

5.0 SITE 3 ENVIRONMENTAL IMPACT ASSESSMENT

5.1 AESTHETICS

5.1.1 Summary

Installing a substation and supporting infrastructure at Site 3 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 3:

- 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)

5.1.2 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.

5.1.3 Physical Characteristics of the Project

As detailed in Section of 4.2.2.2 of this document, PG&E would replace approximately 10 existing wood poles on the Fulton No. 1 60 kV Power Line, extending one-half mile south to Trione Circle, with 9 new wood poles and one tubular steel pole (TSP) in addition to construction of the substation. The new poles would be approximately 20 feet taller than the existing poles to accommodate a new underbuild distribution line.

5.1.4 Project Landscaping

Project landscaping would be developed as allowed by the area available to PG&E for the project. It is likely that, for a substation at this location, an 8-foot-tall prefabricated wall would be installed on one or more sides of the substation, with the remaining sides being a chain-link fence of the same height. An entrance gate would likely be installed on the northern side of the substation.

5.1.5 Existing Conditions

5.1.5.1 Substation Project Site

The project lies in central Windsor approximately 0.4 mile south of the downtown area, within the Town of Windsor's Department of Public Works' property on Windsor Road. Adjacent municipal land uses include a wastewater treatment plant, a fire station, and the public works

yard. The municipal property is bordered to the east by the Northwestern Pacific Railroad (NWPRR) and to the north by Patrick Lane, a private residential cul-de-sac. The densely-vegetated Windsor Creek riparian corridor lies to the south and east of the site. The surrounding ridges and hills are partially visible in the backdrop from some places within the general vicinity.

The substation project site occupies a 268-foot by 220-foot parcel of land that is generally flat and currently occupied by wastewater treatment storage ponds, which the Town of Windsor is planning to reconfigure. Once reconfigured, wastewater treatment storage ponds would border the site on the west and south. Directly to the north of the site is a row of mature trees. A NWPRR corridor lies adjacent to the northeast corner of the site.

Existing vertical elements in the vicinity include the row of mature evergreen trees, poles of the adjacent Fulton No. 1 60 kV Power Line and light standards associated with the Water Treatment Plant.

5.1.5.2 Project Viewshed and Potentially Affected Public View Corridors

Figure 5.1-1 delineates the project site and photo viewpoint locations. A set of four photographs presented on Figure 5.1-2 portray representative visual conditions and public views in the project area.

Views from the North

Immediately to the north of the site are a row of evergreen trees and a vacant parcel. Patrick Lane, a private residential cul-de-sac, ends approximately 100 feet to the northwest of the site. Approximately seven residences north and west of the site on Patrick Lane would have direct views toward the project (see Photos 3 and 4 in Figure 5.1-2). From this roadway, open views are available across the site toward the water treatment plant buildings backdropped by distant hills. Limited views may also be available from the multi-family housing development to the north of the vacant parcel, located along Private Road F (approximately 400 feet north of Site 3); however, existing trees and structures provide partial screening.

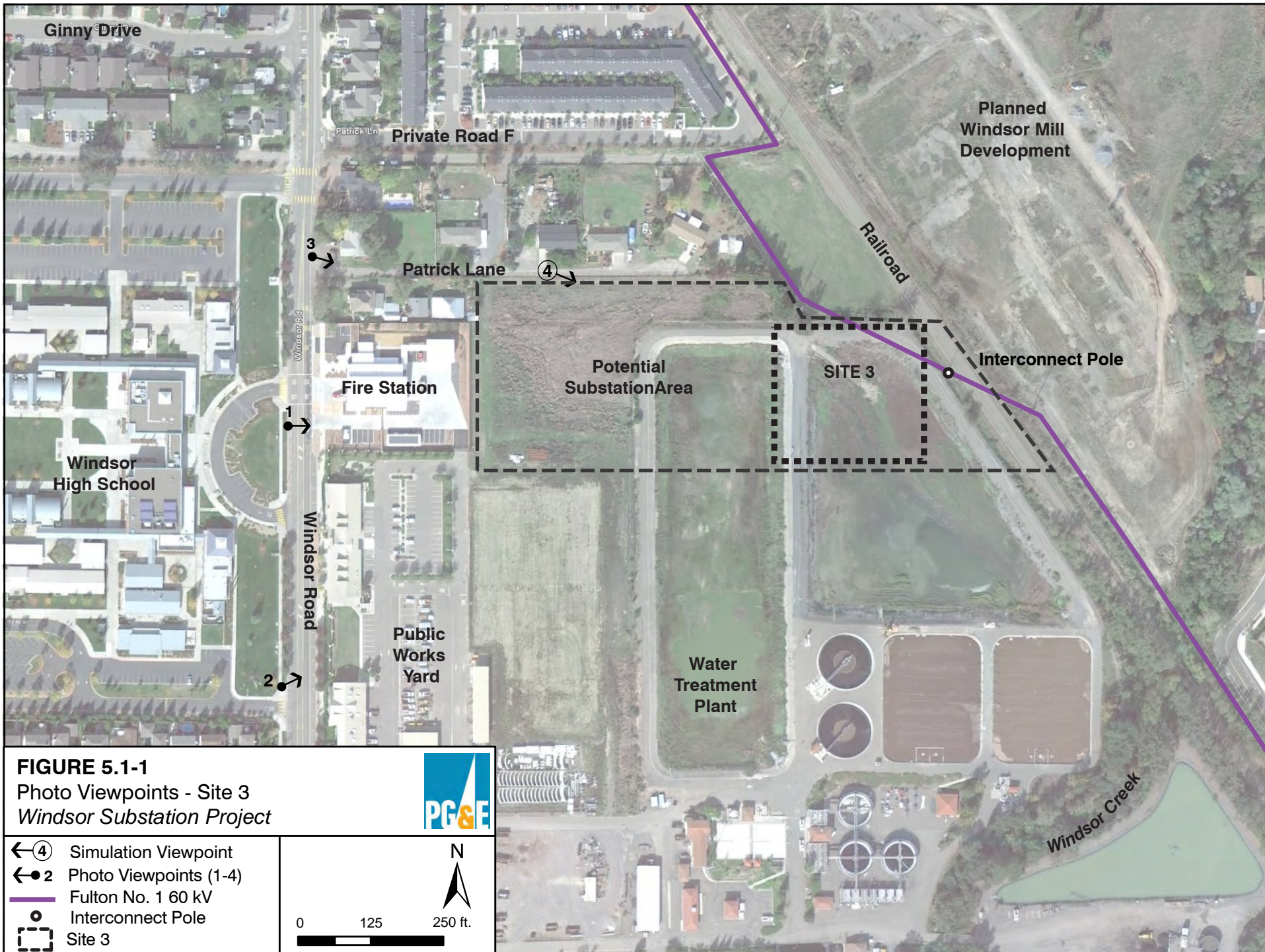
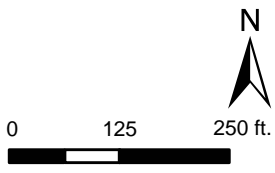


FIGURE 5.1-1
 Photo Viewpoints - Site 3
 Windsor Substation Project



- ←④ Simulation Viewpoint
- ←●2 Photo Viewpoints (1-4)
- Fulton No. 1 60 kV
- Interconnect Pole
- ⊠ Site 3



BACK OF FIGURE 5.1-1

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1. Windsor Road at Fire Station looking east



2. Windsor Road at Public Works Yard looking northeast



3. Windsor Road at Patrick Lane looking southeast



4. Patrick Lane looking southeast *

FIGURE 5.1-2
Photographs of the Project Site and Vicinity - Site 3
Windsor Substation Project

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Note: Refer to Figure 5.1-1 for viewpoint location

*Simulation view



BACK OF FIGURE 5.1-2

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Views from the East

East of the site is the NWPRR corridor. Across the railroad corridor is a vacant parcel that was previously occupied by a lumber mill. Open views across the railroad to Site 3 are available from this property. This parcel is zoned Neighborhood Center/Mixed Use. The area is planned for a 20-acre multi- and single-family live/work neighborhood, Windsor Mill, which was slated to begin construction in 2009, but has not yet begun construction. Dense vegetation situated along the Windsor Creek riparian corridor screens views of Site 3 from residential areas further to the east.

Views from the West

From the west, limited views are available from Windsor Road, a major local roadway with speeds posted at 35 miles per hour. Shown in Photo 1, ornamental light poles line Windsor Road, and utilities have been undergrounded. These views are generally screened by vegetation and structures associated with the fire station and public works facility. Limited views may be available from Windsor High School, located on the west side of Windsor Road. Photos 1 through 3 in Figure 5.1-2, taken from Windsor Road near the east edge of the high school campus, include glimpses of the ridges that surround the valley in the backdrop.

Views from the South

To the south are municipal wastewater treatment storage ponds and the water treatment plant. The entrance to this facility is gated. Public views from this direction are extremely limited and encompass the existing water treatment facility. Ponds located further south are enclosed by berms that rise to over 6 feet tall, which effectively block views from Windsor Road toward the project site. In addition, views from residential neighborhoods further south are completely screened by mature trees and vegetation that line Windsor Creek as well as the wastewater treatment storage pond berm.

Views of the Distribution Line

As described in above in Section 5.1.3 Physical Characteristics of the Project, and shown on Figure 4.3-1 the project includes replacement of existing poles with taller poles to accommodate a new distribution line. The distribution line underbuild extends south from the proposed substation paralleling the NWPRR corridor along the existing Fulton No. 1 right-of-way to Trione Circle. The route passes near a number of residential properties along Bell Road.

5.1.5.3 Potentially Affected Viewers

The project viewshed includes several types of concerned viewer groups.

Motorists, the largest viewer group that could be affected by the project, include people traveling on Windsor Road. Local travelers, who are familiar with the visual setting, including visitors to the high school, are likely the primary motorists in the project area. Other motorists may include those using the roadway on a less regular basis. Given the intervening structures and vegetation between the site and the roadway, motorists would only have brief glimpses of the project. Viewer sensitivity is considered low to moderate.

Within the project vicinity, pedestrians and cyclists are another viewer group. Windsor Road near the project is posted as a bike lane and is a proposed Class 2 bike route (Sonoma County Transit Authority, 2008). The roadway has sidewalks along both sides. The railroad corridor to the east of the site is a proposed Class 1 bike route, although it is currently not paved. 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. As a result, viewer sensitivity of pedestrians and cyclists is considered moderate.

The third viewer group includes a limited number of residents along Patrick Lane north of the site. Photo 4 indicates that unobstructed close-range views of the project would be available from residences along this road. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

In addition, from the east, potential future residents of the planned Windsor Mill development could have limited views of the project. However, because current Windsor Mill residential development plans include rows of trees along the railroad corridor, on the western edge of the development, these potential residential views of the project would be substantially screened. Additional screening would be provided under APM AE-1 which calls for trees to be planted along the east between the project and the railroad corridor.

5.1.6 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.

5.1.6.1 Town of Windsor General Plan 2015

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

Figure 6-3 in the General Plan identifies scenic corridors near the site, including Windsor Road south of Reiman Lane, Reiman Lane, Starr Road north of Reiman Lane, and Highway 101. None of these roadways is adjacent to the substation site. The site is approximately 0.4 mile from Highway 101 and the scenic corridor portions of Windsor Road and Reiman Lane. The project would not be visible from these corridors.

5.1.6.2 California Department of Transportation (Caltrans) Scenic Highways Program

Site 3 is not visible from any designated or eligible State Scenic Highway in Sonoma County. The site is 6 miles (and on the other side of a ridgeline) from Highway 116, a designated Scenic Highway, and over 8 miles from Highway 12, portions of which are designated and eligible.

5.1.7 Impacts

5.1.7.1 Visual Simulation Methods

As part of the aesthetic impact evaluation of Site 3, a computer-generated visual simulation was produced to show this alternative from Patrick Lane (See Figures 5.1-3A and 5.1-3B). Refer to Figure 5.1-1 for the simulation viewpoint location. The visual simulation photograph was taken using a digital SLR camera with a 35-millimeter-equivalent lens, which represents a horizontal view angle of 54 degrees.

The simulation portrays the location of the project at the far eastern edge of the potential area in which the project could be sited.

5.1.7.2 Visual Change

Constructing the project at Site 3 would introduce a new substation on a site currently occupied by wastewater treatment storage ponds. The following discussion provides an evaluation of the visual changes associated with the project as seen from a key representative vantage point.

Figures 5.1-3A and Figure 5.1-3B portray a “before” and “after” view of the project from Patrick Lane looking southeast. The Figure 5.1-3A photo shows a relatively close-range, unobstructed view toward the project site, which lies beyond the chain-link fence on the south (right) side of the road. Seen through the chain-link fence near the center of this view, the site is a flat, grass-covered field with wastewater treatment storage ponds that appear against a backdrop of scattered mature trees and vegetation. The view includes Patrick Lane and portions of front yards and driveways that face this narrow, paved private road. Existing vertical elements seen within this landscape setting include mature evergreen trees, fence posts, utility poles, and light standards, some of which appear silhouetted against the sky.

The 5.1-3B simulation portrays the proposed substation facility without landscaping. For purposes of this simulation, the substation is located at the far eastern edge of the area in which the project could potentially be sited. As shown, the substation is approximately 360 feet from the photo viewpoint. The simulation also portrays proposed repaving of Patrick Lane. The simulation view shows that taller substation components, including the take-off structures and the new replacement TSP that connects to the substation, would be visible from this location. The replacement pole is somewhat taller and potentially more noticeable than the existing pole. Substation structures and perimeter fencing are partially visible through the grid of black fencing. Mature existing trees north of the project screen northern portions of the substation. Project landscaping called for under APM AE 1 would provide additional screening that would reduce the project’s potential visibility. From this location, the substation would be visible and somewhat noticeable; however, when seen in the context of the existing water treatment facility, it would not substantially alter the existing character of the view.

If the substation were further to the west, it would be considerably more visible, as seen from this vantage point; however, landscaping proposed as part of the project would provide a measure of screening.

Similar views of the project as those shown in the Figure 5.1-3B simulation could be available from several of the nearby residential properties located along Patrick Lane. However, views from the residences would be partially screened by existing landscaping, and new landscaping to be installed as part of the project would provide additional screening. In addition, the project would be visible from a limited area along Windsor Road; however, the substation would not appear prominent from this area because it would be set back between approximately 300 and 750 feet and the substation components would be largely screened from public views by existing structures and vegetation.

An additional visual simulation is being prepared to show visual effects of the project as seen from a viewpoint on the east side of the railroad tracks in the area that is planned for the Windsor Mill development and will be submitted to the CPUC when it becomes available.

5.1.7.3 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 along Patrick Lane who live in close proximity to the project. Filtered views of project construction would also be available to drivers and pedestrians along Windsor Road.

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 often partially screened by existing mature vegetation. The project would not substantially alter existing views of distant landform. 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 3 would not substantially damage scenic resources within a State Scenic Highway.

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Existing view from Patrick Lane looking southeast

Note: Refer to Figure 5.1-1 for viewpoint location

FIGURE 5.1-3A
Existing View - Site 3
Windsor Substation Project
042011





Visual simulation of proposed project without landscaping

Note: Refer to Figure 5.1-1 for viewpoint location
Preliminary and subject to change based on California Public Utilities
Commission requirements, final engineering, and other factors.

FIGURE 5.1-3B
Visual Simulation - Site 3
Windsor Substation Project
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Highway 101 and nearby portions of Windsor Road, Reiman Lane, and Starr Road are listed as local scenic roadways in the Windsor General Plan. These roadways are at least 0.4 mile from the project, and views of the project from these roadways would be screened by existing mature vegetation and structures. The project would not have a substantial adverse effect on views from these roadways; therefore, no mitigation would be required.

Visual Character

The project involves installation of a new substation on a site currently occupied by wastewater treatment storage ponds. The new substation would not be highly visible from major public-view corridors as it would be set back between approximately 300 and 750 feet from Windsor Road, and the components would be largely screened from public views by existing structures and vegetation. The substation would be visible from Patrick Lane, a narrow residential street to the north, and from a limited number of existing residences along this road. APM AE-1 calls for landscaping along the western side of the new facility to screen views from the Patrick Lane area. Additionally, APM AE-1 includes landscaping along the eastern side between the project and the railroad corridor to screen views from the planned future Windsor Mill development. 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 would be compatible with the visual character found in the surrounding area.

In addition, given the nearby existing facilities on the adjacent public works and water treatment plant site, the project at Site 3 would not appear out of context with the landscape setting.

If the project were located further west, it would be considerably more visible to existing residences on Patrick Lane, and may represent a noticeable visual change. Implementation of APM AE-1 would reduce this effect to 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.

Site 3 is within an existing public works facility site, which currently includes night lighting, and is adjacent to a major roadway with street lighting. The project security lighting would create an additional source of nighttime light that may be visible from some nearby locations off-site. With the proposed APM AE-1 and the use of non-glare fixtures directed on-site, these project-related light and glare effects would be considered incremental and less than significant.

5.1.8 Avoidance and Protection Measures

Implementation of the following APM would minimize potential visual effects.

APM AE-1. Landscaping comprised of trees and shrubs would be included along the west side of the project, along the east between the project and the railroad corridor, and between the project and Patrick Lane, as allowed by the area available for the project. This would provide

additional screening and would reduce project visibility. Suggested plant material includes a mix of deciduous and evergreen native oaks. All planting would be consistent with PG&E operational requirements for landscaping in proximity to electric transmission facilities.

5.1.9 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 & Electric. *Plan @ 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 & Electric, January 2011.

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

5.2 AIR QUALITY

5.2.1 Summary

Installing a substation and supporting infrastructure at Site 3 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 3 would generate short-term emissions from project construction resulting in some temporary impacts; however, with incorporation of the APMs described in Section 5.6 of the PEA, impacts to air quality and greenhouse gas emissions would be less than significant.

The following discussions detailed in the PEA are the same for Site 3:

- Methodology used for the evaluation of Site 3 (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)

5.2.2 Temporary Construction Impacts

Temporary construction impacts at Site 3 would be similar to those described in the PEA with the exception of emissions of carbon dioxide (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. Documentation of the inputs to and results from the construction analysis are included in Attachment C.

Construction-phase unmitigated emissions of CO₂ were estimated using emissions factors from URBEMIS 9.2.4 and EMFAC2007 Ver. 2.3. A total of 223 metric tons carbon monoxide equivalent (CO₂e) emissions are estimated for construction activities at Site 3. Incorporation of the APMs listed in Section 5.6 of the PEA would further reduce emissions from construction to approximately 190 metric tons CO₂e. The emissions from the construction phase of the project at Site 3 would be well below the California Air Resources Board-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 190 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 3 would thus be less than significant.

5.3 BIOLOGICAL RESOURCES

5.3.1 Summary

Installing a substation and supporting infrastructure at Site 3 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 and APM BIO-24 and APM BIO-25 listed below.

The following discussions detailed in the PEA are the same for Site 3:

- Significance criteria for 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 3, including 24 special-status plant species and 23 special-status wildlife species (see Tables 5.3-1 and 5.3-2). Additional information about the special-status wildlife species listed in Table 5.3-2 can be found in Section 6.5.8 of the PEA. In addition, the following special-status wildlife species are also potentially present at Site 3 and are discussed below in Section 5.3.4.3 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 3 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.

5.3.2 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 3 as those described in Section 6.2.3 of the PEA.

5.3.2.1 Federal Regulations

A project at Site 3 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 3.

5.3.2.2 State/Regional Regulations

A project at Site 3 would be subject to the same state and regional regulations as described in Section 6.2.2 of the PEA. However, while Site 3 and the Fulton No. 1 60 kV Power Line are

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 (CTS) is unlikely at Site 3 and along the Fulton No. 1 60 kV Power Line as these areas are out of the range of the CTS, but mitigation for listed plants may be required. The portion of the Fulton No. 1 60 kV Power Line between Patrick Lane and Trione Circle is located in, or adjacent to, already developed or permitted areas, and therefore, there is no potential for impact. The closest existing mitigation bank or preserve is located less than 0.50 mile south of Site 3.

5.3.3 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. The survey area included:

- Site 3
- The Fulton No. 1 60 kV Power Line southeast of Site 3, from Patrick Lane to Trione Circle (a 50-foot radius around existing wood poles)
- The vacant lot immediately north of Site 3, bounded by Private Road F to the north and the North Western Pacific Railroad to the east

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 collected⁶. Closer inspections were made in areas which 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 3 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, Jintown, 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

⁶ Additional data will be collected during appropriate blooming periods to confirm wetland versus upland plant species and complete wetland delineation.

Table 5.3-1: Site 3 - 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 within 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; 90-1555 meters.	Mar-June	Low; potential habitat present in grasslands but no occurrences within 10 miles.
Sonoma sunshine <i>Blennosperma bakeri</i>	FE, SE, 1B.1	Occurs in wet areas in valley and foothill grassland, vernal pools; 10–110 meters.	Mar-May	Moderate; potential habitat present in grasslands and wetlands. Nearest occurrence is < 4 miles away.
Bristly sedge <i>Carex comosa</i>	2.1	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.

Species Common Name Scientific Name	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur within Project Area
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.
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 broadleafed 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.

Species Common Name Scientific Name	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur within Project Area
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 occur within < 0.50 mile of the site.
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	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.
Wooly-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 of site.

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

Species Common Name Scientific Name	Listing Status¹	General Habitat Requirements	Blooming Period	Potential to Occur within Project Area
<i>Baker's navarretia</i> <i>Navarretia leucocephala</i> <i>ssp. 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.
<i>Two-fork clover</i> <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.
<i>Saline clover</i> <i>Trifolium depauperatum</i> <i>var. 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.

Notes: * = known populations believed extirpated from that County
? = population location within County uncertain

¹Listing 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 that are seriously endangered in California
- 0.2 Plants that are fairly endangered in California

Table 5.3-2: Site 3 - 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 sixteen stream segments within these counties, including tributary streams in the lower Russian River drainage.	Low; Suitable habitat exists in Windsor Creek. Drainage ditches most likely do not support suitable habitat.
<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 Windsor Creek although no research found indicating populations there. No CNDDDB occurrences within 5 miles.
Central California Coastal steelhead <i>Oncorhynchus mykiss</i>	FT	Anadromous; coastal rivers, streams and creeks from Santa Cruz County north to Russian River basin.	High; Critical habitat exists in Windsor Creek, although there are no CNDDDB occurrences within 5 miles.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
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 Windsor 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 wastewater treatment plants, drainages and Windsor Creek. Nearest CNDDDB occurrence is < 0.50 mile away.
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	Unlikely; project area is located on the northern edge of the species' range in Sonoma County. Nearest occurrence is over 5 miles away.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
		northern San Francisco Bay Area to Santa Barbara County (up to elevations of 1067 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.	
California red-legged frog <i>Rana aurora draytonii</i>	FT, SSC	Occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Breeds January to July (peaks in February). Requires 11 to 20 weeks of permanent water for larval development. Females attach eggs to vegetation 2 to 6 inches below the surface. Requires access to aestivation habitat. Individuals have been found considerable distances from breeding sites on rainy nights. California red-legged frogs have been documented in 46 counties in California, but now remain in only 238 streams or drainages in 31 counties. Historically, occurred throughout Sonoma County; now only known in three creeks in Sonoma County (Upper Sonoma Creek, Petaluma Creek-Sonoma Creek).	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
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 m 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 1940 meters.	Low; could utilize Windsor Creek for breeding. Nearest CNDDDB occurrence is < 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 Co., south to the Mexican border. Elevations of occurrence extend from near sea level to 1363 meters in the southern Sierra foothills.	Unlikely; Survey area appears to be out of the current range of the toad.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
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 deciduous trees and in the main crotch, horizontal branches of conifers. Usually nests in second-growth conifer stands, or in deciduous riparian areas, usually near streams.	Moderate; marginal nesting habitat present. Oak woodlands could be used for hunting.
Tri-colored blackbird <i>Agelaius tricolor</i>	SSC	Frequents fresh emergent wetlands. Nest may be located up to 4 miles from foraging areas. Seeks cover in emergent wetland vegetation, especially cattails and tules; also in trees and shrubs. Roosts in large flocks in emergent wetland or in trees. Usually nests in dense cattails or tules; also nests in thickets of willow, blackberry, wild rose, and tall herbs. Nest usually located a few ft over, or near, fresh water; also may be hidden on ground among low vegetation. Resident to California.	Moderate; seasonal wetlands provide marginal nesting habitat and oak trees provide marginal habitat for roosting. May use drainage ditches for foraging.
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 < 5 miles away.
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	Moderate; could potentially use the oak woodlands in the survey area for nesting.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
		snag cavity. Breeding was confirmed at the Russian River near Windsor.	
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 existing equipment on site and culverts for shelter.
Yellow warbler <i>Dendroica petechia brewsteri</i>	SSC	Frequents open to medium-density woodlands and forests with a heavy brush understory in breeding season. In migration, found in a variety of sparse to dense woodland and forest habitats. In summer usually found in riparian deciduous habitats: cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. Currently occupy much of their former breeding range, except in the Central Valley.	Low; marginal habitat exists in oak woodland.
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.	Low; could utilize oak woodland and hunt for prey in annual grassland and wetland.
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 in oak woodlands, but could hunt over wastewater treatment

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
			ponds.
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 ft above ground in dense shrubs along a stream or river. Known to breed in Sonoma County, confirmed nesting in Annadel State Park.	Low; less-than marginal nesting habitat occurs in oak woodlands.
Loggerhead shrike <i>Lanius ludovicianus</i>	SSC	Inhabits open woodlands, farmland, pastures, annual grasslands, and salt marsh with elevated perches. Utilizes tall shrubs or trees (also use fences and power lines) for hunting perches. Present year round throughout most of the state.	Moderate; suitable nesting, perching, and foraging habitat exists on existing structures and trees.
Purple martin <i>Progne subis</i>	SSC	Utilize tree cavities, bridges, utility poles, lava tubes for nesting. Prey on aerial insects near large wetlands and other water bodies, and at upper slopes and ridges. Occur in 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.
<i>Mammals</i>			
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 or insects over wastewater treatment pools for foraging.

Species Common Name <i>Scientific Name</i>	Listing Status ¹	General Habitat Description	Potential to Occur within Project Area
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 human-made 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 0.6-13 meters above ground level. Females and young may roost in higher sites than males.	Low; marginal roosting habitat present in oak woodlands, may use grasslands or insects over wastewater treatment pools for foraging.

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

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species coincided with that of the survey areas, the species was considered as having the potential to occur within the survey areas.

5.3.4 Existing Conditions

Site 3 is located within a portion of a 24.0-acre parcel of land bounded by Patrick Lane to the north and Plant Road to the south. The area immediately south of Patrick Lane contains an approximately 1.12-acre seasonal wetland (see Figure 5.7-1); the adjacent western area of the parcel contains grassland habitat and the adjacent eastern area is occupied by two wastewater treatment ponds that were not included in the survey area, but were briefly observed through binoculars for special-status wildlife species. Further to the south in the western portion of the parcel is an area that mostly consists of ruderal vegetation and appears to have been graded at one point. Also further to the south is an area that contains construction debris and materials and additional ponds and structures associated with the wastewater treatment facilities.

Three drainage ditches and two seasonal wetlands are located within the survey area of Site 3. However, most of the surveyed area exhibits poor habitat for special-status wildlife and plant species because over half of the parcel was previously graded and/or contains construction debris and materials. The grassland portion of the site contains some minimal foraging habitat; however, the north, east, west and south sides of the parcel are surrounded by buildings, residences or railroad tracks, which makes the existing marginal wildlife habitat segmented. The graded area contains mostly weeds, making it difficult for any special-status plants to become established. The grassland portion and areas around the wetland could, however, provide suitable habitat for special-status plants. A mix of pine and eucalyptus trees located in the northeastern corner of the site, and some shrubs and small trees between the edge of the survey area and the wastewater treatment ponds, likely support bird nesting activity during spring and summer months.

Construction of a substation at Site 3 would also require work along a 0.51-mile section of the Fulton No. 1 60 kV Power Line. This section of power line extends from Site 3, south to Trione Circle, and is parallel to the North Western Pacific Railroad (NWPRR) tracks. The line spans and/or is adjacent to oak woodland, semi-riparian scrub, ruderal and landscaped habitats. It spans and/or is adjacent to seven drainage ditches and Windsor Creek. Potential for special-status species exists throughout the distribution line alignment; mostly in the woodland and aquatic areas.

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 5.3-1: Special-Status Plant Species With Potential to Occur in the Project Area.

Thirty-six special-status wildlife species were identified as having the potential to occur within the survey areas. Thirteen of the 36 species did not meet the habitat characteristics observed in the survey area. The remaining 23 species were analyzed for their potential to occur within the

survey area. These species are described in Table 5.3-2: Special-Status Wildlife Species With Potential to Occur in the Project Area.

Two potentially federal-jurisdictional drainage ditches, two potentially federal-jurisdictional seasonal wetlands and eight non-jurisdictional drainage ditches, which could be either directly or indirectly affected by the project, are within the surveyed areas and were recorded with a sub-meter accurate GPS unit.

5.3.4.1 Habitat Types

The types of habitat present are very similar to habitat types discussed in Section 6.4.1 of the PEA. These habitats consist of annual grassland, ruderal/disturbed, oak woodland, developed/landscaped, drainage ditches and creeks. Two additional habitat types, semi-riparian scrub and seasonal wetland, were found in various areas 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 southeastern and northeastern corner of the surveyed area for Site 3 and on the banks of the drainage ditch located south of Patrick Lane and north of the wastewater treatment pond.

Seasonal Wetland

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 by Harding grass (*Phalaris aquatica*) are found at Site 3. Wildlife species that could utilize seasonal wetlands include raccoon (*Procyon lotor*), gopher snake (*Pituophis melanoleucus*), and Pacific chorus frog (*Pseudacris regilla*).

Water Features

There are two drainage ditches and two seasonal wetlands in the survey areas that are potentially U.S. Army Corps of Engineers (ACOE) jurisdictional. There are eight drainage ditches within the survey area that are non-jurisdictional.

5.3.5 Impacts

5.3.5.1 Habitat Types

Annual Grassland

No annual grassland would be impacted by placement of the substation in the northeast corner of the public works yard immediately adjacent to the Fulton No. 1 60 kV Power Line. PG&E's use of a 75-foot buffer work area around the TSP, 50-foot buffer work area around wood poles and a 10-foot ROW between poles along the Fulton No. 1 60 kV line would result in impacts to approximately 0.90 acre of annual grassland. The grasslands could provide habitat for a variety of special-status plant species and only marginal habitat for special-status wildlife species; however, these impacts would be less than significant with implementation of the APMs incorporated into the project (refer to Section 6.6 of the PEA).

Ruderal/Disturbed

Ruderal/disturbed vegetation can be found throughout the project area and is most prominent along the southwestern area of Site 3 and on the disturbed lot east of Site 3 (and located east of the NWPRR tracks). 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 habitat can be found in work areas along the Fulton No. 1 60 kV Power Line. Construction occurring along the power line is not likely to result in the loss of any oak trees in the oak woodland habitat; however, some trees in these areas may need to be trimmed. The protection measures listed in Section 6.6 Avoidance and Protection Measures in the PEA would help to reduce the impact to trees to a less-than-significant level.

Developed/Landscaped

Developed/landscaped areas occur along the east side of Trione Circle. These areas have been planted with a low growing manzanita (*Arctostaphylos* sp.). 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 the southeastern and northeastern corner of Site 3 and on the banks of a drainage ditch adjacent to the Fulton No 1 60 kV Power Line. Impacts to riparian-scrub would likely only result in approximately 0.01 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

The 1.04 acre seasonal wetland located to the west of Site 3 within the public works yard is potentially ACOE jurisdictional, as is the wetland located further to the south in the area that

appears to have been graded at one point. The wetland occurring in the southern portion of the Site 3 survey area would not be impacted. The 1.04 acre seasonal wetland could be permanently impacted by construction of a permanent access road from the eastern end of Patrick Lane across the wetland to the substation, depending on the final design of the road.

Drainage Ditches and Windsor Creek

No impacts to drainages would occur with placement of the substation in the northeast corner of the public works yard immediately adjacent to the Fulton No. 1 60 kV Power Line as shown on Figure 5.7-1.

The Fulton No. 1 60 kV Power Line spans and/or is adjacent to seven drainage ditches and Windsor Creek. Approximately 0.05 acre of drainage ditch would be temporarily impacted. No impacts to Windsor Creek are anticipated. Although unlikely, these water features could be affected by sedimentation runoff from disturbed soils. Sedimentation from ground disturbance along the Fulton No. 1 60 kV Power Line could wash from the site into these 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.

5.3.5.2 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.

5.3.5.3 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 3 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

Windsor 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 Avoidance and Protection Measures in the PEA 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 CA coast), Central California coastal steelhead, and California coastal chinook salmon could potentially migrate through Windsor 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 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 in 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.

5.3.6 Avoidance and Protection Measures

PG&E would implement the following APMs in addition to those described in Section 6.6 of the PEA to avoid or minimize anticipated impacts to biological resources from project development:

APM BIO-24. A wetland delineation per the ACOE Wetlands Delineation Manual would be conducted prior to construction. The delineation would use a three-parameter approach that includes an examination of vegetation, soils, and hydrology to determine the presence of wetlands. A wetland report would be prepared and submitted to the ACOE for verification. Through this process, final calculations of wetland area present in the project area would be obtained for project permitting.

APM BIO-25. Wetlands and aquatic resources would be denoted as environmentally sensitive areas and would be avoided during construction to the degree practicable. The permanent loss of seasonal wetlands resulting from project construction would be mitigated at a minimum ratio of 1:1 through:

- the purchase, restoration, and protection of severely degraded similar wetlands in the vicinity of the project;
- the creation of new emergent and/or seasonal wetland from upland habitat within the vicinity of the project; and/or
- the purchase from a mitigation bank of similar wetlands in the vicinity of the project.

5.3.7 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.

5.4 CULTURAL RESOURCES

5.4.1 Summary

Installing a substation and supporting infrastructure at Site 3 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 no known cultural resources associated with Site 3, and no impacts to significant recorded cultural resources would be anticipated, either during construction or operation.

The following discussions detailed in the PEA are the same for Site 3:

- 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 3.4 of this document.

5.4.2 Methodology

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

- A records search encompassing a 0.25-mile radius of Site 3 was conducted in October 2010.
- Consultation with Native American groups and individuals, and local historical societies has not been conducted but should occur if Site 3 is selected by the CPUC as the preferred location for the Windsor Substation Project.

5.4.3 Existing Conditions

Site 3 is located at the northern end of the Windsor Public Works Department site. The project area is south of Patrick Lane, and northeast of the Windsor Public Works Department parking lot and other modern buildings and structures. The Windsor Public Works Department's wastewater treatment storage ponds currently occupy the substation footprint at Site 3, and are surrounded by a 10-foot-wide trench and a chain link fence topped with barbed wire. To the west of the ponds, a seasonal wetland dominates the landscape, and the area also contains a stack of large utility pipes, a small amount of construction debris, and a dilapidated wood and barbed-wire fence line. There is also evidence of subsurface infrastructure features, as indicated by an exposed portion of an underground ferrous metal pipe at the northwestern end of the project area. Plant Road currently serves as the access road to the site.

5.4.4 Cultural Resources

No prehistoric cultural resources have been previously recorded or were identified during the fieldwork within or adjacent to Site 3.

The results of the records search conducted in October 2010 indicate that one study (S-023912) has been conducted within the Site 3 project area. The study is associated with four historic-era cultural resources located west and southwest of Site 3: P-49-002835, P-49-002836, P-49-002837, and P-49-002838. These were early twentieth-century single-family residences along Windsor Road within the Windsor Public Works Department complex, but outside Site 3 where the substation would be located. They have since been demolished.

There is a low potential for historic-era deposits associated with these structures within the Site 3 substation footprint. However, during the archaeological survey conducted in February 2011, a wood and barbed-wire fence line, isolated ceramic artifacts, and a ferrous metal pipe were observed. These resources may be remnants of the previously recorded buildings/structures (P-49-002835 and P-49-002838), which were located outside but immediately west of the project area. The age of these materials is currently undetermined and would require further identification efforts and potential evaluation if Site 3 is selected as the preferred site.

5.4.5 Unknown Cultural Resources

There is a low potential for the identification of subsurface cultural resource deposits at Site 3. Additionally, there appears to be a low potential for inadvertent discoveries of buried prehistoric archaeological deposits during subsurface construction within the project areas, based on a review of the area's geology and soils. The soils within the project area, all Huichica series, likely date to the 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 would be carried out.

No impacts to significant recorded cultural resources at Site 3 would be anticipated for the project, either during construction or operation. However, the potential resources observed at Site 3 would require further identification and evaluation for the California Register of Historical Resources if Site 3 is selected as the preferred site.

5.5 GEOLOGY, SOILS, MINERAL RESOURCES, AND PALEONTOLOGY

5.5.1 Summary

Installing a substation and supporting infrastructure at Site 3 would avoid potential impacts to geological resources, soils, mineral resources, and paleontological resources; and therefore, no APMs are proposed. Site 3 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 discussions detailed in the PEA are the same for Site 3:

- Methodology for the evaluation of Site 3 (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)

5.5.2 Existing Conditions

5.5.2.1 Topographic Setting

Site 3 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 3:

- Site 3 is at an elevation of approximately 100 feet above mean sea level.
- Windsor Creek, located south of Site 3 and crossed by the new overhead distribution circuit, flows to the west toward the Russian River.

5.5.2.2 Soils

Site 3 is on relatively flat ground in an area of soils belonging to the Huichica Series, as mapped by the Natural Resources Conservation Service (NRCS), similar to soils described in Section 8.4.5 of the PEA. The following differences are applicable to the soils at Site 3:

- The main soil types in the vicinity of the project site are Huichica Loam HtA (0 to 2 percent slopes) and the Huichica loam HtC (2 to 9 percent slopes).
- The Huichica Loam HtA is alluvium derived from igneous, metamorphic, and sedimentary rock; has slopes ranging from 0 to 2 percent; is moderately well-drained; and has a low to moderately low capacity to transmit water.
- The Huichica loam HtC is alluvium derived from igneous, metamorphic, and sedimentary rock; has slopes ranging from 2 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 Huichica Series is classified as a Class 3s to Class 3e soil, with low permeability, low to high shrink-swell potential, high corrosivity, and medium compressibility. Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices; capability subclass letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained, and *s* shows that the soil is limited mainly because it is shallow, droughty, or stony. Class 3 soils have limitations that make them unsuitable for cultivation, and require conservation practices and careful management.

5.5.2.3 Mineral Resources

The Site 3 property 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 3.

5.5.2.4 Paleontology

Paleontological remains near Site 3 were 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 3 to 5 miles west of Site 3. 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 3, 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 3.

5.5.3 References

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

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.

5.6 HAZARDS AND HAZARDOUS MATERIALS

5.6.1 Summary

Installing a substation and supporting infrastructure at Site 3 would avoid potential impacts from hazards and hazardous materials.

The following discussions detailed in the PEA are the same for Site 3:

- 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)

5.6.2 Methodology

Environmental Resource Management (ERM), at the request of PG&E, conducted a Phase I Environmental Site Assessment in April 2011 to assess the potential for existing hazardous waste or materials on Site 3. The report, *Phase I Environmental Site Assessment*, will be provided to California Public Utilities Commission staff upon request.

5.6.3 Existing Conditions

Site 3 contains portions of two unlined, wet weather, high-flow ponds that have received and stored untreated wastewater from residential, commercial, and industrial sources in the Town of Windsor since the 1960s and 1970s. According to the *Phase I Environmental Site Assessment*, it is very likely that the storage of untreated wastewater for over 40 years might have resulted in adverse impacts to soil and/or groundwater at Site 3. Possible contamination in wastewater from commercial and industrial sources could include a spectrum of organic and inorganic chemicals that would have been discharged to the sewer system. A monitoring well located on the east side of the railroad tracks and belonging to the adjacent property is hydraulically cross-gradient of the ponds and has been monitored for volatile organic compounds (VOCs). No detectable concentrations of VOCs have been found in the groundwater at this monitoring well; however, other constituents such as heavy metals, polychlorinated biphenyls (PCBs), and agricultural chemicals have not been monitored.

In addition, prior to being a public works yard, Site 3 was used for agricultural purposes (farm lands and orchards) since at least 1953. Historical agricultural operations typically would have included the use of agricultural chemicals (e.g., pesticides, herbicides, fertilizers), although no specific information regarding agricultural chemical use was obtained by ERM.

5.6.4 Hazards and Hazardous Materials Impacts

Fire and lightning hazards at Site 3 would be the same as discussed in Sections 9.4.2.3 and 9.4.2.4 of the PEA, respectively.

5.6.4.1 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. Placement of the substation at Site 3 within the eastern portion of the site would require relocation of the wastewater treatment storage ponds currently located there. As required pursuant to regulations of the California Regional Water Quality Control Board and Department of Health Services, the ponds would be clean-closed and filled prior to commencement of project construction. This procedure is followed to prevent any pond contaminants from entering the groundwater by leaching, or entering surface waters through soil movement during construction. Completion of the clean-closure procedure would ensure the removal of any contaminated soils prior to commencement of construction of the substation or confirm that any residual contaminant concentrations are at or below background levels or clean up levels established by the relevant regulatory agencies.

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.

5.6.4.2 Schools

Site 3 is 0.16 mile from Windsor High School and 0.25 mile from Windsor Creek Elementary School. Regulated materials are subject to standard rules and regulations regarding their transport, storage, and use. Compliance with these standard regulations would ensure that potential impacts in this regard would be less than significant.

5.6.4.3 Airport Proximity

Site 3 is outside the 2-mile vicinity of a public or private airstrip; therefore, there would be no impact to the safety of persons working within the project site or to air traffic flying near or over the project site.

5.6.5 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*. April, 2011.

5.7 HYDROLOGY AND WATER QUALITY

5.7.1 Summary

Installing a substation and supporting infrastructure at Site 3 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 5.7.5 of the Supplement to the PEA. One drainage ditch is located along the northern and eastern boundary of Site 3, and a wetland is located to the west and northwest of the site. The drainage ditch appears to be hydrologically connected to Windsor Creek, which is a perennial watercourse and tributary to the Russian River. A portion of the wetland may need to be filled depending on the location of the access road that would be installed for construction and operation of the substation.

The following discussions detailed in the PEA are the same for Site 3:

- Regulatory framework (Section 10.2.1 of the PEA)
- Standards of significant impacts (Section 10.4.1 of the PEA)
- Impacts resulting from potential groundwater, runoff, flooding and inundation, and hazardous material spills (Sections 10.4.2.1.1, 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)
- References (Section 10.6 of the PEA)

5.7.2 Methodology

The hydrologic setting was evaluated by field inspection of nearby waterbodies and drainages in January 2011, 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 5.7-1 shows all identified water sources discussed within this section.

5.7.3 Existing Conditions

Site 3 is relatively flat and water sheet flow or stormwater generally drains across the property south to southeast toward Windsor Creek. Surfaces east of Site 3 generally drain south toward Windsor Creek. The Fulton No. 1 60 kV Power Line crosses Windsor Creek, East Windsor Creek, and their tributaries, but no poles are located below the top of the banks of these creeks and their tributaries.

The precipitation associated with Site 3 is the same as described in Section 10.3.2 of the PEA.

5.7.3.1 Channels, Creeks, and Streams

A drainage ditch runs along the east and north sides of Site 3.

5.7.3.2 Wetlands

One 1.04-acre seasonal wetland was identified on Site 3 in a topographic depression in the western and northwestern area adjacent to Site 3.

5.7.3.3 Flood Potential

The Site 3 alternative is not within the 100-year or 500-year flood zones. FEMA maps (2011) show that the ponds adjacent to the site have a 0.20 percent chance of flooding during a severe storm; however, potential flooding of these ponds should not affect the project site.

5.7.3.4 Surface Water Quality and Supply

Surface water supply and quality for Site 3 consists of upland stormwater collected through drainage ditches, roadside ditches, and ponding. Review of the North Coast Regional Water Quality Control Board Basin Plan (2007) indicates that 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. December 2009 water quality sampling of Windsor Creek met all water quality objectives.

5.7.3.5 Groundwater Supply and Quality

Site 3 is located in the Santa Rosa Plain sub-basin, within the Santa Rosa Valley Basin. A significant amount of groundwater development has occurred in the Santa Rosa Plain and surrounding areas. The Town of Windsor uses groundwater in this area for domestic supply. The groundwater supplies augment surface supplies from the Russian River Project.

Based on surface topography, groundwater at Site 3 appears to generally flow west to northwest, toward the Russian River. Site-specific groundwater data is not available for analysis at this time.



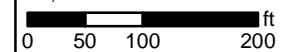
FIGURE 5.7-1
 Hydrology - Site 3
 Windsor Substation Project

Legend

- ⊙ Pole
- Culvert Inlet/Outlet
- Culvert
- ▭ Survey Area
- ▭ Site 3
- ▭ Seasonal Wetland
- Potential Non-Jurisdictional Ditches
- - - 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 5.7-1

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5.7.4 Impacts

Temporary and permanent impacts resulting from construction of the project at Site 3 would be similar to those discussed in Section 10.4.2 of the PEA.

The wetland in the western and northwestern area adjacent to Site 3 could be permanently impacted by construction of a permanent access road across the wetland to the substation, depending on the final design of the road. If this wetland is determined to be state or federal jurisdictional, PG&E would make every effort to establish access to the substation without creating permanent impacts to the wetland. If permanent impacts could not be avoided, PG&E would compensate for the loss of wetland. Additional temporary impacts would be avoided through the use of APMs, as described in Section 10.5 of the PEA, and described in Section 5.7.5 of this document.

A substation located in the northeast corner of the public works yard would require relocation of the wastewater treatment storage ponds currently located there. The ponds would need to be “clean closed” and filled prior to PG&E’s commencement of a project at this location, pursuant to regulations of the California Regional Water Quality Control Board and Department of Health Services. The clean-closure procedure is followed to prevent any pond contaminants from entering the groundwater by leaching, or entering surface waters through soil movement during construction.

5.7.5 Avoidance and Protection Measures

PG&E would implement Best Management Practices (BMPs) and APMs as described in Section 10.5 of the PEA, as well as APMs listed below. Wetland impacts would be addressed as described in APM BIO-25.

APM WQ-8. 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 with 100 feet of any waterbodies.

5.8 LAND USE AND PLANNING, RECREATION, AND AGRICULTURAL RESOURCES

5.8.1 Summary

Installing a substation and supporting infrastructure at Site 3 would avoid 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 3:

- Methodology used for the evaluation of Site 3 (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 agriculture (Sections 11.4.2 and 11.4.3 of the PEA)
- References (Section 11.6 of the PEA)

5.8.2 Existing Conditions

5.8.2.1 Land Use, Planning, and Zoning Designations

The local land use planning and zoning designations for Site 3 are described in the *Town of Windsor General Plan–2015, Sonoma County General Plan–2020*.

Substation and Power Line Interconnection

Although this project is not subject to local zoning requirements,⁷ the Town of Windsor has zoned Site 3 as Public/Institutional (PI) and site existing development includes wastewater treatment storage ponds that the Town of Windsor is planning to reconfigure. Per the Town of Windsor Zoning Ordinance, allowed uses within areas zoned PI include “public facilities, utilities, and public gathering facilities, including: public schools, libraries, government offices, etc.”

Figure 5.8-1 depicts land use designations in the vicinity of Site 3 as defined in the Town of Windsor General Plan. Site 3 is approximately 800 feet east of Windsor Road and is bounded on the north by Patrick Lane, on the west by a wetland area and fire station, on the east by the existing Fulton No. 1 60 kV Power Line and the Northwestern Pacific Railroad (NWPRR), and on the south by the wastewater treatment plant and other facilities within the public works yard. Patrick Lane is a private road fronted by seven residences and a vacant lot, all zoned Surrounding Residential. Areas on the west and north sides of the wastewater treatment storage ponds are densely covered by hydrophilic vegetation, annual grasses, and weeds, and there is an approximate 1.12-acre seasonal wetland feature. The area northwest of Patrick Lane is zoned for Surrounding Residential development. Approximately 0.50 mile (2,600 feet) south are residential

⁷ 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.

neighborhoods, on the west side of Windsor Road, approximately 0.16 mile (850 feet) from Site 3, is Windsor High School, and on the east side of the NWPRR, approximately 0.02 miles (100 feet) from Site 3, is vacant land zoned High Density Residential and slated for future multi-family residential development (see Table 5.8-1).

Table 5.8-1: Site 3 – 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	Public Institutional	Public Institutional	Windsor Public Works with wastewater treatment storage ponds
North	Surrounding Residential	Surrounding Residential	Patrick Lane (seven residences and vacant lot)
South	Public Institutional	Public Institutional	Wastewater ponds and water treatment plant
East	Public Institutional/High Density Residential	Public Institutional/High Density Residential	Fulton No. 1 60 kV Power Line and the North Western Pacific Railroad / proposed high-density residential homes on opposite side of railroad tracks
West	Public Institutional	Public Institutional & Village Residential	Fire Station - Windsor Fire District (across Windsor Road is Windsor High School). One single family home adjacent to the Fire Station

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

Source: Windsor Zoning Map, Windsor General Plan Land Use Map (2005 and 2008 Update)

¹du/ac Dwelling Units per Acre

PG&E would purchase the substation site from the Town of Windsor and acquire a new easement on the east side of the substation site for the power line interconnection to the Fulton No. 1 60 kV Power Line. PG&E currently possesses an existing right of way (ROW) along the Fulton No. 1 60 kV Power Line.

Distribution Line and Reconductoring

PG&E would acquire a new easement along the north side of the substation site along Patrick Lane for associated distribution line work. The work activities along Windsor Road would occur within the existing Public Utility Easement (PUE) or in public streets under PG&E's franchise agreement with the Town of Windsor. PG&E currently possesses an existing ROW along the Fulton No. 1 60 kV Power Line. PG&E would obtain ministerial encroachment permits to conduct work in public rights-of-way in accordance with Town of Windsor requirements.

The distribution work along Patrick Lane would occur on lands zoned Surrounding Residential. The segment of the Fulton No. 1 60 kV Power Line that would be rebuilt to add the distribution underbuild occurs on lands zoned High Density Residential, Medium Density Residential, Surrounding Residential, and Gateway Commercial.

5.8.2.2 Recreation

The nearest recreation facility is Keiser Park, approximately 0.50 mile northwest of Site 3 at 700 Windsor River Road, and well outside the project vicinity.

5.8.2.3 Agriculture

Site 3 is located within the Town of Windsor on land that is zoned for development. The substation site and locations of associated work are not currently under cultivation, nor classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Department of Conservation. Site 3 is not subject to a Williamson Act contract.

5.8.3 Impacts

5.8.3.1 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, and lane closures along minor access roads leading to individual pole locations on the Fulton No 1 60 kV Line. 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. Because the distribution line is an existing structure, the project would not result in additional barriers that might divide the existing community.

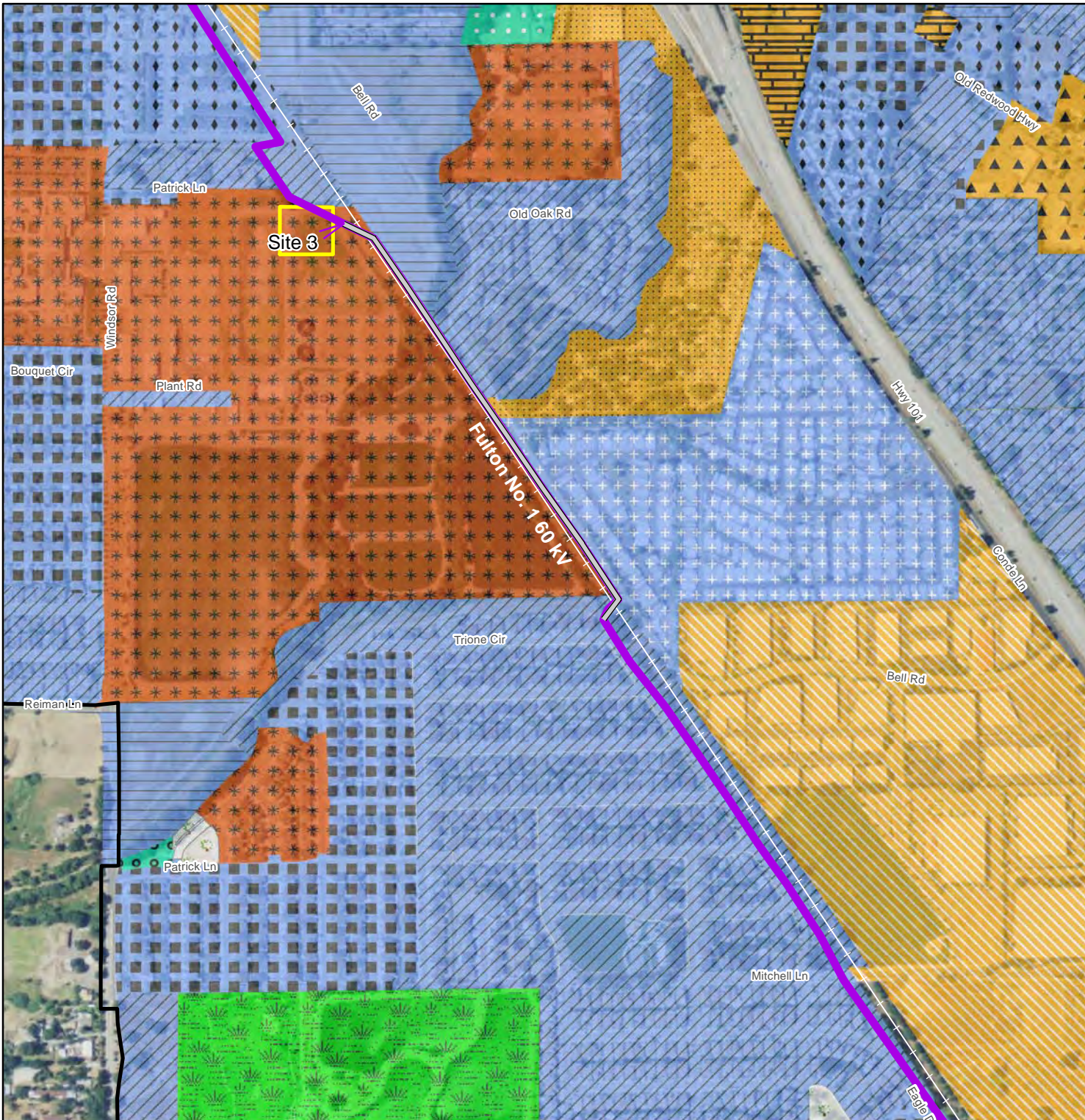


FIGURE 5.8-1
 General Plan Map - Site 3
 Windsor Substation Project



- 12 kV Distribution Reconductoring
- Proposed 115 kV Loop (Initially 60 kV Loop)
- Fulton No. 1 60 kV
- Site 3
- 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
- Gateway Commercial
- General Business
- Light Industrial

PARKS/OPEN SPACE

- Parks
- Open Space

PUBLIC/QUASI-PUBLIC/INSTITUTIONAL

- Cemetery/School/Wastewater-Treatment Plant

1:8,000

1 inch = 667 feet



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

BACK OF FIGURE 5.8-1

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For Site 3, less-than-significant impacts to land use would occur as a result of construction activities.

Operation and Maintenance

Impacts to land use and planning resulting from operations and maintenance would be similar to those described in Section 11.4.3.1 of the PEA. Site 3 is zoned Public Institutional, and proposed project activities are consistent with the Town of Windsor Zoning Ordinance list of allowed uses at the site. Because the Fulton No. 1 60 kV Power Line is an existing structure, the associated project interconnection and distribution work would not result in additional barriers that might divide the existing community.

PG&E is not subject to local zoning ordinances. However, if Site 3 is selected for location of the substation, Site 3 would be located so as not to conflict with any local land use plans or policies as outlined below in Table 5.8-2.

Table 5.8-2: Zoning Development Standards for the Proposed Substation Site 3

Development Standard (Setbacks)	Requirement
Front Minimum	20 feet
Sides (each)	5 feet
Street Side (Patrick Lane)	10 feet
Rear Setback	20 feet
Height	Primary Structure 35 feet Accessory Structure 15 feet

Source: Windsor Zoning Ordinance, Section 27.10.040, Table 2-9

See Zoning Ordinance Chapter 20.20 for exceptions to setbacks (page 3-9 and 16)

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

5.8.3.2 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

Recreational impacts resulting from operations and maintenance would be similar to those described in Section 11.4.3.2 of the PEA. No portion of the Site 3 project area is on land in recreational use or on land zoned for recreational uses. Therefore, no impacts would occur to recreational resources.

5.9 NOISE

5.9.1 Summary

Installing a substation and supporting infrastructure at Site 3 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 3:

- Methodology used for the evaluation of Site 3 (Section 12.2 of the PEA)
- Regulatory framework (Section 12.3.1 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)

5.9.2 Existing Conditions

5.9.2.1 Existing Noise Levels

Existing noise levels at Site 3 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 60.8 A-weighted decibels (dBA) and Day Night Sound Level of 60.6 dBA.

5.9.2.2 Airport Noise Contribution

According to the Town of Windsor General Plan Figure 7.5, all potential Site 3 project areas 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.

5.9.2.3 Sensitive Receptors

The nearest sensitive receptor to Site 3 is a single-family dwelling approximately 250 feet northwest of the substation. In addition, a multi-family residential development is planned for the vacant parcel immediately adjacent to the east side of the NWPRR, approximately 150 feet east of Site 3.

5.9.3 Operations and Maintenance Impacts

Detailed SoundPLAN (Braunstein + Berndt GmbH) noise models were utilized to predict noise resulting from operation of a three-bank substation at Site 3. As stated in Section 12.3.1 of the PEA, the maximum allowable limit of continuous noise under the Town of Windsor's General Plan is 53 dBA. Normal operation and maintenance of the three-bank substation at Site 3 would result in maximum constant sound levels of up to 53 dBA at the substation boundary with no walls or other sound moderation treatment. Sound levels of 35 to 37 dBA would be produced at the nearest existing sensitive receptors. Sound levels of 36 to 40 dBA would be produced at the nearest sensitive receptors to the east side of the NWPRR. Additional screening measures, such

as prefabricated walls, may be designed in coordination with the Town of Windsor, which may further reduce noise impacts. Even without additional screening measures, operation and maintenance-related noise impacts would be under 53 dBA, and therefore, less than significant.

5.9.4 References

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

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

5.10.1 Summary

Installing a substation and supporting infrastructure at Site 3 would avoid potential impacts to population and housing, public services, and utilities and service systems, either during construction or as part of ongoing maintenance and operation; therefore, no APMs have been proposed.

The following discussions detailed in the PEA are the same for Site 3:

- Methodology used for the evaluation of Site 3 (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 (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)

5.10.2 Existing Conditions

5.10.2.1 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.

5.10.2.2 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.

5.10.2.3 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 \$75,673⁸.

⁸ According to Census 2010 estimated data

5.10.3 Impacts to Public Services

Several fire and police departments are in the vicinity of Site 3. Windsor Fire Station Two is located at 8600 Windsor Road, which is adjacent to Site 3, with primary emergency access along Windsor Road. Fire Station One (also known as Windsor Fire Protection District) is located at 8200 Old Redwood Highway. Windsor Road is also considered a primary emergency access route to this fire station. The Police Department is located at 9291 Old Redwood Highway, which is more than 2 miles from Site 3. For further discussion see Sections 13.4.1.2, 13.4.2.2, and 13.4.3.2 of the PEA.

5.10.4 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.

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. Site visited February 18, 2011.

5.11 TRANSPORTATION AND TRAFFIC

5.11.1 Summary

Installing a substation and supporting infrastructure at Site 3 would avoid potential impacts to transportation or traffic, either during construction or as part of ongoing maintenance; 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 3:

- Methodology used for the evaluation of Site 3 (Section 14.2 of the PEA)
- Regulatory framework (Section 14.3 of the PEA)
- Existing conditions for bus services, commuter rails, and air traffic (Sections 14.3.3, 14.3.4, and 14.3.7 of the PEA)
- Standards of significant impacts (Section 14.4 of the PEA)
- Impacts resulting from operations and maintenance (Sections 14.4.2 and 14.3.3 of the PEA)

5.11.2 Existing Conditions

General access to the Site 3 location would be via Highway 101, Shiloh Road, Windsor Road, Patrick Lane, Trione Circle, Bell Road, and other minor side streets for short-term access to individual pole locations. An access road to the substation site for construction and operation purposes would likely be constructed by way of an extension off of Patrick Lane. This would involve, but not be limited to, the removal of existing vegetation and topsoil; grading and possibly the import of fill material, which could create ditches on either side of the road; importing and compacting baserock on the final road subgrade; and paving the road with asphalt concrete. Alternatively, an access road to the substation site parcel could be installed off of a private lane, immediately south of Private Road F and one block north of Patrick Lane. From this unnamed private lane, an access road would be constructed approximately 400 feet south through a vacant lot, and involve similar construction activities (clearing, grading, import of fill, paving). Portions of the public works site or vacant lot 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.

Access to construct the overhead double-circuit distribution underbuild along the Fulton No. 1 60 kV Power Line at individual pole locations would be along Bell Road and Trione Circle.

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

- Windsor Road
 - Patrick Lane
 - Minor access roads leading to individual pole locations on the Fulton No 1 60 kV Line
- Table 5.11-1 provides the approximate location and traffic data, as well as Level of Service (LOS), for each of the access roads at Site 3. Refer to Figures 4.2-1 and Figure 4.3-1 for a depiction of the roadways in the project vicinity.

The NWPRR line is just east of Site 3 and remains closed. The NWPRR ROW was acquired for future freight use by the Sonoma-Marín Area Rail Transit (SMART) District, with an easement issued to the Northern Coast Railroad Authority (NCRA) for freight operations. In the PEA, the schedule of operation for the NCRA freight service was projected for the first quarter of 2010, and the SMART passenger rail service was projected for 2014. Recent communications with NCRA indicate that freight operations are scheduled to re-commence beginning in April 2011. Planned maintenance activities on portion of the SMART rail line have been postponed indefinitely.

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 5.11-2 below.

Table 5.11-1: Roadways in the Site 3 Project Vicinity

Roadway	Lanes	Classification	Daily Traffic Volume	Peak-Hour Level of Service (LOS)
Highway 101 (between Arata Lane and Windsor River Road Exit)	4	Highway	66,000	Less than C
Windsor Road (Patrick Lane)	2	Collector	8,840	A/B
Patrick Lane	2	Local	< 2,000	A/B
Trione Circle	2	Local	< 2,000	A/B
Bell Road	2	Local	8,840	A/B
Windsor River Road	2	Arterial	16,000	A/B/C

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

Table 5.11-2: Existing and Proposed Bikeways in the Site 3 Project Vicinity

Bikeway	Class	Location
Northwestern Pacific Railroad (NWPRR)	Proposed Class I	From north of Shiloh Road to the north Town limits
Windsor Creek Trail	Existing Class I	From Conde Lane to NWPRR
East Windsor Creek Trail	Proposed Class I	From Conde Lane to NWPRR south of Windsor Creek

Source: Windsor Bike and Pedestrian Master Plan, 2008

Charles M. Schulz Sonoma County airport is the only point for commercial airline services in Sonoma County and is approximately 2 miles from the Site 3 project area. Sonoma County is currently updating the Charles M. Schulz Sonoma County Airport *Comprehensive Airport Land Use Plan* (2001). The *Draft Final Airport Master Plan Update* was reviewed and accepted by the County of Sonoma Board of Supervisors on December 4, 2007. The Environmental Review process for this updated plan is now underway, and it is anticipated that public hearings will be scheduled in the late spring or early summer of 2011.

5.11.3 Impacts

Impacts to transportation and traffic would be similar to that which is described in Section 14.4 of the PEA, with the additional information provided below.

Several fire and police departments are in the vicinity of Site 3. Windsor Fire Station Two is at 8600 Windsor Road, which is adjacent to Site 3, with primary emergency access along Windsor Road. Fire Station One (also known as Windsor Fire Protection District) is at 8200 Old Redwood Highway. Windsor Road is also considered a primary emergency access route to this fire station. PG&E would obtain an encroachment permit from the Town for work in the public streets, which would include any provisions for emergency vehicles. PG&E would coordinate with the Windsor Fire District prior to lane closure and transportation of heavy equipment along Windsor Road (Allan Tilton, pers. comm. 2011). For further discussion see Section 13.4.1.2, 13.4.2.2 and 13.4.3.2 of the PEA.

One existing and two proposed public bike facilities are either planned along, or planned to cross, roadways that would be used to access Sites 3 or the associated distribution line installation. Traffic in these areas due to construction vehicles would be less than significant, and as such these bike routes would not be affected by project construction.

PG&E would consult with SMART regarding coordination of construction activities within and adjacent to the railroad crossing (e.g., installation of a new overhead distribution circuit across the railroad). Therefore, there would be no impact to passenger or freight railroad services.

Site 3 is located just outside and west of the Charles M. Schultz Airport Safety Zone (Outer Safety Zone – A), so there would be no impact to air transportation.

5.11.4 References

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

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

Town of Windsor. General Plan 2015. 2005 Update. Online:
<http://www.ci.windsor.ca.us/documentview.asp?did=95>. Site visited February 18, 2011.

5.12 GROWTH-INDUCING AND CUMULATIVE IMPACTS

5.12.1 Summary

Installing a substation and supporting infrastructure at Site 3 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 4.6 of the Supplement to the PEA. Growth-inducing significance criteria, new employment, and existing community services relevant to Site 3 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.

5.12.2 Cumulative Impacts

Construction activities associated with Site 3 could result in short-term construction 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 noise, hydrology, and transportation and traffic are 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 updated current and probable projects near Site 3 is provided in Table 5.12-1 and depicted in Figure 5.12-1. As shown in Table 5.12-1, the only probable project near the vicinity of the substation having a known anticipated construction schedule simultaneous to PG&E's project is the Bicycle Transportation Route Widening Project, located along Windsor Road between Ryman Lane and Winemaker Street. This work is scheduled to occur from June through September 2012.

5.12.2.1 Aesthetics

Construction and operation of the project at Site 3 would not result in any significant impacts to visual resources. A substation at Site 3 would be situated on relatively flat, low-lying terrain and would be largely screened from public views by existing structures (Public Works Building, Fire Station, and fencing) and vegetation, and not highly visible from major public view corridors. While the substation would be visible from Patrick Lane, landscaping along the northern and western sides of the new facility would help to screen views from the Patrick Lane area. The substation would also be visible from any future development across the NWPRR tracks; a high-density residential development is currently planned for this site, which is 0.02 mile (150 feet) from the boundary of Site 3. Landscaping along the northern and eastern sides of the substation site and any additional landscaping added as part of the residential development, would help to screen views of the substation. The scale and appearance of the substation facilities would be compatible with the visual character found in the surrounding area.

Table 5.12-1: 2011 Planned and Current Projects in the Vicinity of Site 3

Project Name	Address	Proximity to Project (approx.)	Type of Development	Description	Parcel/Lot Size¹ (approx.)
BTA – Bicycle Trail Improvements	Windsor Road (Reiman to Plant Road)	0.22 mile	Road/bicycle trail improvements	Bicycle trail construction	Unknown
LaFranchi Retail	8779 Conde Lane	0.30 mile	Non-residential	8.5 ksf ¹ retail	8.5 ksf ¹
Coate Minor Subdivision #3	450 Duncan Drive	0.31 mile	Residential	Single-family detached	Unknown
Coate Minor Subdivision #4	475 Ginny Drive	0.29 mile	Residential	Single-family detached	Unknown
Faccini Subdivision	365 Patrick Lane	0.04 mile	Residential	Add duplex	Unknown
Town Green Village 5	8900 Bell Road	0.21 mile	Mixed use development	66 single-family detached (condos) over 30.4 ksf ¹ retail	Unknown
Windsor Mill	8777 Bell Road	0.02 mile	Mixed use development	53 single-family detached, 23 live/work townhomes, 127 single-family attached	Unknown
Village at Windsor	8975 Conde Lane	0.18 mile	Mixed use development	16 single-family detached (condos) over 12.1 ksf ¹ retail	Unknown
Windsor Gateway	9397 Old Redwood Highway	0.55 mile	Mixed use development	152 single-family detached (condos) over 40 ksf ¹ retail	Unknown

¹ksf = thousand square feet

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

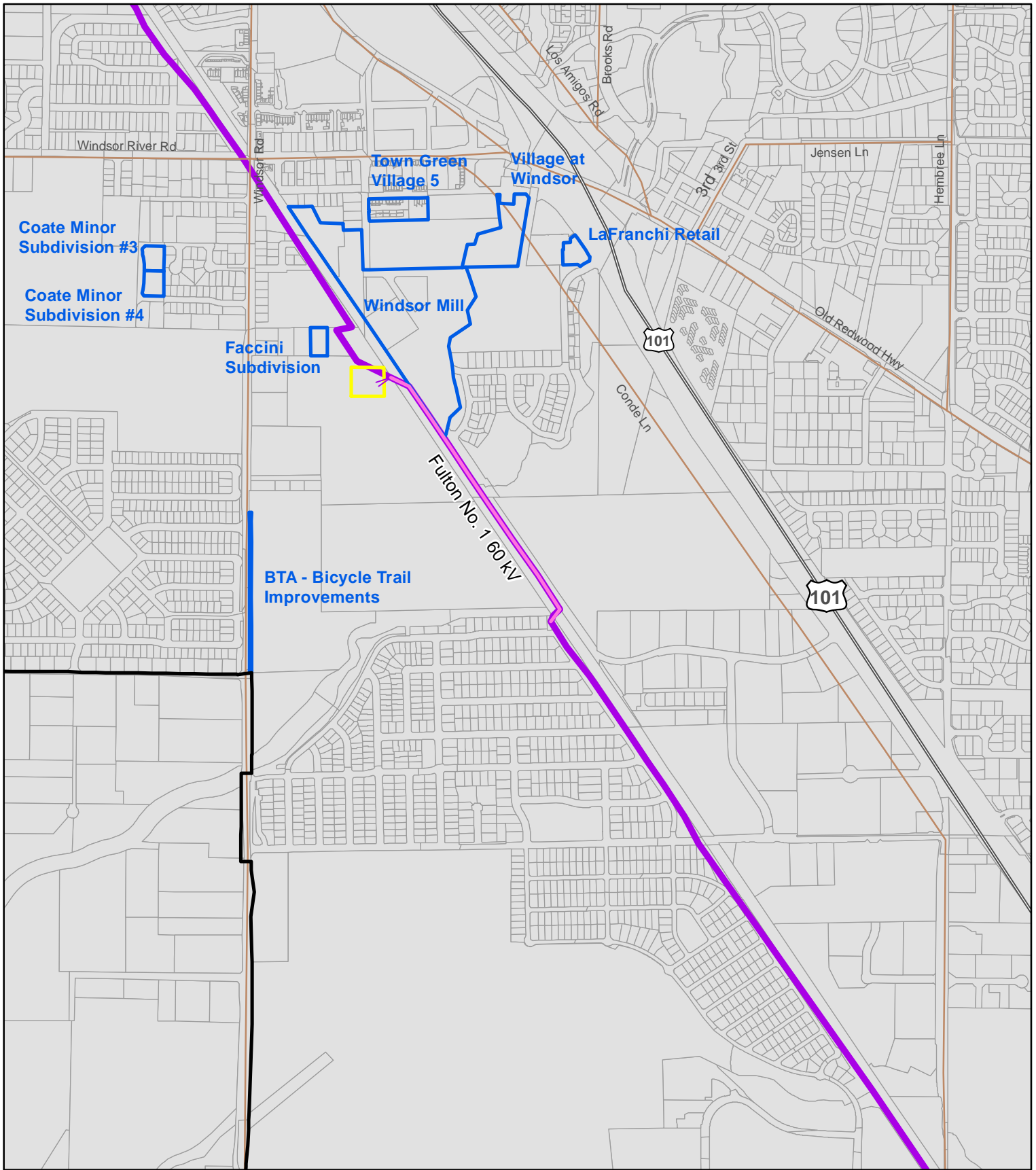


FIGURE 5.12-1
 Planned Projects - Site 3
Windsor Substation Project

1:12,000

0 250 500 1,000
 ft



- 12 kV Reconductoring
- Proposed 115 kV Loop (Initially 60 kV Loop)
- Fulton No. 1 60 kV
- Site 3
- Developments
- Windsor Town Limit

BACK OF FIGURE 5.12-1

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5.12.2.2 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 4.6×10^{-3} percent or less of the County's annual total for greenhouse gases (GHG), and for substation operations and maintenance are 1.7×10^{-2} 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.

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 gases reduction measures would be implemented to reduce already less-than-significant GHG emissions.

5.12.2.3 Biological Resources

Removal of ruderal vegetation at Site 3 for construction and operation of the substation would not contribute to a significant cumulative impact as no established sensitive habitat exists in the weedy and grassy areas on the site. Site 3 provides discontinuous habitat to other distant areas as it is bordered by a fire station on the west, to the east by the railroad, to the south by facilities within the public works yard, and to the north by Patrick Lane and seven residences, which also make it less desirable for wildlife species. The drainage ditches and wetland on and/or adjacent to the site do not provide habitat for special-status wildlife species; however, they could provide habitat for special-status plants. Wastewater treatment storage ponds and drainages along the Fulton No. 1 60 kV Power Line contain suitable habitat for the northwestern pond turtle. Other special-status species, as discussed in Table 5.3-2 Special-status Wildlife Species with Potential to Occur in the Project Area, occupy drainages along the Fulton No. 1 60 kV Power Line. These aquatic habitats, as well as other drainages and wetlands at Site 3 and along the Fulton No. 1 60 kV Power Line, could be affected if hazardous materials inadvertently spill into them.

Implementation of the APMs discussed in Sections 6.6 and 10.5 of the PEA, and in Section 3.7.4 of this document, including the installation of the Spill Prevention Countermeasure and Control 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 site and associated work along the Fulton No. 1 60 kV Power Line would be less than significant.

Tree trimming would be avoided when feasible along the Fulton No. 1 60 kV Power Line; however, tree trimming would be performed to meet clearances as required for safety under General Order 95. If tree removal is necessary on any of the private properties adjacent to the Fulton No. 1 60 kV Power Line, PG&E would coordinate appropriately with property owners.

Additionally, PG&E would coordinate with the Town of Windsor regarding mature and historical oak tree protection and apply for any necessary ministerial Tree Removal Permits. The project's contribution to any cumulative impact on special-status species would be less than significant with implementation of the species-specific measures found in Section 6.6 of the PEA.

5.12.3 References

References for this section are the same as those listed in Section 15.4 of the PEA, with the following additions:

Jones, Rick, Town of Windsor Planning Department. Personal communication with K. Quidachay, GANDA February 2011. 707-838-5331 and by email on February 25, 2011.

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