3.9 HYDROLOGY AND WATER QUALITY

3.9.1 INTRODUCTION

This section describes existing conditions and potential impacts on hydrological resources, water quality, and flood control as a result of construction, operation, and maintenance of the project. The analysis concludes that impacts will be less than significant in these areas; the implementation of Applicant-Proposed Measures (APMs) described in Section 3.9.4.2 will further reduce less-than-significant impacts. The project's potential effects on hydrology, water quality, and flood control were evaluated using the significance criteria set forth in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. The conclusions are summarized in Table 3.9-1 and discussed in more detail in Section 3.9.4.

Table 3.9-1: CEQA Checklist for Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

3.9.2 REGULATORY BACKGROUND AND METHODOLOGY

3.9.2.1 Regulatory Background

Federal

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) is responsible for determining flood elevations and floodplain boundaries based on United States Army Corps of Engineers (USACE) studies. FEMA is also responsible for distributing the Flood Insurance Rate Maps used in the National Flood Insurance Program (NFIP) (42 United States Code [USC] Ch. 50, Section 4102). These maps identify the locations of special flood hazard areas, including 100-year floodplains. FEMA allows non-residential development in the floodplain; however, FEMA has criteria to "constrict the development of land which is exposed to flood damage where appropriate" and "guide the development of proposed construction away from locations which are threatened by flood hazards." Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR), enabling FEMA to require municipalities that participate in the NFIP to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

Section 10 of the Rivers and Harbors Appropriation Act of 1899

This federal law (33 USC Section 401, et seq.) makes it unlawful to obstruct or alter a navigable river or other navigable water of the U.S. Construction, excavation, or deposition of materials in, over, or under such waters, or any work that would affect the course, location, condition, or capacity of those waters requires a Section 10 permit and approval from the USACE.

Clean Water Act Section 404

Section 404 of the federal Clean Water Act (CWA) (33 USC Section 1251 et seq.) requires a permit from the USACE for the discharge of dredged or fill material into "waters of the United States," which include rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water

at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). The limits of non-tidal waters extend to the Ordinary High-Water Mark or to the limit of adjacent wetlands. The U.S. Environmental Protection Agency (USEPA) also has authority over wetlands and may veto a USACE permit under CWA Section 404(c).

Clean Water Act Section 303(d)

CWA Section 303(d) (33 USC Section 1313) requires states, territories, and authorized Tribes to develop a list of waters within its boundaries that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law further requires that these jurisdictions establish priority rankings for water on the lists and develop action plans, called Total Maximum Daily Loads, to improve water quality (SWRCB 2012). The Regional Water Quality Control Boards (RWQCBs) and the State Water Resources Control Board (SWRCB) implement this federal regulation in California.

State

Clean Water Act Section 401

CWA Section 401 (33 USC Section 1251 et seq.) requires states to certify whether projects subject to federal permits meet state water quality standards. In California, the RWQCBs and SWRCB issue such certifications. The project is under the jurisdiction of the North Coast RWQCB. If the project requires a USACE permit, a Water Quality Certification will be required.

Clean Water Act Section 402

Under CWA Section 402 (33 USC Section 1251 et seq.), the National Pollutant Discharge Elimination System (NPDES) controls water pollution by regulating point sources of pollution to waters of the U.S. The SWRCB administers the NPDES permit program in California. Projects that disturb 1 or more acres of soil are required to obtain coverage under the state NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. A Storm Water Pollution Prevention Plan (SWPPP) must be developed and implemented for each project covered by the general permit. The SWPPP must include Best Management Practices (BMPs) that are designed to reduce potential impacts to surface water quality during project construction and operation.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (California Water Code, Division 7), the SWRCB has authority over state waters and water quality. "Waters of the state" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050[e]). Examples include, but are not limited to rivers, streams, lakes, bays, marshes, mudflats, unvegetated and seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked baylands, seasonal wetlands, and riparian woodlands. The RWQCBs have local and regional authority. The North Coast RWQCB has authority over the project area.

The RWQCBs prepare and periodically update Basin Plans (water quality control plans), which establish:

- beneficial uses of water designated for each protected waterbody;
- water quality standards for both surface water and groundwater; and
- actions necessary to maintain these water quality standards.

Projects that will discharge waste to waters of the state must file a report of waste discharge with the appropriate RWQCB, if the discharge could affect the quality of waters of the state (Article 4, Section 13260). The RWQCB will issue waste discharge requirements or a waiver of the waste discharge requirements for the project. The requirements will implement any relevant water quality control plans that have been adopted, and must take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose (Article 4, Section 13263).

Fish and Game Code Section 1602

This section of California law protects the natural flow, bed, channel, and bank of any river, stream, or lake under the jurisdiction of the California Department of Fish and Wildlife (CDFW). Project plans must be submitted to CDFW that are sufficient to indicate the nature of a project for construction if the project would:

- divert, obstruct, or change a streambed;
- use material from the streambeds; or
- result in the disposal or deposition of debris, waste, or other material containing crumbed, flaked, or ground pavement where it can flow into a stream.

For projects impacting the bed, bank, or flow of a water under CDFW jurisdiction, applicants must submit a Notification of Lake or Streambed Alteration to the CDFW so that the department may issue an agreement if staff determines that the activity may substantially adversely affect fish and wildlife resources.

Local

Because the CPUC has exclusive jurisdiction over project siting, design, and construction, the project is not subject to local discretionary regulations. PG&E will secure ministerial permits, as required.

The Sonoma County Permit and Resource Management Department requires and enforces standards contained in the California Building Code related to grading and construction, including those that may directly or indirectly affect surface water quality by contributing to erosion or siltation, or alter existing drainage patterns.

3.9.2.2 Methodology

Information on surface water and groundwater in the project area was obtained from published studies prepared by state, county, and local water agencies. Potential impacts on surface water and groundwater were evaluated by considering the initial construction activities and the

long-term operation of the project. PG&E will comply with all applicable federal, state, and local regulatory requirements that protect surface water and groundwater.

3.9.3 ENVIRONMENTAL SETTING

3.9.3.1 Regional Setting

The project site is located in the North Coast Region, which is separated into two natural drainage basins, the Klamath River Basin and the North Coastal Basin. The North Coastal Basin is bounded on the west by the Pacific Ocean, on the north by the Klamath River, on the east by the Sacramento Valley, and on the south by the Marin-Sonoma area. Most of the basin consists of rugged, forested coastal mountain dissected by six major river systems, including the Russian River. Surface water storage areas in the Russian River hydrologic unit include Lake Mendocino, which is formed by Coyote Dam, and Lake Sonoma, which is formed by Warm Springs Dam (North Coast RWQCB 2011).

The project site elevation ranges from approximately 110 to 600 feet above mean sea level from Fulton Substation in the south to points along the Shiloh-Fitch segment, respectively. The surface topography is relatively flat along the Fulton-Shiloh segment, and climbs in elevation into the foothills that border the eastern margin of the Santa Rosa Valley Plain.

3.9.3.2 Climate

Sonoma County's weather is typical of Mediterranean climates, with a rainy period (generally October through March) followed by long, dry months. Annual precipitation ranges from approximately 36 inches to 40 inches. Large, heavy winter storms may inundate creeks and streams, causing flooding in local communities. Periodic droughts may stress groundwater and surface resources.

3.9.3.3 Surface Water

The project is located within two watersheds—the northern third of the project is located within Guerneville Watershed and the southern two-thirds are located within Mark West Creek Watershed. Both watersheds collect water from the foothills of the Santa Rosa Plain and drain across the plain into the Russian River. The watersheds drain a collective area of approximately 68 acres. Several creeks cross the project area, as described further below. With the exception of Mark West Creek, all of the creeks crossed by the project are intermittent. For a description of wetlands in the project area, refer to Section 3.4, Biological Resources.

Mark West Creek

Mark West Creek is an approximately 30-mile-long stream, with its headwaters in the Mayacamas Mountains of Sonoma County. The creek crosses the Fulton-Shiloh segment approximately 900 feet south of Old Redwood Highway, as shown in Figure 3.9-1: Hydrologic Features Map. The creek channel at the crossing site is naturally maintained with a wide riparian corridor. Downstream of the crossing, Mark West Creek travels approximately 6 miles to its confluence with Laguna de Santa Rosa. From there, the creek flows north to a confluence with Windsor Creek, and the flows westward, entering the Russian River east of Steelhead Beach Regional Park. Altogether, Mark West Creek drains an approximately 45-square mile area.

Figure 3.9-1: Hydrologic Features Map

Mark West Creek beneficial uses include water supply for municipal, domestic, agricultural, and industrial uses, groundwater recharge, freshwater replenishment, and recreational use. It also provides warm and cold freshwater habitat for aquatic species, including spawning and migratory habitat. Mark West Creek is listed by the state as a 303(d) impaired water for sediment and warm temperatures.

Windsor, Pool, and Wright Creeks, and Unnamed Tributaries

The project crosses a network of creeks that drain the western slopes of the foothills of the Santa Rosa Plain into Mark West Creek. Creek elevations range from approximately 1,000 feet in their headwaters to approximately 50 feet at their mouths. Windsor Creek is the primary tributary to Mark West Creek in the project area. Windsor Creek and its tributaries drain an area measuring approximately 26 square miles. Pool Creek is one of Windsor Creek's major tributaries. Wright Creek is, in turn, a tributary of Pool Creek. All three creeks and their tributaries experience intermittent flow.

Russian River

The Russian River is an approximately 110-mile-long river with its headwaters in the Laughlin Range in Mendocino County. The existing Fitch Mountain Substation is located south of an approximately 250-foot-wide area of woodland on the south bank of the river. The Russian River flows generally south and west, draining approximately 1,145 square miles of Sonoma and Mendocino counties to the Pacific Ocean. The Russian River's beneficial uses include water supply for municipal, domestic, agricultural, and industrial uses; groundwater recharge; freshwater replenishment; and recreational use. It also provides warm and cold freshwater habitat for aquatic species, including spawning and migratory habitat. The Russian River is listed by the state as a 303(d) impaired water for sediment and warm temperatures.

Ponds and Reservoirs

Twenty ponds and three privately-owned reservoirs are located within 0.5 mile of the project. Most of these water storage areas are used for agricultural purposes and contain water throughout the year. Ponds in Foothill Regional Park are created by a dam on Windsor Creek, and are maintained for water storage and flood control.

3.9.3.4 Groundwater

The southern half of the project is located in the northern half of the Santa Rosa Plain Subbasin of the Santa Rosa Valley. The Santa Rosa Valley occupies a northwest-trending structural depression in the southern part of the Coast Ranges of northern California. The Santa Rosa Plain Subbasin is bounded on the northwest by the Russian River and flanked on the western boundary by the mountain of the Mendocino Range. The subbasin is drained principally by Santa Rosa and Mark West creeks. The California Department of Water Resources considers the Santa Rosa Plain Subbasin, as a whole, to be roughly in balance, with increased groundwater levels in the northeast, where the project is located.

The subbasin has one main water-bearing unit (Merced Formation) and several units with lower water-bearing capacities (Glen Ellen Formation and Alluvium). Because of the high degree of faulting in the subbasin, water-bearing materials tend to be discontinuous and isolated in lenses.

The project overlaps the Glen Ellen Formation, which consists of partially cemented beds and lenses of poorly silted gravel, sand, silt, and clay. The unit crops out in favorable areas and has moderate permeability, so recharge may occur fairly quickly. The Glen Ellen Formation is tapped for domestic and some irrigation use. Although few wells in the Santa Rosa Plain Subbasin contain constituents over the recommended concentration for drinking water, many wells produce water with aesthetic problems, such as high hardness, color, and taste. Overall, however, the quality of groundwater is considered good.

The project is also located within the Santa Rosa Plain Groundwater Management Plan Area. The Santa Rosa Plain Groundwater Management Plan identifies five geologic units of Cenozoic age that form the area's primary aquifers, including three crossed by the project: (1) Quaternary Alluvium, (2) Glen Ellen Formation, and (3) Sonoma Volcanics.

3.9.3.5 Flood Potential

The Russian River is located approximately 250 feet north of Fitch Mountain Substation. Approximately 0.2 acre in the southeastern corner of the substation property is located within an area designated by FEMA as a 100-year flood zone. FEMA has designated floodways[1] (Zone AE) on the Russian River north of Fitch Mountain Substation; however, the substation is not located within the floodway. Mark West Creek—which is managed as a natural channel in Zone 1A of the Sonoma County Water Agency's Stream Maintenance Program—has associated 100-year flood zones. However, FEMA Flood Insurance Rate Maps indicate that the project poles are not located within a flood hazard area.

3.9.4 APPLICANT-PROPOSED MEASURES AND POTENTIAL IMPACTS

The following sections describe significance criteria for hydrology and water quality impacts derived from Appendix G of the CEQA Guidelines, provide APMs, and assess potential project-related construction and operational hydrology and water quality impacts.

3.9.4.1 Significance Criteria

According to Section 15002(g) of the CEQA Guidelines, "a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." As stated in Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. Per Appendix G of the CEQA Guidelines, the potential significance of project impacts related to hydrology and water quality were evaluated for each of the criteria listed in Table 3.9-1, as discussed in Section 3.9.4.3.

[1] Floodways are areas of the floodplain that should be kept free of obstructions and development that would impede floodwater movement downstream.

3.9.4.2 Applicant-Proposed Measures

PG&E will implement the following APMs:

APM WQ-1: Stormwater Pollution Prevention Plan

PG&E shall file a notice of intent with the SWRCB and the North Coast RWQCB for coverage under the General Construction Storm Water Permit, and shall prepare and implement a SWPPP in accordance with General Order No. 2009-0009-DWQ. Implementation of the SWPPP shall help stabilize disturbed areas and reduce erosion and sedimentation. A monitoring program shall also be established to ensure that the prescribed BMPs are followed during project construction. A qualified SWPPP practitioner shall oversee the implementation of the SWPPP and associated BMPs.

The following measures are generally drawn from the permit and shall be included in the SWPPP prepared for the construction of the project:

- All BMPs will be on site and ready for installation before the start of construction activities.
- BMPs shall be developed to prevent the acceleration of natural erosion and sedimentation rates.
- Prior to conducting clearing activities during the wet season and before the onset of winter rains or any anticipated storm events, erosion-control measures shall be installed. Temporary measures such as silt fences or wattles, which are intended to minimize sediment transport from temporarily disturbed areas, shall remain in place until disturbed areas have stabilized.

APM WQ-2: Best Management Practices Inspection

All BMPs will be inspected on a weekly basis, and at least once every 24-hour period before, during, and after extended storm events. BMPs will be inspected as described in the SWPPP, maintained on a regular basis, and replaced as necessary throughout the course of construction. For each inspection required, an inspection checklist will be completed using a form, as described in Attachment C of General Permit 2009-0009-DWQ. This checklist will remain on site with the SWPPP.

APM WQ-3: Wetland and Drainage Avoidance

To avoid and minimize travel disturbance to wetlands and drainages, temporary materials such as fiberglass mats, steel plates, or temporary bridges will be placed across water features during project access.

APM WQ-4: Vehicle Maintenance

Vehicle maintenance waste, including used oils and other fluids, will be handled and disposed of properly. Fuels and lubricating oils for vehicles and heavy equipment will not be

stored or transferred within 100 feet of any waterbodies, unless otherwise isolated from waterbodies by secondary containment.

3.9.4.3 Potential Impacts

Project impacts related to hydrology and water quality were evaluated against the CEQA significance criteria, as discussed below. This section evaluates potential project impacts from the construction phase and the operation and maintenance phase. For impacts on federally protected wetlands and other sensitive natural communities, refer to Section 3.4, Biological Resources.

The project includes reconductoring a 60 kV power line and 230 kV transmission line between Fulton Substation and Fitch Mountain #1 Tap. The operation and maintenance activities required for the reconductored power and transmission lines will not increase from those currently required for the existing system; thus, no operation-related impacts related to hydrology and water quality will occur. Therefore, the impact analysis is focused only on construction activities that are required to install the new conductor, replace and remove poles, perform minor substation modifications, and establish required access and work areas, as described in Chapter 2.0, Project Description.

a) Would the project violate any water quality standards or waste discharge requirements?
Less-than-Significant Impact

Construction-related impacts on water quality have the potential to release fuels or other hazardous materials near waters, and increased erosion caused by grading or vegetation clearing may lead to increased sedimentation in adjacent waters. Vegetation may need to be cleared or mowed to improve existing access roads or establish overland access routes, work areas, pull sites, or landing zones for construction and to reduce fire risk. In some instances, minor grading also may be needed to improve construction work areas or existing access roads. The project has the potential to temporarily adversely affect water quality as a result of erosion and subsequent sedimentation that can result from the increased use of off-road vehicles or earth-disturbing activities.

Surface water features within the biological/wetland survey area include Mark West Creek, Pool Creek, Wright Creek, Windsor Creek, seasonal swales/wetlands, drainage ditches, and roadside ditches. See Figure 3.4-1: Vegetation Communities in Section 3.4, Biological Resources, for the locations of waters and wetlands. Construction-related impacts on water quality have the potential to result from several different sources. Among these sources is contamination from fuels or other hazardous materials, and increased erosion caused by grading or vegetation clearing that leads to increased sedimentation. APMs have been incorporated into the proposed project design in order to minimize the potential for erosion, sedimentation, and/or accidental spills of hazardous materials. Applicable APMs are summarized as follows:

- APM HM-1 requires all construction workers to be trained to appropriately implement erosion- and sediment-control measures.
- APM WQ-1 requires development of a SWPPP and that BMPs be in place prior to the start of construction.

- APM WQ-2 requires that all BMPs be regularly inspected to ensure effectiveness and be inspected and repaired, as needed, following precipitation events.
- APM WQ-3 requires feasible avoidance of wetlands, swales, and drainages during construction to minimize the potential of direct impacts on these surface water features.
- APM WQ-4 requires that potentially hazardous materials used during construction are properly handled and disposed of to avoid the potential for such materials to result in water quality degradation.

PG&E will assess the risk to water quality based on site-specific soil characteristics, slope, and the construction schedule, and will develop a SWPPP that addresses potential water quality concerns. The SWPPP will specify measures for each activity that has the potential to degrade surrounding water quality through erosion, sediment runoff, and the presence of other pollutants. These measures will be implemented and monitored throughout the project by a qualified SWPPP practitioner (QSP).

Accidental releases of hazardous materials that are used during construction—such as diesel fuel, hydraulic fluid, or oils and grease—have the potential to occur. This potential impact and associated APMs are discussed in Section 3.8, Hazards and Hazardous Materials. With implementation of these measures, potential construction-related impacts associated with water quality degradation that could result in violation of a water quality standard or waste discharge requirement will be less than significant.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level? *No Impact*

Water used during project-related construction activities will be limited to that applied for dust control and fire suppression. A water truck, typically with a capacity of 4,000 gallons, will be available to support project construction activities and dust suppression. Water could also be conveyed to the worksites via a truck with portable tanks. The water is expected to be obtained from local municipal sources, which are typically supplied through groundwater. The project will not result in a substantial increase in impervious surfaces or other areas that could substantially interfere with groundwater recharge. All disturbed areas will be recontoured and revegetated. While tubular steel poles (TSPs) will add impervious areas for foundations, these foundations will be minimal in size, especially considering the groundwater recharge surrounding the TSP areas. The project's negligible water use during construction will not deplete or interfere with groundwater supply or recharge. The project will have no impact on groundwater or groundwater recharge.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or sedimentation on or off site)? *Less-than-Significant Impact*

The project has been designed to minimize impacts on waterways, as well as to avoid substantially altering the drainage patterns of the project work areas or altering the course of a stream or river. Furthermore, because major grading or contouring will not be required, the

project will not result in the substantial alteration of existing drainage patterns. Minor temporary grading may be needed in select locations to improve project access roads or establish work areas to accommodate equipment; however, this grading will be limited in scope and will not substantially alter site drainage or result in substantially increased erosion or siltation. Therefore, the impact will be less than significant.

To further reduce this impact, appropriate measures will be implemented. The project-specific SWPPP described in APM WQ-1 will include BMPs—such as such as silt fences, wattles, straw bales, berms, fiber filtration tubes, sand/gravel bags, and gravel—to address erosion, sedimentation, and runoff. The project will not create or contribute to runoff water that will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. After project construction, disturbed areas will be returned to approximate pre-project conditions, unless otherwise requested by the landowner.

Therefore, the temporary and short-term effects of erosion or siltation from site runoff will be addressed and the project will have less-than-significant impacts on drainage and runoff.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site? *Less-than-Significant Impact*

The project will not substantially alter existing drainage patterns, create impervious surfaces or otherwise cause increased surface water runoff rates, or require substantial modification of any upland sites that would increase the potential for any on- or off-site flooding. In some locations, culverts may be replaced or installed within drainage channels or small creeks to accommodate the weight or size of construction equipment. Installing an undersized culvert has the potential to restrict water flow, resulting in localized flooding. In instances where a culvert may need to be installed or replaced, it will be sized accordingly to ensure that it can accommodate typical anticipated flows; therefore, impacts will be less than significant.

e) Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? *Less-than-Significant Impact*

Activities associated with project construction, including grading the access roads, will have a less-than-significant impact on stormwater drainage systems and will not provide substantial additional sources of polluted runoff. Following construction, the project site will not create or contribute to runoff water that will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The implementation of APMs WQ-1, WQ-3, HM-1, and HM-2 will further reduce potential less-than-significant impacts.

f) Would the project otherwise substantially degrade water quality? *No Impact*

No additional impacts on water quality beyond those previously described are anticipated. Therefore, the project will not substantially degrade water quality and no impact will occur.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? *No Impact*

The project will not involve the construction of housing; therefore, no impact will occur.

h) Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows? *Less-Than-Significant Impact*

The existing control building at Fitch Mountain Substation, which is located within a 100-year flood hazard area, will be replaced as part of the project. The control building will be replaced in the same location and will be placed to avoid increased flooding onto adjacent roadways and properties area. Thus, the impact will be less than significant.

i) Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? *Less-Than-Significant Impact*

The project is not located within the Warm Springs Dam or Coyote Valley Dam failure inundation zones. Several dams are located along Windsor Creek, including one in Foothill Regional Park. However, project poles in the vicinity of Windsor Creek are located on ridge lines and would not be subject to inundation as a result of the failure of these dams. Likewise, project poles are not located within a 100-year flood plain. Expansion of the Fitch Mountain Substation control building footprint will occur within the 100-year flood plain; however, the structure will be placed to avoid increased flooding onto roadways and properties. Therefore, the impact will be less than significant.

j) Would the project cause inundation by seiche, tsunami, or mudflow? *No Impact*

Given the project's distance from any bodies of water subject to tsunami, the project will not expose people or structures to hazards associated with tsunami. Although the project crosses several creeks, these waterbodies are not subject to inundation due to seiches because of their small size and non-confined nature. The project will not cause a mudflow because construction, operation, and maintenance will not interfere with or affect these creeks. Therefore, no impact will occur.

3.9.5 REFERENCES

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