyards of private residences were not surveyed because they do not provide suitable habitat for special-status wildlife and plants.

Habitat was assessed to determine the potential to support rare plants and special-status wildlife. Plants were identified to the extent practicable; focused rare plant surveys of suitable habitat would be conducted during the appropriate blooming periods. In addition, data regarding potential federal and state jurisdictional waters and wetlands was collected. Closer inspections were made in areas that appeared to have a moderate to high potential of supporting rare, threatened, or endangered fauna and flora.

Protocol surveys would not be necessary for any federally or state-listed wildlife species because of the unlikely or low potential for these species to occur in the project area. A general survey for special-status wildlife species would be conducted again immediately prior to construction. Prior to conducting the field reconnaissance surveys, TRC performed searches of the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) records. In addition, TRC obtained two letters from the USFWS that contained a list of federally listed

species in the Healdsburg U. S. Geologic Survey (USGS) 7.5-Minute Quadrangle and throughout Sonoma County. The CNDDDB was accessed for information on sensitive plant and wildlife species known to occur at Site 8 and within a 5-mile buffer around the site. The CNPS records were accessed for information on sensitive plant species that are known to occur in the Healdsburg USGS quadrangle and the eight surrounding USGS quadrangles. The additional USGS quadrangles included in the search were Sebastopol, Camp Meeker, Mount St. Helena, Mark West Springs, Santa Rosa, Jimtown, Geyserville, and Guerneville. All applicable available field guides were consulted to identify wildlife species not found during the database searches whose ranges are within the survey areas. If the range as well as the habitat of a given sensitive species coincided with that of the survey areas, the species was considered as having the potential to occur within the survey areas.

3.3.4 Existing Conditions

Site 8 is on a 4.11-acre parcel of land that was previously developed. Parts of the site are covered by large concrete foundations and remnants from previous buildings. Other areas are covered in annual grasses, dominated by weeds (such as longbeak stork's bill [*Erodium botrys*] and bristly ox tongue [*Picris echioides*]), and/or contain portions of gravel. One roadside ditch, two drainage ditches, and a seasonal wetland are located within Site 8 or at its perimeter. Most of the area within Site 8 exhibits poor habitat for special-status wildlife and plant species because it was previously developed and is covered mostly by weeds. The perimeter of Site 8 is bounded with mature shrubs and oak trees. This mature vegetation most likely supports bird nesting activity during spring and summer months.

The 12 kV distribution line along Old Redwood Highway between Site 8 and Windsor River Road is adjacent to ruderal, grassland, and woodland habitats, as well as developed areas (including residences). The line spans and/or is adjacent to 10 roadside ditches, 2 drainages, and Starr Creek. Potential for special-status species exists throughout the distribution line alignment, mostly in the woodland and aquatic areas.

Land cover along the Fulton No. 1 60 kV Power Line between Site 8 and Windsor River Road is mainly a mosaic of grassland, oak woodland, and rural residences at the northern end, and backyards of private residences, along roads, and through other developed areas to the south. The vacant property west of Site 8 consists of grassland, wetland, and oak woodland plant communities. One seasonal swale and two seasonal wetlands are located within this property and because this property has been vacant for many years, there is potential for special-status plant and wildlife species to occur in this area. Oaks are scattered within the property and along its perimeter and provide nesting habitat for birds. The Fulton No. 1 60 kV Power Line between Site 8 and Windsor River Road spans and/or is adjacent to a seasonal swale, two seasonal wetlands, and a roadside ditch and drainage. Additional swales and wetlands may be identified when the remaining six poles along the Fulton No. 1 60 kV Power Line are surveyed.

Seventy-two special-status plant species were identified as having the potential to occur within the survey areas. Forty-eight of the 72 species did not fall within 100 feet of the known elevation range and/or did not meet the habitat characteristics observed in the survey area. The remaining

24 species were analyzed for their potential to occur within the survey area. These species are described in Table 3.3-1.

Forty special-status wildlife species were identified as having the potential to occur within the survey areas. Twelve of the 40 species 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 3.3-2.

Seven potential federal-jurisdictional waters and wetland areas and one non-jurisdictional manmade earthen roadside ditch within the survey areas, which could be either directly or indirectly affected by the project, were recorded with a sub-meter accuracy Global Positioning System unit.

3.3.4.1 Habitat Types

The habitat types present are very similar to habitat types discussed in Section 6.4.1 of the PEA. These habitat types consist of annual grassland, ruderal/disturbed, oak woodland, developed/landscaped, wetlands, drainage ditches, and creeks. Two additional habitat types, semi-riparian scrub and seasonal wetlands, were found in the survey area. All of these habitat types are classified according to the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland, 1986) where possible. However, the areas throughout the project area have been altered so much over time that plant community descriptions no longer easily fit the Holland descriptions. In these cases, the descriptions have been modified from the Holland descriptions.

Semi-riparian Scrub

Semi-riparian scrub is composed mainly of Himalayan blackberry (*Rubus discolor*) and can be found where runoff collects. Vegetation is usually at a younger successional stage than in a riparian forest due to current and ongoing disturbances or flooding. Wildlife species that may utilize riparian scrub in the project area are California alligator lizard (*Elgaria multicarinata multicarinata*), house finch (*Carpodacus mexicanus*), scrub jay (*Aphelocoma californica*), and black phoebe (*Sayornis nigricans*). Semi-riparian scrub is found in the lower seasonal swale area in the vacant property west of Site 8, in the southwestern corner of Site 8, and along Old Redwood Highway near some of the drainages.

Seasonal Wetlands and Swales

Seasonal wetlands lack a restrictive layer, such as a hardpan or claypan; therefore, the hydrologic regime in these features is dominated by long periods of saturated soil conditions rather than inundation. The plant species found growing in these features are adapted to withstand long periods of saturation, but not prolonged periods of inundation. Seasonal wetland plant communities, dominated along their boundaries by facultative wetland grasses, including barley (*Hordeum marinum* ssp. *gussoneanum*), Bermuda grass (*Cynodon dactylon*), and English rye grass (*Lolium perenne*), and dominated where water persists longer by facultative and obligate wetland plants, including fiddle dock (*Rumex pulcher*), curly dock (*Rumex crispus*), tall flatsedge

(*Cyperus eragrostis*), loosestrife (*Lythrum hyssopifolia*), pennyroyal (*Mentha pulegium*), and irisleaf rush (*Juncus xiphioides*), were found in the southwest corner of Site 8 and in the vacant property west of Site 8. Wildlife species that could utilize seasonal wetlands include raccoon (*Procyon lotor*), gopher snake (*Pituophis melanoleucus*), and Pacific chorus frog (*Pseudacris regilla*).

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 defined bed and bank. Similar to seasonal wetlands, the plant species found growing in seasonal swales are typically adapted to saturated soil conditions rather than prolonged periods of inundation. During the field surveys, this feature contained plant species including curly dock (*Rumex crispus*), and many grasses.

3.3.4.2 Water Features

There are seven potential jurisdictional waters or wetland areas and one non-jurisdictional water in the survey area. The water features within the survey area include perennial creeks, tributaries to Starr Creek, seasonal swale, drainage ditch, and roadside ditches.

3.3.5 Impacts

3.3.5.1 Habitat Types

Annual Grassland

PG&E's use of a 75-foot radius of temporary workspace around TSPs, 50-foot radius of temporary work space around wood poles, and a 10-foot right-of-way between poles along the Fulton No. 1 60 kV line would result in the approximate temporary loss of 0.9 acre of annual grassland. The grasslands could provide habitat for a variety of species; however, these impacts would be less than significant with implementation of the APMs incorporated into the project (see Section 6.6 of the PEA).

Ruderal/Disturbed

Ruderal/disturbed vegetation can be found throughout the project area and is most prominent along the road edges and disturbed lots. Such areas are found along Old Redwood Highway and throughout most of Site 8. This non-native vegetation provides minimal habitat value for sensitive biological resources. Impacts to this vegetation would be less than significant.

Oak Woodland

Oak woodland vegetation can be found along the perimeter of Site 8 and the vacant lot west of Site 8. While tree trimming would be avoided when feasible within the substation property and along the existing transmission and distribution alignments, approximately one tree would need to be removed within the substation boundary, and approximately two or three trees located outside of the substation boundary may need trimming depending on the heights of the interconnection line coming into the substation. APMs listed in Section 6.6 of the PEA would help to reduce impacts to trees to less-than-significant levels.

Developed/Landscaped

Developed/landscaped areas consisting of medium-density housing, landscaped backyards and front yards, rural residences, planted ornamental shrubs, and access roads occur around Site 8 and along the Fulton No. 1 60 kV Power Line and 12 kV distribution line. It is anticipated that some landscaped areas with landscaped vegetation would be disturbed and would need to be replaced following construction. Impacts to biological resources would be less than significant.

Semi-riparian Scrub

Semi-riparian scrub is found in lower seasonal swale areas southwest of Site 8, in the southwestern corner of Site 8, where drainages run perpendicular to Old Redwood Highway, and on the banks of a drainage just south of the intersection of Windsor Road and Old Redwood Highway. Impacts to riparian scrub would likely only result in approximately 0.03 acre of temporary disturbance. The riparian scrub could provide habitat for a variety of species; however, these impacts would be less than significant with implementation of the APMs incorporated into the project (see Section 6.6 of the PEA).

Seasonal Wetlands

One seasonal swale is located in the southwestern portion of Site 8 (see Figure 3.7-1). Approximately 0.057 acre of this wetland would be temporarily affected.

In the areas that were surveyed in February and April 2011, the Fulton No. 1 60 kV Power Line spans and/or is adjacent to one seasonal swale on the vacant property west of Site 8 and five season wetlands. Approximately 0.04 acre of seasonal swale would be temporarily affected. Potential impacts to the seasonal wetlands would be temporary.

Drainage Ditches and Starr Creek

There are two drainage ditches and one roadside ditch located within Site 8 (see Figure 3.7-1). One drainage ditch is on the west side of Site 8 and is a tributary to Sotoyome Creek, which makes it ACOE jurisdictional. Another drainage ditch is located in the southwestern corner and drains from a culvert into the ditch discussed above. The roadside ditch is on the west side of Site 8. This ditch is used to collect and convey stormwater runoff and has a culvert in it that would be used as part of Site 8's storm drain system; it is likely not within the jurisdiction of the ACOE as it does not carry a relatively permanent flow of water. Approximately 0.05 acre of drainage ditch and 0.002 acre of roadside ditch would be temporarily affected.

The 12 kV distribution line spans and/or is adjacent to 10 roadside ditches, 2 drainages, and Starr Creek. The Fulton No. 1 60 kV Power Line spans and/or is adjacent to one roadside ditch. Approximately 0.006 acre of roadside ditches and 0.006 acre of drainages would be temporarily affected. No impacts to Starr Creek would occur. Although unlikely, sedimentation from ground disturbance could wash from the site into aquatic habitats, especially during rain events. As a result of sedimentation runoff, species occurring in these habitats could be indirectly affected. The APMs as listed in Section 6.6 and 10.5 of the PEA would ensure that any impacts to hydrology and aquatic habitats are less than significant.

3.3.5.2 Special-Status Plant Species

Potential impacts to special-status plant species would need to be identified following the completion of rare plant surveys conducted in the appropriate blooming periods in 2011.

3.3.5.3 Special-Status Wildlife Species

Impacts to potentially occurring special-status wildlife species as a result of substation construction and operation may be slightly different at Site 8 than what is described in Section 6.5.8 of the PEA due to different features present in the survey area, but in general they would be similar. Impacts to potentially occurring special-status wildlife species not previously addressed in Section 6.5.8 of the PEA are described below.

California Freshwater Shrimp

Starr Creek could provide possible habitat for the California freshwater shrimp. California shrimp live 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. Impacts resulting from sedimentation runoff into the creek could cause injury or mortality to the shrimp. The protection measures included in Section 6.6 of the PEA instituted to keep sedimentation from running into waterways would minimize impacts to the California freshwater shrimp and would result in less-than-significant impacts to the shrimp.

Special-status Fishes

Coho salmon (Central California coast), Central California coastal steelhead, and California coastal chinook salmon could potentially migrate through Starr Creek. Work along the Fulton No. 1 60 kV Power Line could possibly cause sedimentation to enter the creek. Sedimentation could cause direct mortality or injury to the fish. The protection measures included in Section 6.6 of the PEA would be instituted to keep sedimentation from running into waterways and would minimize impacts to the coho and chinook salmon and steelhead. Therefore, there would be a less-than-significant impact to special-status fish.

Great Blue Heron

Great blue heron has the potential to occur throughout the project area in grasslands, trees, or near aquatic features. Great blue herons frequent shorelines and also stalk upland fields for rodents, especially in winter. They usually nest in rookeries, trees, or bushes. Impacts to great blue herons would be similar to impacts listed for raptors and other listed birds in Section 6.5.8.7 of the PEA. APMs described in Section 6.6 of the PEA would reduce potentially significant impacts to great blue herons to less than significant.

3.3.6 References

References for this section are the same as those listed in Section 6.7 of the PEA, with the following additions:

Butler, Robert W. 1992. Great Blue Heron (*Ardea herodias*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/025doi:10.2173/bna.25>.

California Native Plant Society. 2011. Inventory of Rare and Endangered Plants (online edition, v7-11). Online: <http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi>. Site visited February 16, 2011. California Native Plant Society. Sacramento, CA.

CDFG (California Department of Fish and Game). 2011. *California Natural Diversity Database*. RareFind 4. Record search of the Healdsburg 7.5-minute quadrangle for special-status wildlife within a 5-mile radius of the project site. Sacramento, CA.

CDFG (California Department of Fish and Game). Online: <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf>. Site visited February 16, 2011.

Faber, P.M. and E. Keller. 1985. The Ecology of Riparian Habitats of the Southern California Coastal Region: A Community Profile. USDI Fish and Wildlife Service Biological Report.

TRC Solutions, Inc. 2011. (Draft) Delineation of Waters of the United States for Pacific Gas and Electric Company's Windsor Substation Project Sonoma County, California February 2011.

3.4 CULTURAL RESOURCES

3.4.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to cultural resources, or would have less-than-significant impacts with the incorporation of the proposed APMs described in Section 7.6 of the PEA. There are two historic-era cultural resources within the project area at Site 8 (the NWPRR and Old Redwood Highway) and no known pre-historic cultural resources.

The following discussions detailed in the PEA are the same for Site 8:

- Regulatory framework (Section 7.3 of the PEA)
- Archaeological, ethnographic, and historic overviews (Sections 7.4.1, 7.4.2, and 7.4.3 of the PEA)
- Standards of significant impacts (Section 7.5.1 of the PEA)
- Impacts resulting from ground-disturbing construction activities (Section 7.5.2 of the PEA)
- Avoidance and Protection Measures (Section 7.6 of the PEA)
- References (Section 7.7 of the PEA)

Paleontological resources are discussed in Chapter 8.0 of the PEA (Geology, Soils, Mineral Resources, and Paleontology), and in Section 3.5.4 of this document.

3.4.2 Methodology

The pre-field archival research and archaeological survey methodology is the same as the methodology described in Section 7.2 of the PEA, with the following additions:

- In February 2010, GANDA conducted an additional records search of a 25-foot radius along the approximate 1.50-mile corridor of the Fulton No. 1 60 kV Power Line and the existing overhead distribution line along Old Redwood Highway associated with Site 8.
- Consultation with Native Americans groups and individuals and local historical societies should be conducted if Site 8 is selected by the CPUC as the preferred site.

3.4.3 Existing Conditions

Site 8 is surrounded by a 6-foot, chain-link fence with barbed wire and two gated entrances. Between 1974 and 2005, three commercial businesses occupied the property, including the Mayfair Packing Company, G&V Contractors Inc., and Dean T. Car Shark. However, most of the structures in the Site 8 alternative project area have been demolished. Presently, the remaining structures consist of four concrete cinder block walls from one of the former commercial buildings and a small wood shed. The central portion of the Site 8 project area is covered by the remnant concrete footprint of former structures, a sidewalk, an asphaltic paved parking area, and two rail lines located on the western side of the cinder block walls. Other features at this location include a concrete culvert, a concrete ramp, and a wood pole. There is also evidence of subsurface

infrastructure features associated with the industrial use of the site as indicated by protruding metal pipes and a pit. The historic-era Old Redwood Highway serves as the access road to Site 8.

The Site 8 project area also includes a section of the Fulton No. 1 60 kV Power Line, which was installed in 1949 and rebuilt in 2009. The power line is located to the west in a mixed urban/rural residential setting that consists of private and public lands along a 1.50-mile corridor parallel to the NWPRR. Within the project area to the east of Site 8 is an overhead distribution line that runs parallel to the historic-era Old Redwood Highway. Although the line was originally installed in 1938, the poles appear to be modern. Located east of Site 8, the poles are situated on the shoulder of the highway surrounded by modern features, such as mail boxes, drainage ditches, utility equipment, and road signage in a mixed urban/rural residential setting.

3.4.3.1 Cultural Resources in the Study Area

No prehistoric cultural resources have been previously recorded or were identified during the fieldwork within or adjacent to the Site 8 alternative project area.

The results of the records searches conducted in October 2010 (NWIC File No.10-0320) and in February 2011 (NWIC File No.10-0760) indicate that 17 studies have been conducted along the distribution lines associated with the Site 8 alternative project area.

One study (S-13217) is associated with the historic-era cultural resource within the Site 8 alternative project area, the NWPRR [CA-SON-2322H (P-49-002834)]. The NWPRR was identified within 25 feet east of the Fulton No. 1 60 kV Power Line at the intersection of Windsor Road and Windsor River Road. The NWPRR has been recorded and updated since 1991. It is adjacent to Site 8; however, no impacts to the resource are anticipated for this project.

The archaeological survey conducted in February 2011 resulted in the identification of one historic-era cultural resource, Old Redwood Highway, which has not been previously recorded or evaluated. Old Redwood Highway is within the project area for Site 8, as the distribution line that runs along the highway would be upgraded. There is evidence of Old Redwood Highway documented on U.S. Geological Survey topographic maps since 1877; however, because there are continuous use of and upgrades to the road, and because the project would not change the road, there is a low potential for impacts to the road bed as a result of the pole replacements.

3.4.4 Unknown Cultural Resources in the Study Area

There is a low potential for the identification of subsurface cultural resource deposits at Site 8. Additionally, there appears to be a low potential for inadvertent discoveries of buried prehistoric archaeological deposits during subsurface construction based on a review of the area's geology and soils. The soils at Site 8, Haire Series and Huichica Series, likely date to the Pleistocene - Late Pleistocene and have not been subject to widespread Holocene-era alluvial deposition that could bury cultural materials. Although the likelihood is low, any archaeological deposits exposed during subsurface construction could contain potentially significant buried prehistoric and/or historic cultural materials. Should subsurface cultural resources be encountered, PG&E's Best Management Practices (BMPs) described in Section 7.6 of the PEA would be carried out.

3.5 GEOLOGY, SOILS, MINERAL RESOURCES, AND PALEONTOLOGY

3.5.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to geological resources, soils, mineral resources, and paleontological resources; therefore, no APMs are proposed. Site 8 is located in the same geologic setting as the proposed project, and impacts on geology, soils, mineral resources, and paleontology would be consistent with the analysis in Section 8.5 of the PEA.

The following information is the same for Site 8 as is in the PEA:

- Methodology used for the evaluation of Site 8 (Section 8.2 of the PEA)
- Regulatory framework (Section 8.3 of the PEA)
- Geologic setting, faulting, seismicity and related hazards, geologic hazards, mineral resources, and paleontological setting (Sections 8.4.2, 8.4.3, 8.4.4, 8.4.6, and 8.4.7 of the PEA)
- Standards of significant impacts (Section 8.5.1 of the PEA)
- Impacts resulting from construction and operations and maintenance (Sections 8.5.2 and 8.5.4 of the PEA)

3.5.2 Existing Conditions

3.5.2.1 Topographic Setting

Site 8 is situated in a similar topographic setting as described in Section 8.4 of the PEA. The following differences are applicable to the topographic setting at Site 8:

- Site 8 is at an elevation of approximately 120 feet above mean sea level.
- Site 8 is relatively flat with a slight downward slope toward the west.

3.5.2.2 Soils

Site 8 is located on relatively flat ground in an area of soils belonging to the Haire Series and the Huichica Series as mapped by the Natural Resources Conservation Service (NRCS). The Haire soils occur in nearly level to moderately-steep hills at elevations of 20 to 2,400 feet. This series consists of clay and loam formed from alluvium derived from sedimentary rocks (terrace deposits) and in part in residuum weathered from arkosic sandstone and granodiorite. The Huichica soils occur in gently-sloping, smooth to hummocky floodplains under grass and scattered oaks, at elevations of 100 to 150 feet. This series consists of loamy soils that formed from volcanic rocks and alluvial deposits. The soil characteristics indicate the Haire Series are moderately well-drained, runoff is slow to rapid, and permeability is very slow. The Huichica Series are imperfectly drained, runoff and permeability are moderately slow to very slow, erosion hazard is slight, and the expansion potential is low to medium. The main soil types in the vicinity of the proposed project site are Haire Clay Loam HcC and the Huichica loam (shallow) HvC.

The Haire Clay Loam HcC, is alluvium derived from sedimentary rock, has slopes ranging from 0 to 9 percent, is moderately well-drained, and has a moderately low to moderately high capacity to transmit water. The Huichica loam (shallow) HvC, is alluvium derived from igneous, metamorphic, and sedimentary rock, has slopes ranging from 0 to 9 percent, is moderately well-drained, and has a very low to moderately low capacity to transmit water.

The NRCS land capability classification system rates soils by various characteristics dependent on location, slope, parent rock, climate, and drainage. Certain soils may have characteristics that limit development or are problematic to existing structures, such as low permeability, susceptibility to expansion, or soil erosion. The Haire Series is classified as a Class 3e soil, with low permeability, high shrink-swell potential, high corrosivity, and medium compressibility. The Huichica Series is classified as a Class 4e soil, with low permeability, moderate shrink-swell potential, moderate-high corrosivity, and medium compressibility. Soils categorized as Class 3 and above have limitations that make them unsuitable for cultivation, and require conservation practices and careful management.

3.5.3 Mineral Resources

Site 8 is not in a classified mineral resource zone, and there are no known important mineral resources or active mining operations near the property. According to the Sonoma County Aggregate Resources Management Plan, there are no known economically-viable sources of rock materials in the immediate area of Site 8.

3.5.4 Paleontology

Paleontological remains near Site 8 would be similar to those described in Section 8.4.7 of the PEA. In addition, a University of California Museum of Paleontology (UCMP) records search identified a few different types of invertebrate fossils near the Russian River, approximately 2 to 5 miles west of Site 8. These invertebrate fossils are found in the Tertiary age Wilson Grove formation (formerly Merced). Due to the depth of these fossils within the formation and the distance from Site 8, fossils are not anticipated to be encountered during site activities. None of the fossil locations identified in the UCMP database occurs on or in the vicinity of Site 8.

3.5.5 References

References for this section are the same as those listed in Section 8.7 of the PEA with the following additional sources:

Environmental Resources Management (ERM-West, Inc.). 2011. Phase I Environmental Site Assessment. 10789 Old Redwood Highway, Assessor's Parcel Number 086-220-011, Windsor, California.

Environmental Resources Management (ERM-West, Inc.). 2011. Limited Phase II Environmental Site Assessment. 10789 Old Redwood Highway, Assessor's Parcel Number 086-220-011, Windsor, California.

National Cooperative Soil Survey, U.S.A. Haire Series. Online:
<http://ortho.ftw.nrcs.usda.gov/osd/dat/H/HAIRE.html>. Site visited February 21, 2011.

University of California Museum of Paleontology. 2009. Online Exhibits; the Paleontology Portal. Online: <http://www.ucmp.berkeley.edu/exhibits/index.php>. Site visited February 16, 2009. Online: http://ucmpdb.berkeley.edu/cgi/ucmp_query2. Site visited February 24, 2011.

Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture, Soil Maps of Monterey County, California, Online:
<http://websoilsurvey.nrcs.usda.gov/app/>. Site visited February 21, 2011.

3.6 HAZARDS AND HAZARDOUS MATERIALS

3.6.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts from hazards and hazardous materials, or would have less-than-significant impacts with the incorporation of the proposed APMs described in Section 3.6.5 of the Supplement to the PEA.

The following discussions detailed in the PEA are the same for Site 8:

- Regulatory framework (Section 9.3.1 of the PEA)
- Standards of significant impacts (Section 9.4.1 of the PEA)
- Impacts resulting from operations and maintenance (Section 9.4.3 of the PEA)
- Avoidance and Protection Measures (Section 9.5 of the PEA)

Results of Phase I and II Environmental Site Assessments at Site 8 indicate that low concentrations of fuel(s), oil(s), and chlorinated solvents are present in the soil, soil vapor, and shallow groundwater. These detections could be related to on-site activities, off-site sources, or a combination of both. Detections of metals in the soil appear to be related to natural background concentrations; however, this cannot be definitively established with existing data. The concentrations of the detected chemicals are generally not in the ranges that would result in regulatory enforcement. It is possible that higher concentrations of regulated hazardous substances are present in site media in areas that were not sampled, including possibly deeper groundwater.

3.6.2 Methodology

Environmental Resource Management (ERM), at the request of PG&E, conducted Phase I and Phase II Environmental Site Assessments in January 2011 to assess the potential for existing hazardous waste or materials on Site 8. The reports documenting these site assessments, *Phase I Environmental Site Assessment* and *Limited Phase II Environmental Site Assessment*, will be provided to California Public Utilities Commission staff upon request.

3.6.3 Existing Conditions

Site 8 was previously developed, but most of the structures on-site have been demolished and removed. Presently, the remaining structures consist of four concrete cinder block walls from one of the former commercial buildings and a small wood shed. The central portion of the Site 8 project area is covered by the remnant concrete footprint of former structures, a sidewalk, an asphaltic paved parking area, and two rail lines located on the western side of the cinder block walls. Other features at this location include a concrete culvert, a concrete ramp, and a wood pole. There is also evidence of subsurface infrastructure features associated with the industrial use of the site as indicated by protruding metal pipes and a pit.

The presence of the remnant features at Site 8 (particularly septic system and subsurface piping) is indicative of potential site impacts from historic operations. According to information

provided by the property owner, Site 8 formerly had connections to water, sewer, electricity, and potentially natural gas; no utility services are currently provided to Site 8.

Arsenic and cobalt were both detected in the soil in excess of industrial screening levels; however, these detections may represent natural soil conditions, based on the generally even distribution of concentrations within typical background ranges.

A range of Volatile Organic Compounds (VOCs) was detected in soil vapor at generally low concentrations below industrial screening levels. Most of the detected compounds are characteristic of fuel or oil. Chlorinated VOC cis-1-, 2-Dichloroethylene (1, 2-DCE) was also detected at one sampling location.

Xylenes were detected in one groundwater sample location and were below the established Environmental Screening Level and California Maximum Containment Level. The groundwater sample may represent shallow, seasonal, perched water rather than the shallowest aquifer at the site, which is reported to occur at approximately 35 feet below ground surface (bgs) at a nearby site. Samples were not taken at any intervals deeper than 5.5 to 6 feet bgs and, therefore, it cannot be stated with certainty that compounds of concern are not present in groundwater at deeper depths.

3.6.4 Hazards and Hazardous Materials Impacts

Fire and lightning hazards at Site 8 would be the same as discussed in Sections 9.4.2.3 and 9.4.2.4 of the PEA, respectively.

3.6.4.1 Construction

General impacts of construction-related hazardous materials sites and releases would be similar to impacts discussed in Sections 9.4.2.1 and 9.4.2.2 of the PEA.

If construction crews were to uncover unanticipated buried contaminated soils, rock, or groundwater during substation construction or excavation activities associated with distribution work, regulations regarding the handling and disposal of contaminated materials would apply. In addition, crews would follow PG&E's BMPs for proper handling, reporting, transporting, and disposal of contaminated materials. Therefore, impacts would be less than significant.

3.6.4.2 Schools

Site 8 is not within 0.25 mile of any existing or proposed schools. The closest schools are the Windsor Christian Academy 0.70 mile to the south and Cali Calmecac Charter School 0.87 mile to the south of Site 8. Therefore, there would be no impact to schools.

3.6.4.3 Airport Proximity

Site 8 is not within 2 miles of a public or private airstrip and, therefore, there would be no impact to the safety of persons working at the project site or to air traffic flying near or over the project site.

3.6.5 Avoidance and Protection Measures

Because PG&E would implement the company's standard BMPs during construction of the facility, the accidental release of hazardous materials would represent a less-than-significant impact. Specifics for hazardous substance controls and emergency response plans are in the APMs described in Section 9.5 of the PEA. However, to further reduce impacts, PG&E would implement the following site-specific APM at Site 8:

APM HM-4. If contaminated soils or groundwater due to VOCs, xylene, or other contaminants are encountered, appropriate abatement actions would be implemented in accordance with applicable regulatory requirements.

3.6.6 References

References for this section are the same as those listed in Section 9.6 of the PEA, with the following additions:

Environmental Resource Management. 2011. *Phase I Environmental Site Assessment*. January, 2011.

Environmental Resource Management. 2011. *Limited Phase II Environmental Site Assessment*. January, 2011.

3.7 HYDROLOGY AND WATER QUALITY

3.7.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to hydrology and water quality, or would have less-than-significant impacts with the incorporation of the proposed APMs described in Section 3.7.5 of the Supplement to the PEA. Perennial creeks within the project boundary of Site 8 are tributaries to Sotoyome Creek and Starr Creek, which in turn are tributaries to the Russian River. There is one seasonal swale on the substation site, and several seasonal wetlands are along the Fulton No.1 60 kV Power Line.

The following discussions detailed in the PEA are the same for Site 8:

- Regulatory framework (Section 10.2.1 of the PEA)
- Standards of significant impacts (Section 10.4.1 of the PEA)
- Impacts resulting from potential runoff, flooding and inundation, and hazardous material spills (Sections 10.4.2.1.2, 10.4.2.1.4, and 10.4.2.1.5 of the PEA)
- Impacts resulting from operations and maintenance (Section 10.4.3 of the PEA)
- Avoidance and Protection Measures (Section 10.5 of the PEA)

3.7.2 Methodology

The hydrologic setting was evaluated by field inspecting nearby waterbodies and drainages in January 2011, reviewing the *Phase I Environmental Site Assessment* and *Limited Phase II Environmental Site Assessment* reports prepared by ERM, reviewing preliminary wetland data collected by TRC in February and April 2011, and by reviewing stream and watershed information prepared by federal, state, and local agencies. Figure 3.7-1 shows all identified water sources discussed within this section.

3.7.3 Existing Conditions

Site 8 is relatively flat, with a slight downward slope toward the south and west. According to site visit observations, the majority of the stormwater at Site 8 infiltrates to the ground and/or flows overland toward the seasonal swale along the western and southern perimeters of the property. The seasonal swale also receives water from an unknown, offsite source through a culvert in the southwestern corner of the site. All stormwater runoff associated with the seasonal swale exits the property in the northwestern corner, and appears to ultimately discharge into the Sotoyome Creek to the north. The Russian River is approximately 1.40 miles to the west. Precipitation associated with Site 8 is the same as described in Section 10.3.2 of the PEA.

The inlets along the northern edge of the site appear to be associated with previous land uses on the site rather than stormwater conveyance features. However, a small drainage ditch directs a small amount of runoff into one of the inlets. The inlet directs water south towards the middle of the site with an unknown termination point.



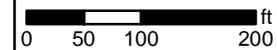
FIGURE 3.7-1
 Hydrology - Site 8
 Windsor Substation Project

Legend

- ⊙ Pole
 - Culvert Inlet/Outlet
 - Culvert
 - ▭ Survey Area
 - ▭ Site 8
 - ▭ Seasonal Swale
 - ▭ Seasonal Wetland
- Potential Non-Jurisdictional Ditches**
- - - Roadside Ditch
 - - - Drainage Ditch

photo: April 2009

1:2,000



Preliminary and subject to change based on California Public Utilities Commission requirements, final engineering, and other factors.

BACK OF FIGURE 3.7-1

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The water features along the Fulton No. 1 60 kV Power Line and 12 kV distribution line are comprised of a mixture of relatively natural features, such as seasonal swales and perennial creeks, and excavated features, such as roadside ditches, constructed as part of street and highway projects.

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. Sotoyome Creek is approximately 125 feet north of the Site 8 substation parcel.

3.7.3.1 Wetlands

One small, seasonal swale (approximately 0.057 acre) is located near the southwestern corner of Site 8, less than 25 feet southeast of the substation footprint. This seasonal swale abuts a drainage ditch. Within the surveyed area, there is also one seasonal swale and five seasonal wetlands adjacent to the Fulton No. 1 60 kV Power Line.

3.7.3.2 Flood Potential

Site 8 is not within a 100-year or 500-year flood zone. A 100-year and 500-year flood zone area is located approximately 0.75-mile west of the subject property. However, a small amount of ponded rainfall was observed during the January 2011 site visit in the western portion of the property.

3.7.3.3 Surface Water Supply and Quality

Surface water at Site 8 consists of upland stormwater collected through a seasonal swale, drainage ditch, and roadside ditches along Old Redwood Highway. These water features are tributaries to Sotoyome Creek, which in turn is a tributary to the Russian River. Surface water along the Fulton No. 1 60 kV Power Line and the 12 kV power line along Old Redwood Highway generally drains toward Starr Creek, which is also a tributary to the Russian River.

Reviewing the North Coast Regional Water Quality Control Board Basin Plan (2007), the beneficial uses of the Russian River watershed are the same as listed in Table 10-1: Beneficial Uses of the Mark West Hydrological Subunit (HAS 114.23) in Section 10.3.6 of the PEA. There is no data available for Sotoyome Creek or Starr Creek.

3.7.3.4 Groundwater Supply and Quality

While it is not confirmed, groundwater flow direction at Site 8, based on surface topography, is expected to generally flow west to southwest, toward the Russian River. Shallow soils were observed during site visits, and consist primarily of silts and clays.

A search of the California Department of Water Resources Groundwater Information Center database (2004) was conducted for groundwater data relevant to Site 8. Data from a nearby site suggest that shallow groundwater is present at approximately 35 feet below ground surface (bgs), and during the site investigation, groundwater did enter shallow borings within 5 feet of the surface. It was noted that, given the recent rains and the appreciably deeper reported water levels

at the nearby site, the possibility exists that the groundwater sampled during this investigation was perched, seasonal water that had recently infiltrated from the surface. Groundwater samples are discussed in Section 9.0 of the PEA.

3.7.4 Impacts

Temporary and permanent impacts resulting from construction of a substation at Site 8 would be similar to those discussed in Section 10.4.2 of the PEA. However, Site 8 groundwater quality could be altered if project activities (e.g., excavation, drilling activities) disturb soil or shallow groundwater that contains xylenes. Implementation of the APMs discussed in Section 10.5 of the PEA and Section 3.7.5 below would reduce impacts to less than significant. Additionally, construction activities would use a small amount of domestic water for dust suppression, but this would not impact groundwater levels.

Several wetlands occur around Site 8 and along the Fulton No.1 60 kV Power Line. Any impacts to these wetlands would be avoided or temporary; and with the implementation of APMs, as described in Section 10.5 of the PEA and Section 3.7.4 below, reduced to less-than-significant levels. Therefore, impacts to wetlands would be less than significant.

3.7.5 Avoidance and Protection Measures

Construction of the project at Site 8 would not result in any impacts requiring mitigation, other than those addressed by existing regulatory programs or PG&E standard Best Management Practices (BMPs). Nevertheless, PG&E would implement the BMPs and APMs as described in Section 10.5 of the PEA. To further reduce impacts, PG&E would implement the following site-specific APMs at Site 8:

APM WQ-8. Permits may need to be obtained prior to construction from the Army Corps of Engineers (404), Regional Water Quality Control Board 401 Certification, and California Department of Fish and Game Streambed Alteration agreement (1600) if any resources subject to these agencies jurisdiction would be affected by the project.

APM WQ-9. Construction work would avoid all wetlands, swales and drainages during construction. If water resources could not be avoided, work would be performed outside of the wet season, when feasible.

APM WQ-10. Vehicle maintenance wastes, including used oils and other fluids, would be handled and disposed of properly. Fuels and lubricating oils for vehicles and heavy equipment would not be stored or transferred within 100 feet of any waterbodies.

3.7.6 References

References for this section are the same as those listed in Section 9.6 of the PEA, with the following additions:

Environmental Resource Management. 2011. *Phase I Environmental Site Assessment*. January, 2011.

Environmental Resource Management. 2011. *Limited Phase II Environmental Site Assessment*. January, 2011

3.8 LAND USE AND PLANNING, RECREATION, AND AGRICULTURAL RESOURCES

3.8.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to land use and planning, recreation, and agricultural resources, either during construction or as part of ongoing maintenance and operation. Therefore, no APMs are proposed.

The following discussions detailed in the PEA are the same for Site 8:

- Methodology used for the evaluation of Site 8 (Section 11.2 of the PEA)
- Regulatory framework (Section 11.3 of the PEA)
- Standards of significant impacts (Section 11.4.1 of the PEA)
- Impacts to agricultural resources resulting from construction activities (Section 11.4.2.3 of the PEA)
- Impacts resulting from operations and maintenance (Section 11.4.3 of the PEA)

3.8.2 Existing Conditions

3.8.2.1 Land Use, Planning, and Zoning Designations

The land use and planning and zoning designations for Site 8 are described in the *Town of Windsor General Plan-2015* and *Sonoma County General Plan-2020*.

Substation and Power Line Interconnection

Although this project is not subject to local zoning requirements⁴, the Town of Windsor has zoned Site 8 as Service Commercial (SC). Allowed uses within areas zoned SC include “intensive personal and business service uses, including automobile repair shops, construction equipment sales and rental yards, service stations, and outdoor recreation uses.” The school bus yard to the south is zoned Public Institutional (PQ), lands to the west are zoned Estate Residential (ER) (nearest residence is 0.20 mile west of Site 8), and lands to the east on the far side of Old Redwood Highway are zoned Gateway Commercial (GC) and contain one residence. Lands to the north and west are just outside of the Town of Windsor jurisdiction in unincorporated Sonoma County zoned Rural Residential; the adjacent parcels to the north and west are residential with two single-family dwelling units on each. Figure 3.8-1 depicts general plan land use designations and the boundaries of the 4.11-acre parcel. Table 3.8-1 outlines the land use and zoning designations and existing uses for Site 8.

⁴ As stated previously, the California Public Utilities Commission has exclusive jurisdiction to regulate the design, siting, installation, operation, maintenance, and repair of electric transmission facilities. The project is, therefore, exempt from local land use and zoning requirements. However, as a part of the environmental review process for the project, local land use ordinances, goals, and policies are considered in evaluating potential impacts.

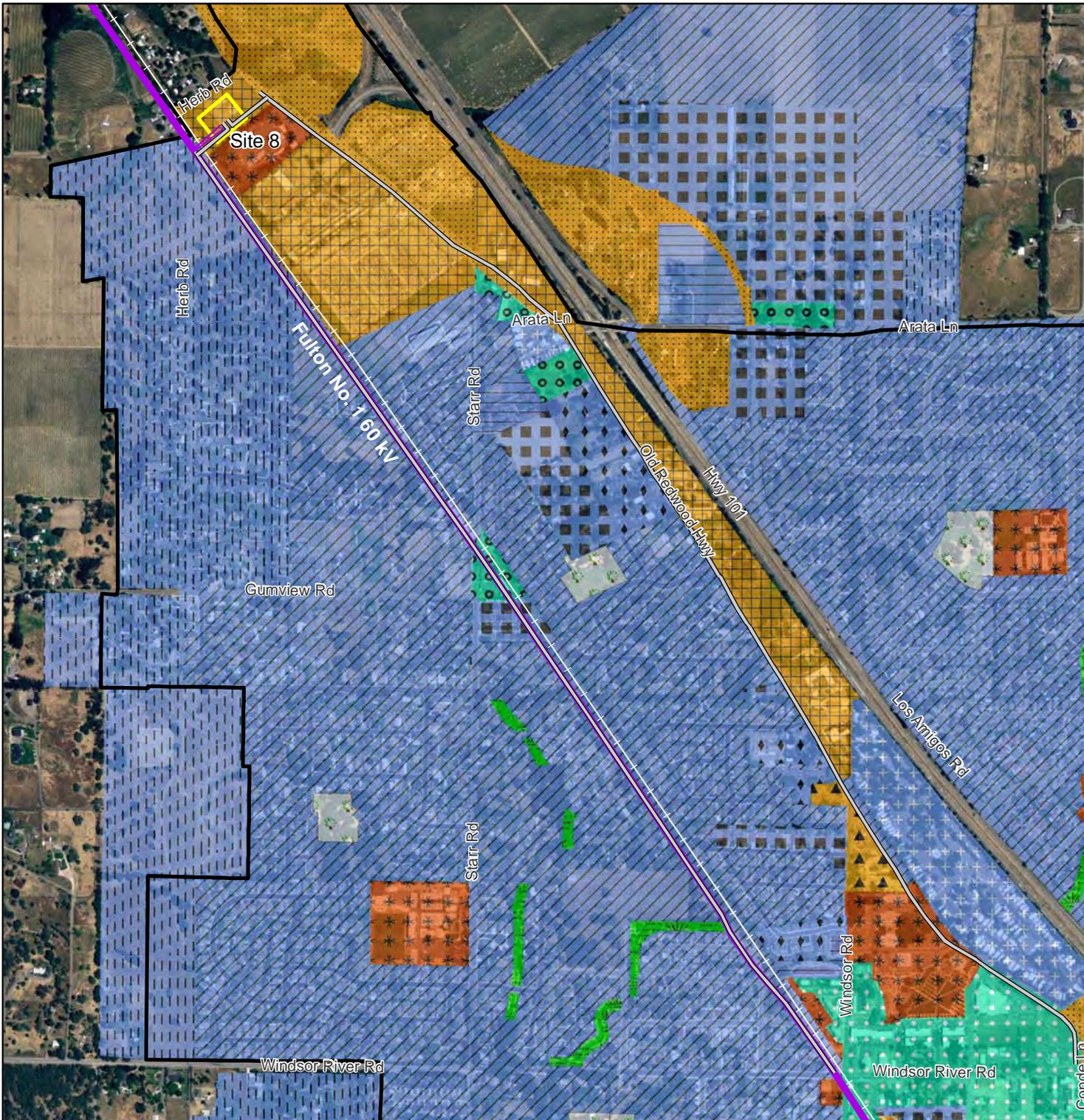


FIGURE 3.8-1
 General Plan Map - Site 8
 Windsor Substation Project 

-  12 kV Distribution Reconductoring
-  Proposed 115 kV Loop
(Initially 60 kV Loop)
-  Site 8

-  Town Boundary
- Town of Windsor Land Use Categories**

- RESIDENTIAL**
-  High Density Residential
 -  Medium-High Density Residential
 -  Mobile Home Park
 -  Village Residential
 -  Surrounding Residential
 -  Estate Residential

- MIXED USE**
-  Town Center/Mixed Use
 -  Neighborhood Center/Mixed Use

- COMMERCIAL/INDUSTRIAL**
-  Retail Commercial
 -  Service Commercial
 -  Gateway Commercial
 -  Light Industrial

- PARKS/OPEN SPACE**
-  Parks
 -  Open Space

- PUBLIC/QUASI-PUBLIC/INSTITUTIONAL**
-  Cemetary/School/Wastewater-Treatment Plant

1:12,000
 1 inch = 1,000 feet
 0 250 500 1,000 ft


 Preliminary and subject to change based on California Public Utilities Commission requirements, final engineering, and other factors.

BACK OF FIGURE 3.8-1

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Table 3.8-1: Site 8 - Town of Windsor* and Sonoma County Land Use Designations, Zoning Designations and Existing Uses

Direction	General Plan Land Use Designation	Zoning Designation	Existing Use
Proposed substation site	Service Commercial	Service Commercial	Remains of demolished structures
North (Unincorporated Sonoma County)	Rural Residential (Unincorporated Sonoma County)	Rural Residential (Unincorporated Sonoma County)	Three single-family units (Unincorporated Sonoma County)
South	Public Institutional	Public Institutional	School bus yard
East	Gateway Commercial	Gateway Commercial	One residence
West (across railroad tracks)	Unincorporated Sonoma County - Rural Residential / Town of Windsor - Estate Residential (0.2-3 du/ac ¹)	Unincorporated Sonoma County - Rural Residential / Town of Windsor - Estate Residential (0.2-3 du/ac)	Two single-family units / Undeveloped

*Land use and zoning designations are based on Town of Windsor except as noted.

Sources: Windsor Zoning Map, Windsor General Plan Land Use Map (2005 Update), Sonoma County General Plan Land Use Map Healdsburg and Environs (2009 Update)

¹du/ac Dwelling Units per Acre

PG&E would purchase the proposed substation site from its current landowner and acquire a new easement at the west side of the substation site for the power line interconnection across the railroad property. Refer to Figure 3.1-2 in Section 3.1, Aesthetics, for site photographs.

Distribution Underbuild and Reconductoring

The 1.50-mile segment of the Fulton No. 1 60 kV Power Line that would be rebuilt to add the distribution underbuild is in a mixed urban/rural residential setting that consists of private and public lands parallel to the NWPRR.

The poles that would accommodate the overhead distribution line along Old Redwood Highway are situated on the shoulder of the road surrounded by features, such as mailboxes, drainage ditches, utility equipment, and road signage in a mixed urban/rural residential setting. All of the work activities involving the distribution line would occur within the existing Public Utility Easement (PUE) or in public streets under PG&E’s franchise agreement with the Town of Windsor.

The installation of the underground distribution lines from the substation to the Fulton No. 1 Power Line, and from the substation to Old Redwood Highway, would occur in an area zoned Service Commercial. Installation of the overhead, double-circuit distribution line under the Fulton No. 1 Power Line would primarily occur on lands zoned Surrounding Residential, with portions of the power line being adjacent to lands zoned as Estate Residential and Planned Development to the west, and lands zoned as Service Commercial, Public Institutional, Medium Density Residential, and Village Residential to the east. Reconductoring of the existing overhead and underground distribution lines along Old Redwood Highway would occur on lands zoned as Service Commercial, Gateway Commercial, and Medium Density Residential, bordered to the west by lands zoned as Public Institutional, Service Commercial, Medium Density Residential, Service Commercial, Neighborhood Center Commercial, Town Center Commercial, and Community Commercial.

3.8.2.2 Recreation

The nearest recreation facility to Site 8 is Los Robles Park, approximately 1 mile to the south at 10860 Rio Ruso Drive, and well outside the project vicinity.

3.8.2.3 Agriculture

Site 8 is within the Town of Windsor on land zoned for development. The substation site and locations of work along the Fulton No. 1 60 kV Power Line are not currently under cultivation, nor are they classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Department of Conservation. Site 8 is not subject to a Williamson Act contract.

The existing distribution line work would occur on land that is within the PUE or within public streets under PG&E's franchise agreement with the Town of Windsor. The line does not pass through or adjacent to any agriculturally-developed parcels or parcels that are subject to a Williamson Act contract.

3.8.3 Impacts

3.8.3.1 Land Use and Planning

Construction

Construction activities would not create a barrier within the community as surrounding public streets would remain accessible during construction. However, there would be temporary lane closures for short durations, as well as temporary blocking of sidewalks fronting pole locations along the distribution line alignment on Old Redwood Highway, and lane closures along minor access roads leading to individual pole locations on the Fulton No. 1 60 kV Power Line. Temporary lane closure could occur during the development of a curb cut into Site 8 along the west side of Old Redwood Highway fronting the substation.

It is not expected that any sidewalks or roads would be damaged as a result of the pole replacements; however, PG&E would repair any sidewalk/road damage that occurs as a result of construction activities.

All of the work activities involving the distribution lines along Old Redwood Highway would occur within the existing PUE or in public streets under PG&E’s franchise agreement with the Town of Windsor. All the poles would be replaced in the same locations, or within 3 to 6 feet of the existing pole locations. PG&E would obtain ministerial encroachment permits to conduct work in public rights-of-way, in accordance with state and Town of Windsor requirements. PG&E currently possesses an existing right-of-way along the Fulton No. 1 60 kV Power Line. For Site 8, less-than-significant impacts to land use would occur as a result of construction activities.

Operation and Maintenance

PG&E is not subject to local zoning ordinances and would not conflict with any local land use plans or policies as outlined in Table 3.8-2. Site 8 is zoned Service Commercial, and project activities would be consistent with the Town of Windsor Zoning Ordinance list of allowed uses at the site. Because the Fulton No. 1 60 kV Power Line and the 12 kV distribution line along Old Redwood Highway are existing facilities, the associated project interconnection and distribution work would not result in additional barriers that might divide the existing community.

Table 3.8-2: Zoning Development Standards for Site 8

Development Standard (Setbacks)	Requirement	Project
Front minimum	10 feet minimum	100 + feet
Sides (each)	15 feet adjacent to a residential zone	25 feet (south, Public Institutional) 50 feet (west, Estate Residential)
Street side (Old Redwood Highway)	0 feet	170 feet
Rear setback	10 feet minimum	25 feet
Substation height	50 feet maximum	42 feet*

Source: Windsor Zoning Ordinance, Section 27.10.040, Table 2-5

*Height is for the substation equipment; power line poles would exceed height indicated.

3.8.3.2 Recreation

Construction

Construction activities would not impede access to any existing recreational facilities. Because of the short construction duration and limited construction workforce, no additional pressure would be placed on existing recreation facilities and there would not be a need to expand existing recreation facilities. Thus, impacts would be short-term and less than significant.

Operation and Maintenance

No portion of the Site 8 project area is on land in recreational use or on land zoned for recreational uses. Therefore, no long-term impacts would occur to recreational resources.

3.8.4 References

References for this section are the same as those listed in Section 11.6 of the PEA with the following additional source:

Sonoma County Planning Department. Sonoma County General Plan 2020, Figure LU-2c Land Use Map Healdsburg and Environs. Online: <http://www.sonoma-county.org/prmd/gp2020/fig-lu2c.pdf>. Site visited March 28, 2011.

3.9 NOISE

3.9.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts from short-term elevated noise levels and vibration during project construction.

The following discussions detailed in the PEA are the same for Site 8:

- Methodology used for the evaluation of Site 8 (Section 12.2 of the PEA)
- Standards of significant impacts (Section 12.4.1 of the PEA)
- Corona noise resulting from substation construction (Section 12.4.1.3 of the PEA)
- Noise-related impacts and vibration resulting from construction (Section 12.4.2 of the PEA)
- Avoidance and Protection Measures (Section 12.5 of the PEA)

3.9.2 Existing Conditions

3.9.2.1 Regulatory Background

Site 8 is subject to the same regulatory framework as described in Section 12.3.1 of the PEA, which indicates the maximum allowable limit for continuous noise emission under the Town of Windsor's General Plan is 53 dBA. (Sections D.1 and D.2 of Chapter 7 of the General Plan) In addition, as Site 8 is located at the northern boundary of the Town of Windsor, Sonoma County codes and planning requirements were also reviewed in the evaluation of potential noise and vibration impacts. The Sonoma County General Plan states in table NE-2 that the maximum sound level to be emitted from 10 p.m. to 7 a.m. is 45 A-weighted decibels (dBA), with a 5 dBA penalty for pure-tone noise. The penalty results in a limit to exterior noise exposure of 40 dBA at the exterior property line of the nearest sensitive receptor for noise emitted from a substation; however, there are provisions in the Plan for adjustment of the limit upward in consideration of the existing ambient noise level. In this case, the allowable limit is taken to be the measured ambient sound level plus a minimum significant change of +1.5 dBA. (Policy NE-1c of Sonoma County General Plan 2020).

3.9.2.2 Existing Noise Levels

Existing noise levels at Site 8 were determined using the same methods as described in Section 12.3.2 of the PEA. Noise measurements collected in April 2011 revealed a Community Noise Equivalent Level (CNEL) of 65.5 dBA and Day Night Sound Level L_{dn} of 64.9 dBA. The 90 percent exceeded noise level (L_{90}) was measured at 43.6 dBA. This results in a conservative maximum allowable sound level of 45.1 dBA based on L_{90} at the nearest property line of a sensitive receptor.

3.9.2.3 Airport Noise Contribution

According to the Town of Windsor General Plan Figure 7.5, Site 8 and associated electric line segments lie outside of the 55 dBA CNEL isopleth for the Projected Noise Contours resulting from the operation of the Charles M. Schulz Sonoma County Airport.

3.9.2.4 Sensitive Receptors

The nearest sensitive receptors to Site 8 are single-family dwellings approximately 150 feet north of the substation's proposed perimeter wall.

3.9.3 Impacts

3.9.3.1 Significance Criteria

Significance criteria for Site 8 are similar to what is described in Section 12.4.1.1 of the PEA. In addition, the Sonoma County General Plan states in section NE-1h that the ordinance "may exempt" construction noise from its stated limits. The Sonoma County General Plan also states in section NE-1b that an interior limit of 45 dBA is to be maintained, if possible, and that a level of 65 dBA is acceptable if the interior limit of 45 dBA is maintained for building uses such as single room occupancy, work-live, mixed use project, and caretaker units.

3.9.3.2 Operations and Maintenance

Detailed SoundPLAN (Braunstein + Berndt GmbH) noise models were utilized to predict noise resulting from operation of a three-bank substation at Site 8. Normal operation and maintenance of the three-bank substation would result in maximum constant sound levels of up to 53 dBA at the substation boundary with no sound moderation treatment. Modeling predicts that prefabricated walls, 8 feet tall and approximately 312 feet in total length on the north and east sides of the substation, would reduce this maximum level to a maximum of less than 52 dBA at the substation boundary and less than 44 dBA at the property line of the nearest sensitive receptor. These levels are below the maximum allowable limit for continuous noise emission of 53 dBA under the Town of Windsor's General Plan. The levels also fall below the Sonoma County General Plan's noise requirements. As the existing L_{90} level at the edge of Site 8 is 43.6 dBA, adding the minimum significant change criterion of +1.5 dBA yields an allowable sound level of 45.1 dBA at the property line of the nearest sensitive receptor. Therefore, under both Town and County standards, operation and maintenance-related noise impacts would be less than significant.

3.9.4 References

References for this section are the same as those listed in Section 12.6 of the PEA with the following additional source:

Sonoma County General Plan 2020.

Online: <http://www.sonoma-county.org/prmd/gp2020/noise.pdf> Site visited May 9, 2011.

Town of Windsor General Plan 2015. Online: <http://www.ci.windsor.ca.us/index.aspx?NID=385> Site visited May 9, 2011

3.10 POPULATION AND HOUSING, PUBLIC SERVICES, AND UTILITIES AND SERVICE SYSTEMS

3.10.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to population and housing, public services, and utilities and service systems; therefore, no APMs have been proposed.

The following discussions detailed in the PEA are the same for Site 8:

- Methodology used for the evaluation of Site 8 (Section 13.2 of the PEA)
- Existing conditions (Section 13.3 of the PEA)
- Standards of significant impacts (Section 13.4.1 of the PEA)
- Impacts to population and housing and utilities and service systems resulting from construction (Sections 13.4.2.1 and 13.4.2.3 of the PEA)
- Impacts resulting from operations and maintenance (Section 13.4.3 of the PEA)

3.10.2 Existing Conditions

3.10.2.1 Population

As of January 12, 2011, the population of Sonoma County, including its nine incorporated cities and unincorporated areas, was 493,285. Between 1990 and 2000, Sonoma County's population increased by 70,392 persons, with an average annual growth rate of 1.9 percent. From 2000 to 2010, population in Sonoma County grew at an average annual rate of 0.7 percent. In 2015 the population is projected to be 519,042 residents. The Town of Windsor had a total population of 25,619 as of 2009.

3.10.2.2 Housing

Based on 2009 data, there are 8,645 housing units in the Town of Windsor. Of those units, approximately 80 percent are owner occupied, and 20 percent are rental units. The overall rental vacancy rate for homes and apartments is 3.6 percent. The average household size is 2.6 individuals per unit.

3.10.2.3 Employment and Income

The Town of Windsor possesses a labor force of 12,976 workers, of which 5.4 percent are unemployed according to February 2011 Employment Development Department data. The median household income for residents of the Town of Windsor is \$75,673⁵.

3.10.3 Impacts to Public Services

There would be no impacts to public services as a result of a project at Site 8. Several fire and police departments are located in the vicinity of Site 8, but none are immediately adjacent to or

⁵ According to Census 2010 estimated data

within 0.25 mile of the site. The Police Department is 1.60 miles from Site 8 at 9291 Old Redwood Highway. Fire Station One is 2.60 miles from Site 8 at 8200 Old Redwood Highway, and Fire Station Two is approximately 1.50 miles from Site 8 at 8600 Windsor Road. For further discussion regarding impacts to public services, see Sections 13.4.1.2, 13.4.2.2 and 13.4.3.2 of the PEA.

3.10.4 References

References for this section are the same as those listed in Section 13.6 of the PEA, with the following additions:

Sonoma County Administrator's Office. Online: http://www.sonoma-county.org/cao/citizens_guide/sonoma_county_population.htm. Site visited February 21, 2011.

Tilton, Allan, Town of Windsor Traffic Consultant. 2009. Telephone communication with K. Quidachay, GANDA. February 22 and March 7 and 11, 2011 (707) 542-9500.

Town of Windsor. Police Department Information. Online and Telephone communication: Online: <http://www.ci.windsor.ca.us/index.aspx?nid=174>. Site visited on March 1, 2011. Telephone communication with Deputy Winter, March 1, 2011 (707) 838-1234.

3.11 TRANSPORTATION AND TRAFFIC

3.11.1 Summary

Installing a substation and supporting infrastructure at Site 8 would avoid potential impacts to transportation or traffic; therefore, no APMs have been proposed. The project would not conflict with any adopted transportation policies.

The following discussions detailed in the PEA are the same for Site 8:

- Methodology used for the evaluation of Site 8 (Section 14.2 of the PEA)
- Regulatory framework (Section 14.3 of the PEA)
- Existing conditions for bus services, commuter rails, bikeways, and air traffic (Sections 14.3.3, 14.3.4, 14.3.6, and 14.3.7 of the PEA)
- Standards of significant impacts (Section 14.4.1 of the PEA)
- Impacts resulting from operations and maintenance (Section 14.4.3 of the PEA)

3.11.2 Existing Conditions

General access to Site 8 and associated distribution line installation within the Town of Windsor would be via one major highway (Highway 101), two major arterial highways (Old Redwood Highway and Arata Lane), and three local roads (Herb, Starr, and Gumview roads). Other minor side streets would be used for short-term access to individual pole locations, including Dawn Way and Godfrey Drive. Old Redwood Highway, which borders the east side of the site, is a two-lane arterial roadway running parallel to Highway 101, and has a Level of Service (LOS) ranging from “A” to “C” in the project vicinity. Herb, Starr and Gumview Roads are assumed to operate primarily at free flow LOS 3.11.A.

Access to the substation site parcel would be directly off of Old Redwood Highway, over a newly-installed curb cut and driveway on the east side of the parcel. The entire 4.4-acre site would be used during construction for parking and lay down, and staging for construction materials and equipment; no additional lay down areas would be required.

Distribution line installation may require both general access and additional workspace within the following roads and highways:

- Old Redwood Highway
- Starr Road
- Gumview Road
- Herb Road
- Minor access roads leading to individual pole locations on the Fulton No 1 60 kV Power Line

Table 3.11-1 provides the approximate location, traffic data, and LOS for each of the access roads associated with Site 8. Refer to Figures 2.2-1 and 2.3-1 for a depiction of the roadways in the project vicinity.

The NWPRR line remains closed; however, the Northern Coast Railroad Authority (NCRA) is scheduled to re-commence freight operations beginning in April 2011 (pers. comm. Steve Allen, March 2, 2011). In addition, a portion of the Sonoma-Marín Area Rail Transit District (SMART) rail line is scheduled for maintenance activities, which are pending.

For a description of bikeways used for the evaluation of transportation and traffic impacts resulting from project construction and operation and maintenance activities, refer to Section 14.3.6 of the PEA, and Table 3.11-2 below.

Table 3.11-1: Roadways in the Site 8 Project Vicinity

Roadway	Lanes	Classification	Daily Traffic Volume	Peak-Hour Level of Service
Highway 101 (between Arata Lane and Windsor Road Exit)	4	Highway	66,000	Less than C
Old Redwood Highway (Arata Lane to Starr Road)	2	Arterial	3,172 to 6,269	A/B
Starr Road (Windsor River Road to Old Redwood Highway)	2	Collector	7,100	A/B
Gumview Road	2	Local	< 2,000	A/B
Herb Road	2	Local	< 2,000	A/B
Arata Lane	2	Collector	5,000	A/B
Dawn Way	2	Local	< 2,000	A/B
Godfrey Drive	2	Local	< 2,000	A/B

Source: Town of Windsor General Plan—2015 (2005 Update), Tilton (2011)

Table 3.11-2: Existing and Proposed Bikeways in the Site 8 Project Vicinity

Bikeway	Class	Location
Northwestern Pacific Railroad	Proposed Class I	From Shiloh Road to the north Town limits
Old Redwood Highway	Proposed Class II	From south of Windsor Road north to the north Town limits

Source: Windsor Bike and Pedestrian Master Plan, 2008

3.11.3 Impacts

Impacts to transportation and traffic for a project at Site 8 would be similar to those described in Section 14.4 of the PEA, with the additional information provided below.

A public “park and ride” lot exists at the intersection of Old Redwood Highway and Starr Lane, west of the project area. Construction personnel would be instructed to park in designated areas within the substation parcel, and would, therefore, not affect public parking capacity.

The NWPRR right-of-way has been acquired for future freight use by the SMART, with an easement issued to NCRA for freight operations, a portion of which exists adjacent to the Site 8 project area. In the PEA, the schedule of operation for the NCRA freight service was projected for the first quarter of 2010 and SMART passenger rail service was projected for 2014. The freight operation is currently scheduled to begin in April 2011, and the SMART passenger rail service has been postponed indefinitely. PG&E would consult with NCRA and SMART regarding coordination of construction activities within and adjacent to the railroad crossing for a project at Site 8 (e.g., stringing the conductor from the 60 kV power line to the substation). Therefore, there would be no impact to passenger or freight railroad services.

3.11.4 References

References for this section are the same as those listed in Section 14.6 of the PEA, with the following additions:

Allen, Steve, Town of Windsor Mayor. 2011. Personal communication with K. Quidachay, GANDA. March 2, 2011. Town Hall, P.O. Box 100, Windsor, CA 95492.

Tilton, Allan, Town of Windsor Traffic Consultant. 2009. Telephone communication with K. Quidachay, GANDA. February 22, 2011 (707) 542-9500.

Town of Windsor. 1993. General Plan and EIR Program. Baseline Conditions Report. Online: <http://www.ci.windsor.ca.us/documentview.asp?did=95> last uploaded 2009. Site visited April 16, 2011.

3.12 GROWTH-INDUCING AND CUMULATIVE IMPACTS

3.12.1 Summary

Installing a substation and supporting infrastructure at Site 8 would not result in growth-inducing or cumulative impacts, or would have less-than-significant impacts with incorporation of the proposed APMs described in Section 1.10 of the PEA and in Section 2.6 of the Supplement to the PEA. Growth-inducing significance criteria, new employment, and existing community services are the same as discussed in Sections 15.2.1, 15.2.2, and 15.2.3 of the PEA. Likewise, cumulative impacts significance criteria and a description of the analysis of cumulative impacts is the same as discussed in Sections 15.3.1 and 15.3.2 of the PEA.

3.12.2 Cumulative Impacts

Construction activities associated with Site 8 could result in short-term impacts, including increased traffic, air emissions, and noise. Short-term construction-related impacts are not typically considered significant under the California Environmental Quality Act. Long-term impacts could include those related to visual and biological resources. Cumulative impacts to hydrology, noise, and transportation and traffic would be similar to those discussed in Sections 15.3.2.4, 15.3.2.5, and 15.3.2.6 of the PEA.

A list of current and probable projects near Site 8 is depicted in Figure 3.12-1 and provided in Table 3.12-1. As shown in Table 3.12-1, no current and/or probable projects in the vicinity of the substation have anticipated construction schedules that would occur at the same time as the project and thus create a potential cumulative impact (R. Jones pers. comm., 2011).

3.12.2.1 Aesthetics

Construction and operation of the project at Site 8 would not result in any significant impacts to visual resources. A substation at Site 8 would be situated on relatively flat, low-lying terrain and would largely be screened from public views by project landscaping and existing vegetation, and would not be highly visible from public view corridors. Given the nearby light industrial and commercial development, the project's appearance would not be out of context with the landscape setting. The replacement of existing wood poles with taller poles and the associated reconductoring and distribution underbuild are incremental changes that would not substantially alter the existing visual character found in the area.

3.12.2.2 Air Quality

Cumulative impacts to air quality would be similar to those discussed in Section 15.3.2.2 of the PEA, with the exception of the following:

- The contributions to Sonoma County air emissions from substation construction are 6.9×10^{-3} percent or less of the County's annual total for greenhouse gases (GHG) and for substation operations and maintenance are 3.9×10^{-5} percent or less of the County's annual total for all pollutant categories; a very small amount when compared to the total emissions in Sonoma County.

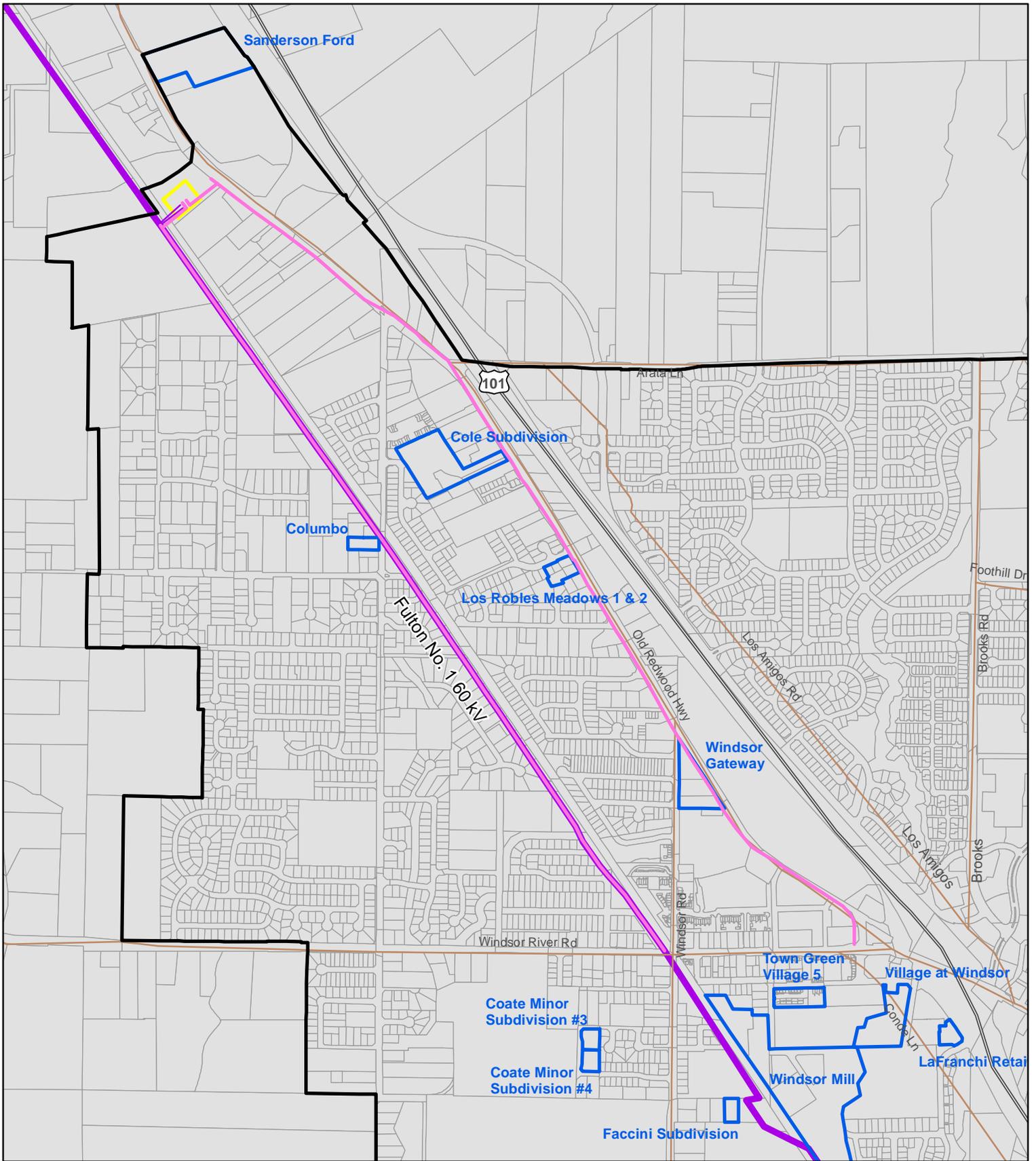


FIGURE 3.12-1
 Planned Projects - Site 8
 Windsor Substation Project

1:14,000



- 12 kV Reconductoring
- Proposed 115 kV Loop (Initially 60 kV Loop)
- Site 8
- Developments
- Windsor Town Limit
- Fulton No. 1 60 kV

BACK OF FIGURE 3.12-1

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As described in Section 3.2 of this document, construction emissions of particulate matter would be less than significant with the implementation of measures identified in the Bay Area Air Management District CEQA Guidelines. Other pollutants resulting from construction activities are accounted for in emission inventories for regional air quality maintenance plans and would not impede attainment or maintenance of ozone or carbon monoxide (CO) standards. Greenhouse gas reduction measures would be implemented to reduce already less-than-significant GHG emissions.

Table 3.12-1: 2011 Planned and Current Projects in Proximity to Site 8

Project Name	Address	Proximity to Site 8 (approx.)	Type of Development	Description	Size (approx.)
Sanderson Ford	10920 Old Redwood Highway	0.20 mile	Non-residential	Auto dealership	7 acres
LaFranchi Retail	8779 Conde Lane	2 miles	Non-residential	Retail	8.5 ksf ¹
Los Robles Meadows 1 & 2	9885 Old Redwood Highway	1 mile	Residential	Single-family detached	Unknown
Cole Subdivision	10095 Old Redwood Highway	0.70 mile	Residential	20 single-family attached/11 single	Unknown
Columbo	9933 Starr Road	0.80 mile	Residential	Single-family detached	Unknown
Coate Minor Subdivision #3	450 Duncan Drive	2 miles	Residential	Single-family detached	Unknown
Coate Minor Subdivision #4	475 Ginny Drive	2 miles	Residential	Single-family detached	Unknown
Town Green Village 5	8900 Bell Road	1.70 miles	Mixed use	66 single-family detached (condos) over 30.4 ksf ¹ retail	Unknown

Project Name	Address	Proximity to Site 8 (approx.)	Type of Development	Description	Size (approx.)
Windsor Mill	8777 Bell Road	1.90 miles	Mixed use	53 single-family detached, 23 live/work townhomes, 127 single-family attached	Unknown
Village at Windsor	8975 Conde Lane	1.90 miles	Mixed use	16 single-family detached (condos) over 12.1 ksf ¹ retail	Unknown
Windsor Gateway	9397 Old Redwood Highway	1.40 miles	Mixed use	152 single-family detached (condos) over 40 ksf ¹ retail	Unknown

¹ksf = thousand square feet

Sources: Town of Windsor Planning Department, 2007; Jones, 2011

3.12.2.3 Biological Resources

Removal of the ruderal vegetation at Site 8 for construction and operation of the substation would not contribute to a significant cumulative impact as no established sensitive habitat exists in the weedy areas on the site. Site 8 provides discontinuous habitat to other distant areas as it is bordered by Old Redwood Highway to the east, railroad tracks to the west, residences to the north, and a school bus yard to the south, also making it less desirable for wildlife species. The drainage ditches and wetland on the site do not provide habitat for special-status wildlife species; however, they could provide habitat for special-status plants. The drainages along the Fulton No. 1 60 kV Power Line and 12 kV distribution line along Old Redwood Highway provide suitable habitat for special-status species as discussed in Table 3.3-2: Special-status Wildlife Species with Potential to Occur in the Project Area. These drainages, as well as all other aquatic habitats at Site 8, could be affected if hazardous materials inadvertently spill into them. Implementation of the APMs discussed for biological resources in Section 6.6 of the PEA, and for hydrology in Section 10.5 of the PEA and Section 3.7.5 of this document, including the installation of the spill prevention control countermeasure basin, would minimize any disturbance caused by the construction and operation of the substation and all other associated work, and protect nearby aquatic habitats and their functions. Therefore, potential cumulative impacts on the aquatic habitats from construction and operation of the substation at Site 8 would be less than significant.

Temporary disturbance to grasslands southwest of Site 8 resulting from access to individual poles along the Fulton No 1. 60 kV Power Line would not contribute to a significant cumulative impact on special-status wildlife species, since the areas of disturbance would be returned to pre-project conditions. Habitat for special-status plants exists on the site; rare plant surveys would determine if any special-status plants actually occur on the site.

The project's contribution to any cumulative impact on special-status species would be less than significant with implementation of the species-specific APMs found in Section 6.6 of the PEA.

3.12.3 References

The following references were used for this section:

Jones, Rick, Town of Windsor Planning Department. 2011. Email communication with K. Quidachay, GANDA. February 25 and March 7, 2011. (707) 838-5331.

Tilton, Allan, Town of Windsor Traffic Consultant. 2011. Telephone communication with K. Quidachay, GANDA. March 2011. (707) 542-9500.