D.9 Hydrology and Water Quality

This section evaluates the potential for the South Bay Substation Relocation Project (Proposed Project) to impact hydrology and water quality in the project area. Section D.9.1 provides a summary of the existing hydrology and water quality conditions present in the vicinity of the Proposed Project. Applicable regulations, plans, and standards are listed in Section D.9.2. Potential impacts and mitigation measures for the Proposed Project are presented in Section D.9.3; and alternatives are described and discussed in Section D.9.4. Mitigation monitoring, compliance, and reporting are discussed in Section D.9.5.

D.9.1 Environmental Setting for the Proposed Project

The hydrology and water quality analysis in this section is based on the review of San Diego Gas & Electric's (SDG&E's) Proponent's Environmental Analysis (PEA) (SDG&E 2010a) and data responses (SDG&E 2010b), and a review of relevant governmental plans and policies regarding stormwater and water quality. SDG&E performed preliminary hydrologic and drainage calculations using the Rational Method for both the existing and proposed conditions based on the conceptual grading plan.

Climate Characteristics

The weather in the San Diego region is influenced by the Pacific Ocean and its semipermanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. Most of the region's precipitation falls from November to April, with infrequent (approximately 10%) precipitation during the summer. The average seasonal precipitation along the coast is approximately 10 inches.

Surface Water

The Proposed Project area is located within the San Diego Basin (Region 9) of the California Regional Water Quality Control Board (RWQCB). According to the Water Quality Control Plan for the San Diego Basin (9), the Proposed Project area is located in the Sweetwater (909.11) and Otay (910.20) Hydrologic Units (Figure D.9-1, Hydrology and Flood Zone Map) (CSWRB 1994). The Otay Hydrologic Unit encompasses approximately 160 square miles in southwest San Diego County (County). The major water bodies include the Upper and Lower Otay Reservoirs, Otay River, and the San Diego Bay. The watershed consists largely of unincorporated area but also includes portions of the City of Chula Vista (City) as well as other cities. The predominant land uses in the watershed are open space (67%) and urban/residential (20%).

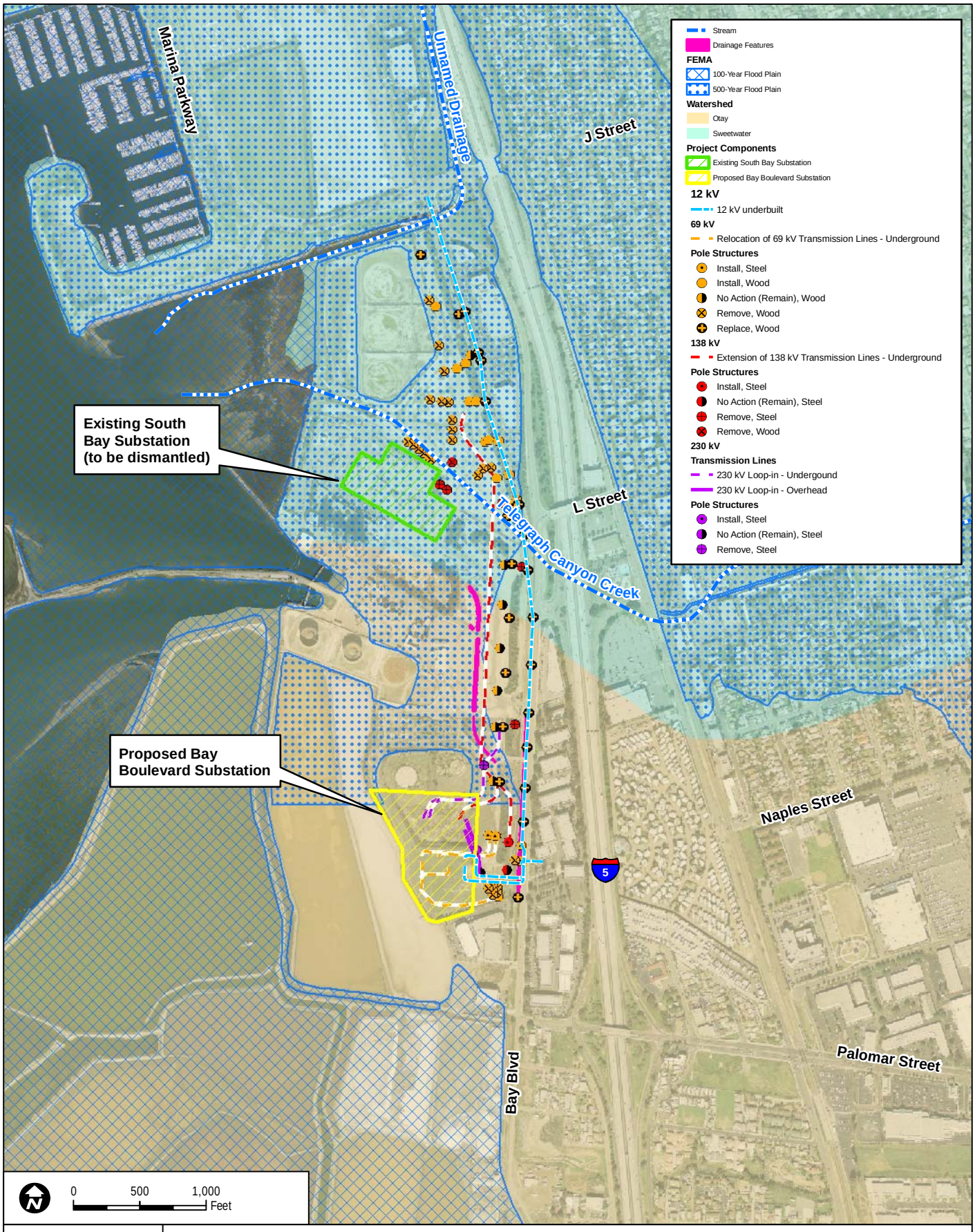
The Sweetwater Hydrologic Unit comprises three hydrologic areas: Lower Sweetwater, Middle Sweetwater, and Upper Sweetwater. The existing South Bay Substation is located within the Hydrologic Subarea of the Lower Sweetwater Hydrologic Area–Telegraph within the Sweetwater Hydrologic Unit of the San Diego Basin. The urbanized lower portion of the Sweetwater watershed contains portions of Chula Vista as well as several other cities.

The Proposed Project is adjacent to the Western Salt Works salt crystallizer ponds, which are located within the southern section of San Diego Bay. The proposed Bay Boulevard Substation includes man-made berms that were constructed as a secondary containment berm for the former liquefied natural gas (LNG) plant site. Stormwater flows on site are currently directed toward a concrete-lined ditch at the northwest corner of the site. This concrete-lined ditch conveys flows into the San Diego Bay located to the west. Drainage patterns on site also result in flows being conveyed to the southwest portion of the site; however, drainage from this area is prevented by the man-made berm along the perimeter of the former LNG site.

Surrounding the site are drainage channels including one located along the western limits of Bay Boulevard on the eastern side of the proposed Bay Substation site, as well as Telegraph Creek, which is located to the northwest of the existing South Bay Substation. Telegraph Creek is an approximately 50-foot-wide, concrete-lined channel that enters SDG&E's existing easement near the intersection of Bay Boulevard and L Street and continues northwest until draining into the San Diego Bay.

Groundwater

The Proposed Project is in the South Coast Hydrologic Region within the Otay Valley Groundwater Basin. The basin receives groundwater recharge from percolation of precipitation, stream-flow originating in the valley highlands, return of applied water, and rare releases from the Lower Otay Reservoir during flood conditions (CSWRB 2004). Regional groundwater flow in the vicinity of the Proposed Project site is to the west, toward San Diego Bay. The depth to groundwater in the project area is between 5 and 13.5 feet. Groundwater levels within the Proposed Project area are considered relatively stable, but groundwater depths may increase slightly during the summer dry months. The groundwater levels within the Proposed Project area can fluctuate slightly (generally less than 1 foot) with the tide of San Diego Bay (SDG&E 2010a). Water quality of the groundwater is rated marginal to inferior for domestic use in the coastal area because of high total dissolved solids (TDS) content and, therefore, is not used for drinking water supply. In addition, water is rated marginal to inferior for irrigation use for most of the basin because of high chloride concentrations (CSWRB 2004). Section D.8, Public Health and Safety, identifies that a recognized environmental condition (REC) was detected in groundwater located upgradient of the existing South Bay Substation site (SDG&E 2010c). The REC is attributed to an automobile junkyard located east of the substation site.



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SOURCE: Digital Globe 2008
SDG&E PEA 2010

FIGURE D.9-1

Hydrology and Flood Zone Map

South Bay Substation Relocation Project Draft EIR

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Water Quality

Water quality refers to the effect of natural and human activities on the composition of water. Water quality is expressed in terms of measurable physical and chemical qualities that can be degraded by urban runoff, illicit discharges, and even planned water use. It is generally agreed that urban runoff transported by municipal stormwater conveyance systems is one of the principal causes of water quality problems in most urban areas. Stormwater that accumulates on impervious surfaces, such as parking lots, roof tops, and streets, drains directly and indirectly to waters of the United States.

Within the San Diego River watershed, concerns with water quality can be attributed to increased levels of coliform bacteria, TDS, nutrients, petroleum chemicals, toxics, and trash. The source of these contaminants is urban runoff, agricultural runoff, mining operations, sewage spills, and sand and gravel mining. The major water quality constituents of concern for the Sweetwater watershed are coliform bacteria, trace metals, and other toxics whose source is predominantly from agricultural and urban runoff.

Under Section 303(d) of the Clean Water Act (CWA), the State Water Resources Control Board (SWRCB) is required to develop a list of water quality limited segments for jurisdictional waters of the United States. The waters on the list do not meet water quality standards; therefore, the RWQCB was required to establish priority rankings and develop action plans, called total maximum daily loads (TMDL), to improve water quality. The California Environmental Protection Agency (EPA) approved the San Diego RWQCB's 303(d) list of water quality limited segments in February 2009. The list includes pollutants causing impairment to receiving waters or, in some cases, the condition leading to impairment. San Diego Bay, within the project vicinity, was not listed as a 303(d) water body (RWQCB 2009).

Flooding

A 100-year flood event is a flood that has a 1% chance of being equaled or exceeded in any given year. The 100-year flood is the standard used by most federal and state agencies, and the National Flood Insurance Program is the standard for floodplain management. The project area is not located within a 100-year flood zone. Linear components associated with the 230 kV realignment, 138 kV extension, 69 kV realignment, and the South Bay Substation demolition are located within the 500-year flood zone. Refer to Figure D.9-1, Hydrology and Flood Zone Map, for the nearest flood zone.

D.9.2 Applicable Regulations, Plans, and Standards

Federal

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA) (33 U.S.C. 1251 et seq.). The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program, as authorized by Section 402 of the CWA, was established to control water pollution by regulating point sources that discharge pollutants into waters of the United States. In the State of California, the EPA has authorized the State SWRCB permitting authority to implement the NPDES program. In general, the SWRCB issues two baseline general permits: one for industrial discharges and one for construction activities. The Phase II Rule that became final on December 8, 1999, expanded the existing NPDES program to address stormwater dischargers from construction sites that disturb land equal to or greater than 1 acre.

Section 401 of the Clean Water Act

Section 401 of the CWA requires an applicant for a federal permit, such as the construction or operation of a facility that may result in the discharge of a pollutant, to obtain certification of those activities from the state in which the discharge originates. This process is known as the Water Quality Certification.

Section 404 of the Clean Water Act

Section 404 of the CWA established a permitting program to regulate the discharge of dredged or filled material into waters of the United States, which include wetlands adjacent to national waters. This permitting program is administered by the U.S. Army Corps of Engineers (ACOE) and enforced by the U.S. EPA.

Section 10 of the Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) requires the ACOE to authorize construction of any structure in or over navigable waters of the United States or obstruction or alteration in a navigable water. Structure or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, condition, or capacity of the water body. Navigable waters are defined as waters that are subject to the ebb and flow of the tide.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) (42 U.S.C. 201) was originally passed by Congress in 1974 to protect public health by regulating the public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources, including rivers, lakes, reservoirs, springs, and groundwater wells. The act authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The EPA states that established drinking water standards must be met, and water agencies must work together to enforce standards.

Through Title 40, Part 144, of the Code of Federal Regulations (CFR) (40 CFR 144), the SDWA prohibits any injection activity that could allow the movement of fluid-containing contaminants into underground sources of drinking water if the presence of that contaminant could cause a violation of any primary drinking water regulation under 40 CFR 142, or that would otherwise adversely affect public health. This regulation applies to Classes I, II, and III and allows the director to take emergency action if a known contaminant is present or is likely to enter a public water system or underground drinking water source.

State

Streambed Alteration Agreement

Sections 1601–1603 of the California Fish and Game Code require an agreement between the California Department of Fish and Game (CDFG) and a public agency proposing to substantially divert or obstruct the natural flow or effect changes to the bed, channel, or bank of any river, stream, or lake. The agreement is designed to protect the fish and wildlife values of a river, lake, or stream.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1967 (California Water Code, Section 13000 et seq.) requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect state waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for the project area are contained in the water quality control plan for the San Diego Basin.

State Water Resources Control Board

The SWRCB is responsible for issuing stormwater permits in accordance with the NPDES program. For projects disturbing one or more acres of land, the applicant must file a notice of intent (NOI) for coverage under the General Permit for Stormwater Discharges Associated with Construction Activity (General Permit) and prepare a Stormwater Pollution Prevention Plan (SWPPP) that specifies Best Management Practices (BMPs) to prevent pollutants from contacting stormwater and procedures to control erosion and sedimentation.

Regional Water Quality Control Board

The Proposed Project falls within the jurisdiction of the Region 9 RWQCB. Each RWQCB is responsible for water quality control planning within their region, often in the form of a basin plan. The RWQCB is also responsible for implementing the provisions of the General Permit, including reviewing SWPPPs and monitoring reports, conducting compliance inspections, and taking enforcement actions. In addition, the RWQCB may issue individual dewatering permits for discharges associated with construction projects.

Local

Chula Vista Municipal Stormwater Permit

In 1990, under authority of the CWA but prior to finalization of the NPDES Phase I regulations, the San Diego RWQCB issued its first municipal permit for the San Diego Region (Order 90-42). The "Municipal Stormwater Permit" named the 18 municipalities within San Diego County, including the City of Chula Vista, the County of San Diego, and the San Diego Unified Port District (Port District), as co-permittees. More recently, on January 24, 2007, the San Diego RWQCB adopted Order No. R9-2007-0001 for a new Municipal Stormwater Permit (MS4), which represents the second municipal permit issued to the County co-permittees. Under the Municipal Stormwater Permit, co-permittees must reduce to the maximum extent possible the pollutants discharged from their respective storm drain systems. Pursuant to the Municipal Permit issued by the San Diego RWQCB, the co-permittees are required to develop and

implement construction and permanent stormwater BMP regulations addressing stormwater pollution associated with private and public development projects. The Municipal Stormwater Permit outlines the individual responsibilities of the co-permittees including, but not limited to, the implementation of management programs, BMPs, and monitoring programs.

Each co-permittee must implement the requirements of the Municipal Stormwater Permit across two broad levels of responsibility. Co-permittees have responsibility for the water quality impacts of urbanization within their jurisdiction and their watershed(s). The Municipal Stormwater Permit reflects these two broad levels of responsibility, in that it requires implementation of a comprehensive Urban Runoff Management Plan (URMP) at the jurisdictional level and a Watershed Urban Runoff Management Program (WURMP) at the watershed level.

The City produced a JURMP designed to identify and prioritize local water-quality problems that can be attributed to urban runoff and then provide solutions to mitigate these problems. Also, in compliance with the Municipal Stormwater Permit, the City, the Port District, and the County, along with seven other municipalities, have submitted the Bay WURMP to the San Diego RWCQB. WURMPs look at land use as one component of watershed management and have identified impervious surfaces as a major component to water quality degradation. The Bay WURMP provides general information about the San Diego Bay watershed and the regulatory context within which the program was developed. It provides an assessment of the quality of the water of receiving bodies within the watershed. In addition, it identifies water quality problems and describes the actions local jurisdictions will take to address them.

City of Chula Vista Development Stormwater Manual

The Municipal Permit requires permittees to develop and implement a program that addresses urban runoff pollution as part of the planning process for public and private projects. Concurrent with the re-issuance of the NPDES Municipal Permit for San Diego County, the City has updated its Development Stormwater Manual (Manual) to address these urban runoff pollution issues within its jurisdiction. The Manual is intended to provide information to applicants for development, redevelopment, and public projects processed through the City on how to comply with the permanent and construction stormwater requirements. The Manual further guides project applicants through the process of selecting, designing, and incorporating stormwater BMPs into their projects. The Manual also contains a Standard Urban Stormwater Mitigation Plan (SUSMP), which addresses post-construction urban runoff pollution from new development and redevelopment projects meeting the “priority project” classifications. The purpose and goal of the City’s SUSMP would be achieved through site-specific controls and/or drainage-area-

based or shared structural treatment controls. Under the SUSMP, the City approves SUSMP project plan(s) as part of the development plan approval process for discretionary projects.

D.9.3 Environmental Impacts and Mitigation Measures

D.9.3.1 Definition and Use of Significance Criteria

Appendix G of the California Environmental Quality Act (CEQA) (14 CCR 15000 et seq.) suggests that a development project could have a significant impact on hydrology and water quality if the project would:

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
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) 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
i) Be at risk of inundation by seiche, tsunami, or mudflow.

D.9.3.2 Applicant Proposed Measures

The applicant did not propose any measures to reduce potential hydrology and water quality impacts associated with the construction and operation of the Proposed Project.

D.9.3.3 Bay Boulevard Substation

Impact HYD-1: Construction activity could degrade water quality due to erosion and sedimentation.

Construction of the Proposed Project has the potential to create short-term erosion and sedimentation impacts associated with grading and other construction activities. Erosion and subsequent sedimentation can adversely affect water quality by transporting pollutants (such as heavy metals, organic compounds, trash and debris, oil, and grease) to downstream resources. Because the project area is relatively flat, with no slopes greater than 2%, the erosion potential would be considered low during construction and very low once construction is complete. Even with slight relief, soil detachment, runoff, and subsequent sedimentation are possible. Similarly, wind erosion and sedimentation resulting from mud tracked onto roadways could occur. Sedimentation is considered a pollutant and can have adverse impacts on water quality resulting from increases in turbidity, nutrient loads, and aquatic habitat degradation.

Mitigation Measure HYDRO-1 would ensure that impacts associated with erosion and sedimentation would be mitigated to a less-than-significant level (Class II).

HYDRO-1 In accordance with the stormwater pollution prevention plan (SWPPP) to be prepared under the State General Construction Permit, work crews shall use erosion control measures during grading activities. Implementation of the SWPPP shall help stabilize soil in graded areas and waterways and reduce erosion and sedimentation. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during construction activities. The SWPPP shall be submitted to the California Public Utilities Commission prior to construction activities.

As identified in HYDRO-1, SDG&E would be required to prepare a SWPPP to comply with the NPDES General Construction Activity Stormwater Permit. Construction-period BMPs identified in the SWPPP may include silt fence, fiber rolls, street sweeping and vacuuming, storm drain inlet protection, stockpile management, solid waste management, stabilized construction entrance/exit, vehicle and equipment maintenance, desilting basin, gravel bag berm, sandbag barrier, material delivery and storage, spill prevention and control, concrete waste management, or other BMPs as contained in the latest edition of the California Stormwater Quality Association (CASQA) BMP handbook. This measure would ensure that the Proposed Project would comply with federal, state, and local water pollution control laws and that project-specific stormwater and erosion control plans are prepared and implemented.

Impact HYD-2: Construction activity could degrade water quality through spills of potentially harmful materials.

Accidental spills or release of potentially hazardous materials commonly used during construction could enter and pollute surface waters or groundwater. Section D.8, Public Health and Safety, provides a list of hazardous materials that are anticipated to be used during construction (Table D.8-2). Further, stormwater contact with trash and/or construction material could threaten nearby water quality. The primary receiving water for runoff from the project site is the San Diego Bay located to the west. Runoff from the site containing deleterious material could enter nearby drop-inlet structures and be transported to San Diego Bay via the municipal stormwater conveyance system. The potential for contaminates to infiltrate the groundwater basin could also occur.

As identified above under Impact HYD-1, SDG&E would be required to prepare an SWPPP to comply with the NPDES General Construction Activity Stormwater Permit. The SWPPP will include measures to minimize potential impacts to water quality from the use of hazardous materials during construction. The SWPPP includes a hazardous substance management plan that identifies the handling, storage, disposal, and emergency response procedures. As part of the hazardous substance management plan, hazardous materials spill kits would be maintained on site for small spills. Implementation of HYDRO-1 would protect both surface water and groundwater quality in the project area from accidental spills of hazardous materials occurring during construction. Therefore, impacts would be less than significant (Class II).

Impact HYD-3: Excavation could degrade groundwater quality in areas of shallow groundwater.

Due to the level of the groundwater in the project area (between 5 and 13.5 feet), construction may require localized dewatering activities during the following activities: trenching for underground duct bank utilities, removing concrete foundations associated with steel poles, removal of concrete foundations at the South Bay Substation, excavation activities associated with wood and steel pole foundations, and excavations for the jack-and-bore operations. The construction activities would typically occur at depths greater than 6 feet below grade, which would result in groundwater being encountered during these activities since groundwater is known to be present in the area between 5 and 13.5 feet below grade. Potentially significant impacts could occur to nearby water resources if sediment-laden water is discharged during excavation activities. Typically water produced by dewatering activities would be placed in a dewatering system and would either be discharged to a sanitary sewer system or in an upland location in accordance with San Diego RWQCB and the City's requirements. Mitigation Measures HYDRO-2a, HYDRO-2b, and HYDRO-2c include measures to ensure dewatering

activities would be completed consistent with local dewatering requirements and would reduce impacts to a less-than-significant level (Class II).

HYDRO-2a Prior to construction, SDG&E shall consult with the San Diego Regional Water Quality Control Board (RWQCB) to determine whether an individual discharge permit is required for dewatering at any of the project areas anticipated to encounter groundwater. A copy of the permit or a waiver from the RWQCB, if required, shall be provided to the California Public Utilities Commission prior to dewatering activities.

HYDRO-2b SDG&E shall submit to California Public Utilities Commission prior to construction a typical dewatering drawing that shall be implemented during dewatering activities. The drawing shall include the location of pumps within secondary containment, fuel storage areas, anticipated discharge point, scour protection measures, intake hose screening, and monitoring procedures to ensure that hazardous materials spills are addressed in a timely manner and discharge hoses are frequently inspected for leaks.

HYDRO-2c Creek and drainage crossings shall be conducted in a manner that does not result in a sediment-laden discharge or hazardous materials release to the water body. The following measures shall be implemented during jack-and-bore operations:

1. Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages.
2. Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of bank or wetland/riparian boundary for Telegraph Creek and the drainage along Bay Boulevard. Spoil shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention).
3. Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times.
4. Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion and temporary sediment barriers left in place until restoration is deemed successful.

In addition to the measures listed, Section D.8, Public Health and Safety, identifies that contaminated groundwater may be encountered during subsurface activity, and the trenching and excavation for the underground duct banks and transmission poles could result in an accidental release of previously unidentified hazardous materials, including contaminated soils and groundwater. To minimize potential groundwater impacts during construction activities, SDG&E would implement applicant proposed measure (APM)-HAZ-01 and Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a. With implementation of identified APM and mitigation measures, impacts would be reduced to less-than-significant levels (Class II).

Impact HYD-4: The project could deplete local water supplies.

Trenching activities for underground duct bank utilities, jack-and-bore operations, and wood and steel pole foundations may require localized dewatering. Due to excavation activities being short term and the fact that minimal amounts of dewatering are anticipated, there would be no substantial depletion or interference with groundwater supplies. Further, a minimal amount of water would be used during operation and maintenance activities for the Proposed Project. Water would primarily be used for irrigation of landscaping and other general operational uses. SDG&E would use water from permitted municipal sources and would not use groundwater during operation of the project facilities. Therefore, impacts would be less than significant (Class III).

Since the Bay Boulevard Substation site is currently vacant, development of the substation would result in an overall increase in impervious surface area (approximately 25%) compared with existing conditions (SDG&E 2010a). Other than where equipment foundations and asphalt access roads are located, the substation site would not be paved. Instead, a gravel base would be placed in areas between equipment foundations and access roads allowing stormwater to percolate into the ground. Groundwater supplies would not be substantially impacted as a result of the Proposed Project because pervious surfaces on site would continue to allow rainwater and stormwater to infiltrate the groundwater basin, similar to the preconstruction condition. Therefore, impacts would be less than significant (Class III).

Impact HYD-5: Creation of new impervious areas could cause increased runoff, resulting in flooding or increased erosion downstream.

Construction of the Proposed Project would remove the man-made berm on the LNG site, and approximately 25% of pervious surfaces within the limits of the man-made berm would be altered to that of impervious surfaces associated with the development of the Bay Boulevard Substation. The substation pad site would be raised to establish a higher elevation than the surrounding area with the central portion being the highest point of elevation to direct flows to the perimeter of the substation site via a slope of approximately 1%. The project proposes construction of a water quality basin along the western limits of the Bay Boulevard Substation,

as well as an engineered wetland to the south. Runoff would be directed toward the water quality basin to direct the surface runoff to the existing concrete-lined ditch at the northwest corner of the property. Drainage basins have been designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Therefore, impacts would be less than significant (Class III).

Impact HYD-6: Project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion, or expose people or structures to significant risk.

Proposed Project facilities are not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map). As a result, the project would not impact flood flows.

Impact HYD-7: Accidental releases of contaminants from project facilities could degrade water quality.

The project would change the existing drainage patterns by elevating the site. However, SDG&E proposes to construct a water quality basin along the western limits of the substation property to capture runoff. In addition, during construction there could be an accidental release of contaminated soil or groundwater. However, as discussed previously in Section D.9.3, APM-HAZ-01 and Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the project would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

As discussed in Section D.8, Public Health and Safety, during operation and maintenance of the Proposed Project, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However, implementation of Mitigation Measure HAZ-1d, which provides for the preparation and implementation of a Spill Prevention Control and Countermeasures (SPCC) plan, would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant. Therefore, impacts to water quality and waste discharge would be mitigated to a level that is considered less than significant (Class II).

Impact HYD-8: Where septic tanks are proposed, such facilities could impact local water quality.

The Bay Boulevard Substation does not include installing a septic system. Therefore, no impact would occur.

Impact HYD-9: Operation would expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam.

Construction and operation of the Proposed Project would not directly affect any changes to any levees or dams. In addition, the project would not expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam, and no dams would be affected. Therefore, impacts would be less than significant (Class III).

Impact HYD-10: Operation would be at risk of inundation by seiche, tsunami, or mudflow.

The Proposed Project's location on the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Based on the emergency planning tsunami inundation map, the western portion of the proposed Bay Boulevard Substation site is located within a tsunami inundation area. Historical tsunami data provided by the Alaskan Tsunami Warning Center indicate that since 1788 there have been only 10 tsunamis in Southern California (not all in San Diego) (California Emergency Management Agency 2009). Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Proposed Project area being relatively flat, the project would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

D.9.3.4 South Bay Substation Dismantling

Impact HYD-1: Construction activity could degrade water quality due to erosion and sedimentation.

Dismantling activities at the South Bay Substation have the potential to create short-term erosion and sedimentation impacts associated with grading and other construction activities. Erosion and subsequent sedimentation can adversely affect water quality by transporting pollutants (such as heavy metals, organic compounds, trash and debris, oil, and grease) to downstream resources. Sedimentation is considered a pollutant and can have adverse impacts on water quality resulting from increases in turbidity, nutrient loads, and aquatic habitat degradation. Mitigation Measure HYDRO-1 would ensure that impacts associated with erosion and sedimentation would be mitigated to a less-than-significant level (Class II).

Impact HYD-2: Construction activity could degrade water quality through spills of potentially harmful materials.

As discussed previously in Section D.9.3.3, accidental spills or release of potentially hazardous materials commonly used during construction could enter and pollute surface waters or groundwater. SDG&E would be required to prepare an SWPPP to comply with the NPDES General Construction Activity Stormwater Permit. The SWPPP will include measures to minimize potential impacts to water quality from the use of hazardous materials during construction. The SWPPP includes a hazardous substance management plan that identifies the handling, storage, disposal, and emergency response procedures. As part of the hazardous substance management plan, hazardous materials spill kits would be maintained on site for small spills. Implementation of HYDRO-1 would protect both surface water and groundwater quality in the project area from accidental spills of hazardous materials occurring during construction. Therefore, impacts would be less than significant (Class II).

Impact HYD-3: Excavation could degrade groundwater quality in areas of shallow groundwater.

As discussed previously in Section D.9.3.3, due to the level of the groundwater in the project area (between 5 and 13.5 feet), construction may require localized dewatering activities during removal of concrete foundations at the South Bay Substation. The construction activities would typically occur at depths greater than 6 feet below grade, which would result in groundwater being encountered during these activities since groundwater is known to be present in the area between 5 and 13.5 feet below grade. Potentially significant impacts could occur to nearby water resources if sediment-laden water is discharged during excavation activities. Typically water produced by dewatering activities would be placed in a dewatering system and would either be discharged to a sanitary sewer system or in an upland location in accordance with San Diego RWQCB and the City's requirements. Mitigation Measures HYDRO-2a, HYDRO-2b, and HYDRO-2c include measures to ensure dewatering activities would be completed consistent with local dewatering requirements and would reduce impacts to a less-than-significant level (Class II).

Impact HYD-4: The project could deplete local water supplies.

Upon completion of the demolition of the South Bay Substation, impervious surface area currently on the site (approximately 5.7%) would decrease with removal of the equipment pads and foundations (SDG&E 2010a). This increase in pervious surface area would allow stormwater to percolate into the groundwater basin; therefore, no impacts would occur.

Impact HYD-5: Creation of new impervious areas could cause increased runoff, resulting in flooding or increased erosion downstream.

The dismantling of the existing South Bay Substation includes the removal of all above-grade substation equipment and returning the site to an area that would be graded to match the surrounding topography. Therefore, no stormwater drainage facilities would be required because the area would be returned to a graded, pervious site; therefore, no impacts would occur.

Impact HYD-6: Project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion, or expose people or structures to significant risk.

Dismantling of the South Bay Substation would not be completed within a 100-year flood hazard area. Upon completion of dismantling of the existing South Bay Substation, no structures would be located on site; therefore, no impacts would occur.

Impact HYD-7: Accidental releases of contaminants from project facilities could degrade water quality.

During construction there could be an accidental release of contaminated soil or groundwater. However, as discussed previously in Section D.9.3, APM-HAZ-01 and Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the project would neither result in a prohibited discharge as defined in the RWQCB Basin Plan nor conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Upon completion of dismantling of the existing South Bay Substation, no further operation or maintenance activities would be required; therefore, no impacts would occur.

Impact HYD-8: Where septic tanks are proposed, such facilities could impact local water quality.

The dismantling of the South Bay Substation does not include installing a septic system. Therefore, no impact would occur.

Impact HYD-9: Operation would expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam.

Construction and operation of the Proposed Project would not directly affect any changes to any levees or dams. Additionally, the project would not expose people or structures to a significant

loss due to flooding as a result of the failure of a levee or dam, and no dams would be affected. Therefore, impacts would be less than significant (Class III).

Impact HYD-10: Operation would be at risk of inundation by seiche, tsunami, or mudflow.

As discussed in Section D.9.3.3, the Proposed Project's location on the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Proposed Project area being relatively flat, the project would not contribute to mudflows. As a result, it is reasonable to assume that there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

D.9.3.5 Transmission Interconnections

Impact HYD-1: Construction activity could degrade water quality due to erosion and sedimentation.

Construction of the transmission interconnection components has the potential to create short-term erosion and sedimentation impacts associated with grading and other construction activities. Erosion and subsequent sedimentation can adversely affect water quality by transporting pollutants (such as heavy metals, organic compounds, trash and debris, oil, and grease) to downstream resources. Sedimentation is considered a pollutant and can have adverse impacts on water quality resulting from increases in turbidity, nutrient loads, and aquatic habitat degradation. Mitigation Measure HYDRO-1 would ensure that impacts associated with erosion and sedimentation would be mitigated to a less-than-significant level (Class II).

Impact HYD-2: Construction activity could degrade water quality through spills of potentially harmful materials.

As discussed previously in Section D.9.3.3, accidental spills or release of potentially hazardous materials commonly used during construction could enter and pollute surface waters or groundwater. SDG&E would be required to prepare an SWPPP to comply with the NPDES General Construction Activity Stormwater Permit. The SWPPP will include measures to minimize potential impacts to water quality from the use of hazardous materials during construction. The SWPPP includes a hazardous substance management plan that identifies the handling, storage, disposal, and emergency response procedures. As part of the hazardous substance management plan, hazardous materials spill kits would be maintained on site for small spills. Implementation of HYDRO-1 would protect both surface water and groundwater quality

in the project area from accidental spills of hazardous materials occurring during construction. Therefore, impacts would be less than significant (Class II).

Impact HYD-3: Excavation could degrade groundwater quality in areas of shallow groundwater.

As discussed previously in Section D.9.3.3, due to the level of the groundwater in the project area (between 5 and 13.5 feet), construction may require localized dewatering activities during trenching for the underground duct bank, steel pole, or wood pole installation and jack-and-bore construction. The construction activities would typically occur at depths greater than 6 feet below grade, which would result in groundwater being encountered during these activities since groundwater is known to be present in the area between 5 and 13.5 feet below grade. Potentially significant impacts could occur to nearby water resources if sediment-laden water is discharged during excavation activities. Typically, water produced by dewatering activities would be placed in a dewatering system and would either be discharged to a sanitary sewer system or in an upland location in accordance with San Diego RWQCB and the City's requirements. Mitigation Measures HYDRO-2a, HYDRO-2b, and HYDRO-2c include measures to ensure that dewatering activities would be completed consistent with local dewatering requirements and would reduce impacts to a less-than-significant level (Class II).

Impact HYD-4: The project could deplete local water supplies.

As discussed previously in Section D.9.3.3, trenching activities for underground duct bank utilities, jack-and-bore operations, and wood and steel pole foundations may require localized dewatering. Due to excavation activities being short term and the fact that minimal amounts of dewatering are anticipated, there would be no substantial depletion or interference with groundwater supplies. Further, a minimal amount of water would be used during operation and maintenance activities for the Proposed Project. Water would primarily be used for washing insulators and completing repairs. SDG&E would use water from permitted municipal sources and would not use groundwater during operation of the project facilities. Therefore, impacts would be less than significant (Class III).

Impact HYD-5: Creation of new impervious areas could cause increased runoff, resulting in flooding or increased erosion downstream.

During construction of the transmission lines, temporary construction impacts would occur to existing drainage contours located near the transmission line right-of-way (ROW). However, all areas temporarily disturbed by construction activities would be restored to preconstruction conditions following completion of construction through reseeding of bare soils, as appropriate. Further, no streams or rivers would be altered during construction activities. Therefore, due to

the relatively flat topography of the project area and implementation of HYDRO-1, potential impacts would to drainage patterns and erosion and siltation would be less-than-significant (Class II).

Impact HYD-6: Project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion, or expose people or structures to significant risk.

Proposed transmission interconnection facilities are not located within a 100-year flood hazard area. Therefore, no new transmission structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map). As a result, the project would not impact flood flows.

Impact HYD-7: Accidental releases of contaminants from project facilities could degrade water quality.

Construction of the underground duct bank utilities, jack-and-bore operations, and excavation for the wood and steel pole foundations may require localized dewatering. As discussed previously in Section D.9.3, Mitigation Measures HYDRO-2a, -2b, and -2c would be implemented to reduce potential impacts from dewatering to less than significant (Class II).

Impact HYD-8: Where septic tanks are proposed, such facilities could impact local water quality.

The transmission interconnections do not include installing a septic system. Therefore, no impact would occur.

Impact HYD-9: Operation would expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam.

Construction and operation of the proposed transmission interconnections would not directly affect any changes to any levees or dams. Also, the project would not expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam, and no dams would be affected. Therefore, impacts would be less than significant (Class III).

Impact HYD-10: Operation would be at risk of inundation by seiche, tsunami, or mudflow.

As discussed previously in Section D.9.3.3, the Proposed Project's location is on the southern edge of San Diego Bay and is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. As a result, it is reasonable to assume that there is a

low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

D.9.4 Project Alternatives

D.9.4.1 Gas Insulated Substation Technology Alternative

Environmental Setting

Section D.9.1 describes the hydrology and water quality setting for the proposed South Bay Substation Relocation Project and surrounding areas. SDG&E's Gas Insulated Substation Technology Alternative would occur in the same hydrologic area and location as the proposed Bay Boulevard Substation; therefore, the existing hydrological conditions would be the same as described in Section D.9.1.

Environmental Impacts and Mitigation Measures

This alternative would use Gas Insulated Substation technology for the 69/230 kV switchyard which would be associated with the proposed Bay Boulevard Substation. All other project components as described for the Proposed Project would remain the same. Under this alternative, use of Gas Insulated Substation technology equipment would result in an approximate 4.4-acre footprint within the same location as the Proposed Project.

Impacts to hydrology and water quality resulting from construction and operation of the Gas Insulated Substation Technology Alternative would be the same as impacts anticipated from the proposed Bay Boulevard Substation component of the Proposed Project (refer to Section D.9.3). Therefore, all of the mitigation measures described in Section D.9.3 would apply to the Gas Insulated Substation Technology Alternative.

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The Gas Insulated Substation Technology Alternative would require approximately 4.4 acres for construction and operation of the substation, whereas the Proposed Project (Air Insulated Substation) would require approximately 9.7 acres. Potential impacts to water quality from erosion and sedimentation during construction (Impact HYD-1), groundwater quality (Impact HYD-3), and accidental release of containments from project facilities degrading water quality (Impact HYD-7) would be similar to the Proposed Project and mitigated with the mitigation measures (Class II) described in Section D.9.3.3 through D.9.3.5. All other impacts associated with the Proposed Project would be the same and apply to the Gas Insulated Substation Technology Alternative.

D.9.4.2 Tank Farm Site Alternative

Environmental Setting

The Tank Farm site is located approximately 250 feet north of the existing South Bay Substation, and therefore, the overall hydrologic setting identified in Section D.9.1 as located within the vicinity of the Proposed Project would also be applicable to this alternative. More specifically, San Diego Bay is located along the western limits of the Tank Farm Site Alternative; Telegraph Creek is located along the southern limits; and a vegetated drainage is located along the northern limits of the Tank Farm Site Alternative site that leads to San Diego Bay.

The environmental setting for the Air Insulated Substation and Gas Insulated Substation Alternatives at the Tank Farm site would be the same, and therefore, the environmental setting is not further discussed in Sections D.9.4.2.1 and D.9.4.2.2.

D.9.4.2.1 Tank Farm Site – Air Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

During construction of the proposed substation and associated improvements, grading would expose soils and remove vegetative cover that would compromise soil structure and increase the risk of erosion. Therefore, impacts to water quality as a result of soil erosion associated with this alternative would be similar to those described for the Proposed Project. However, as described in Section D.9.3.3, implementation of Mitigation Measure HYDRO-1 would mitigate these impacts by requiring that ground disturbance during construction be controlled through implementation of best management practices such as the use of hay bales, water bars, covers, sediment fences, and/or retention/settlement ponds that would be installed before extensive soil clearing and grading began. Potential impacts resulting from construction activity that could degrade water quality due to erosion and sedimentation would be mitigated to a level that is considered less than significant (Class II).

Potential impacts associated with construction activity potentially degrading water quality through spills of potentially harmful materials are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Tank Farm Site Alternative is located within close proximity to the Proposed Project. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measure HYDRO-1 (Class II).

Under this alternative, excavation would be located in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Tank Farm Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as

described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Potential impacts associated with potentially depleting local water supplies are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Tank Farm Site Alternative is located within close proximity and would result in the same ground disturbance as identified under the Proposed Project. Potential impacts would be less than significant (Class III).

Under this alternative, as under the Proposed Project, the introduction of impervious areas would result with project implementation. Potential impacts associated with creating new impervious areas that would increase runoff resulting in flooding or increased erosion downstream are expected to be the same as described in Section D.9.3.3 for the Proposed Project. Runoff would be directed toward water quality basins, and drainage basins would be designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Potential impacts would be less than significant (Class III).

The Tank Farm Site Alternative is not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map) or expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam. As a result, the Tank Farm Site Alternative would not impact flood flows.

Under this alternative, as under the Proposed Project, the Tank Farm Site Alternative has the potential to result in an accidental release of contaminants from project facilities that could degrade water quality. Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the Tank Farm Site Alternative would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Similar to the Proposed Project, during operation and maintenance of substation facilities, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However,

implementation of Mitigation Measure HAZ-1d would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant (Class II).

Under this alternative, the project would change the existing drainage patterns in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Tank Farm Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Under this alternative, as under the Proposed Project, the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Tank Farm Site Alternative area being relatively flat, the Tank Farm Site Alternative would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

Comparison to the Proposed Project

Hydrology and water quality impacts resulting from the construction and operation of the Tank Farm Site – Air Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.2.2 Tank Farm Site – Gas Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

Under this alternative, a similar development footprint and layout as identified for the Gas Insulated Substation Technology Alternative in Section D.9.4.1 would be required for the new substation, which would be constructed at the Tank Farm site. Hydrology and water quality impacts resulting from the construction and operation of the Tank Farm Site – Gas Insulated Substation Alternative would be the same as described in Section D.9.4.2.1.

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The Tank Farm Site – Gas Insulated Substation Alternative would require approximately 6 acres for construction and operation of the substation, whereas the Tank Farm Site – Air Insulated Substation Alternative would require approximately 10 acres. Hydrology and water quality impacts resulting from the construction and operation of the Tank Farm Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.3 Existing South Bay Substation Site Alternative

Environmental Setting

The existing South Bay Substation site is entirely developed and contains an operating electrical substation. The overall hydrologic setting identified in Section D.9.1 would also be applicable to this alternative. More specifically, San Diego Bay is located approximately 480 feet to the west, and Telegraph Creek, which drains to San Diego Bay, is located approximately 85 feet to the north.

D.9.4.3.1 Existing South Bay Substation Site – Air Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

Limited grading would be required at the existing substation site and the adjacent 3-acre area to develop a level pad on which to construct the Air Insulated Substation Alternative. Grading associated with substation development and the construction of transmission interconnections would expose soils to wind and water, which could degrade water quality as a result of an increased risk of soil erosion and sedimentation (Impact HYD-1). Implementation of Mitigation Measure HYDRO-1 would reduce potential impacts to less-than-significant (Class II) levels. Because hazardous materials would be brought to and used on the project site, there is potential for hazardous materials to spill from their containers and degrade the water quality of receiving waters (Impact HYD-2). Implementation of an SWPPP (Mitigation Measure HYDRO-1) would include measures to protect surface and groundwater quality from spills; therefore, with implementation of Mitigation Measure HYDRO-1, impacts would be less than significant (Class II). During construction, excavation activities could impact groundwater quality.

Excavation would typically occur 6 feet below grade, and groundwater in the project area is located between 5 and 13.5 feet below grade. Implementation of Mitigation Measures HYDRO-2a, HYDRO-2b, and HYDRO-2c would reduce potential impacts to groundwater quality (Impact

HYD-3) anticipated during dewatering activities at the South Bay Substation to less than significant (Class II) levels. Pervious surfaces at the substation site would allow for percolation of rainwater and stormwater during operations (similar to the design of the proposed Bay Boulevard Substation), and therefore, less than significant impacts associated with the depletion of local water supplies (Impact HYD-4) would occur.

This alternative would essentially replace an existing substation at the same site. However, because an adjacent 3-acre area is required to accommodate future substation equipment, this alternative would result in an increase of impervious area. Resulting increases in project-related runoff would, however, be controlled through the direction of runoff toward water quality basins and drainage basins, and therefore, Impact HYD-5 would be less than significant (Class III).

The existing substation site is not located within a 100-year flood hazard area or watercourse (Impact HYD-6), and therefore, no impacts associated with flooding, flood diversions, erosions, or the exposure of people or structures to significant risk would occur.

Accidental release of contaminants (i.e., contaminated soils excavated from the site, contaminated groundwater removed during dewatering activities, etc.) during construction could degrade water quality; however, the implementation of Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would protect surface and groundwater quality from spills and would reduce Impact HYD-7 to less than significant (Class II).

No septic tanks are proposed with the Air Insulated Substation Alternative, and therefore, no impacts associated with conflicts regarding septic tanks and local water quality (Impact HYD-8) are anticipated. Construction and operation of this alternative would not compromise the integrity of a levee or dam (no levees or dams are located in the project site); therefore, HYD-9 impacts would be less than significant (Class III). The project's location on the southern edge of San Diego Bay protects it from inundation from tsunamis. In addition, the geologic conditions off the coast are not conducive to tsunamis; therefore, there is a low likelihood for a tsunami or mudflow to occur. Impacts would be less than significant (Class III).

Comparison to the Proposed Project

The hydrology and water quality impacts (Impacts HYD-1 through HYD-10) resulting from construction and operation of the Existing South Bay Substation Site – Air Insulated Substation Alternative would be substantially the same as those previously identified for the Proposed Project.

D.9.4.3.2 Existing South Bay Substation Site – Gas Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

During construction of the proposed substation and associated improvements, grading would expose soils that would compromise soil structure and increase the risk of erosion. The existing South Bay Substation site would require limited grading in comparison to the Proposed Project because the site consists of a level pad site capable of supporting substation components. Therefore, impacts to water quality as a result of soil erosion associated with this alternative would be reduced in comparison to those described for the Proposed Project. As described in Section D.9.3.3, implementation of Mitigation Measure HYDRO-1 would mitigate these impacts. Potential impacts resulting from construction activity that could degrade water quality due to erosion and sedimentation would be mitigated to a level that is considered less than significant (Class II).

Potential impacts associated with construction activity potentially degrading water quality through spills of potentially harmful materials are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Existing South Bay Substation Site – Gas Insulated Substation Alternative is located within close proximity to the Proposed Project. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measure HYDRO-1 (Class II).

Under this alternative, excavation would be completed in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Existing South Bay Substation Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Potential impacts associated with potentially depleting local water supplies are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Existing South Bay Substation Site Alternative is located within close proximity and would result in the same ground disturbance as identified under the Proposed Project. Potential impacts would be less than significant (Class III).

Under this alternative, the impervious area at the existing South Bay Substation site would be maintained with project implementation. Potential impacts associated with creating new impervious areas that would increase runoff resulting in flooding or increased erosion downstream are expected to be the same as described in Section D.9.3.3 for the Proposed Project. Runoff would be directed toward water quality basins, and drainage basins would be designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Potential impacts would be less than significant (Class III).

The Existing South Bay Substation Site – Gas Insulated Substation Alternative is not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map) or expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam. As a result, the Existing South Bay Substation Site – Gas Insulated Substation Alternative would not impact flood flows.

Under this alternative, as under the Proposed Project, the existing South Bay Substation site has the potential to result in an accidental release of contaminants from project facilities that could degrade water quality. Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the Existing South Bay Substation Site – Gas Insulated Substation Alternative would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Similar to the Proposed Project, during operation and maintenance of substation facilities, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However, implementation of Mitigation Measure HAZ-1d would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant (Class II).

Under this alternative, the project would change the existing drainage patterns in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Existing South Bay Substation Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to

less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Under this alternative, as under the Proposed Project, the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Existing South Bay Substation Site Alternative area being flat, the Existing South Bay Substation Site Alternative would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The Existing South Bay Substation Site – Gas Insulated Substation Alternative would require approximately 6 acres for construction and operation of the substation, whereas the Proposed Project would require approximately 10 acres. Hydrology and water quality impacts resulting from the construction and operation of the Existing South Bay Substation Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.4 Power Plant Site Alternative

Environmental Setting

The Power Plant site is entirely developed and contains facilities associated with the South Bay Power Plant operations. The overall hydrologic setting identified in Section D.9.1 would also be applicable to this alternative. More specifically, San Diego Bay is located immediately adjacent to the west and Telegraph Creek is located approximately 480 feet to the north.

The environmental setting for the Air Insulated Substation and Gas Insulated Substation Alternatives at the Power Plant site would be the same; therefore, the environmental setting is not further discussed in Sections D.9.4.4.1 and D.9.4.4.2.

D.9.4.4.1 Power Plant Site – Air Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

During construction of the proposed substation and associated improvements, grading would expose soils that would compromise soil structure and increase the risk of erosion. The Power Plant site would require limited grading in comparison to the Proposed Project because the site

consists of a level pad site that is currently capable of supporting facilities associated with a power plant. Therefore, impacts to water quality as a result of soil erosion associated with this alternative would be reduced in comparison to those described for the Proposed Project. As described in Section D.9.3.3, implementation of Mitigation Measure HYDRO-1 would mitigate these impacts. Potential impacts resulting from construction activity that could degrade water quality due to erosion and sedimentation would be mitigated to a level that is considered less than significant (Class II).

Potential impacts associated with construction activity potentially degrading water quality through spills of potentially harmful materials are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Power Plant Site Alternative is located within close proximity to the Proposed Project. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measure HYDRO-1 (Class II).

Under this alternative, excavation would be completed in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Power Plant Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Potential impacts associated with potentially depleting local water supplies are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Power Plant Site Alternative is located within close proximity and would result in the same ground disturbance as identified under the Proposed Project. Potential impacts would be less than significant (Class III).

Under this alternative, impervious area at the Power Plant site would be maintained with project implementation. Potential impacts associated with creating new impervious areas that would increase runoff resulting in flooding or increased erosion downstream are expected to be the same as described in Section D.9.3.3 for the Proposed Project. Runoff would be directed toward water quality basins, and drainage basins would be designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Potential impacts would be less than significant (Class III).

The Power Plant Site Alternative is not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map) or expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam. As a result, the Power Plant Site Alternative would not impact flood flows.

Under this alternative, as under the Proposed Project, the Power Plant site has the potential to result in an accidental release of contaminants from project facilities that could degrade water quality. Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the Power Plant Site Alternative would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Similar to the Proposed Project, during operation and maintenance of substation facilities, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However, implementation of Mitigation Measure HAZ-1d would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant (Class II).

Under this alternative, the project would change the existing drainage patterns in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Power Plant Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Under this alternative, as under the Proposed Project, the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Power Plant Site Alternative area being flat, the Power Plant Site Alternative would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

Comparison to the Proposed Project

Hydrology and water quality impacts resulting from the construction and operation of the Power Plant Site – Air Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.4.2 Power Plant Site – Gas Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

Under this alternative, a similar development footprint and layout as identified for the Gas Insulated Substation Technology Alternative in Section D.9.4.1 would be required for the new substation and would be constructed at the Power Plant site. Hydrology and water quality impacts resulting from the construction and operation of the Power Plant Site – Gas Insulated Substation Alternative would be the same as described in Section D.9.4.4.1.

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The Power Plant Site – Gas Insulated Substation Alternative would require approximately 6 acres for construction and operation of the substation, whereas the Power Plant Site – Air Insulated Substation Alternative would require approximately 10 acres. Hydrology and water quality impacts resulting from the construction and operation of the Power Plant Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.5 Broadway and Palomar Site Alternative

Environmental Setting

With the exception of several tall tubular and steel lattice transmission towers, the Broadway and Palomar site is vacant. An SDG&E transmission corridor runs through the site, and because of ongoing maintenance activities associated with the corridor, the entirety of the 9-acre site is disturbed and is surrounded by roadways on the east and west and development on the north and south. The Broadway and Palomar site is located within the San Diego Basin (Region 9) of the RWQCB. According to the Water Quality Control Plan for the San Diego Basin (9), the Proposed Project area is located in the Otay (910.20) Hydrologic Unit (CSWRB 1994).

The environmental setting for the Air Insulated Substation and Gas Insulated Substation Alternatives at the Broadway and Palomar site would be the same, and therefore, the environmental setting is not further discussed in Sections D.9.4.5.1 and D.9.4.5.2.

D.9.4.5.1 Broadway and Palomar Site – Air Insulated Substation Alternative

The 9-acre Broadway and Palomar site is not physically large enough to site the 10-acre Air Insulated Substation Alternative. As such, the Air Insulated Substation Alternative is not technically feasible at this site.

D.9.4.5.2 Broadway and Palomar Site – Gas Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

During construction of the proposed substation and associated improvements, grading would expose soils that would compromise soil structure and increase the risk of erosion. The Broadway and Palomar site would require limited grading in comparison to the Proposed Project since the site is relatively flat and within a developed area in Chula Vista. Therefore, impacts to water quality as a result of soil erosion associated with this alternative would be reduced in comparison to those described for the Proposed Project. As described in Section D.9.3.3, implementation of Mitigation Measure HYDRO-1 would mitigate these impacts. Potential impacts resulting from construction activity that could degrade water quality due to erosion and sedimentation would be mitigated to a level that is considered less than significant (Class II).

Potential impacts associated with construction activity potentially degrading water quality through spills of potentially harmful materials are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Broadway and Palomar Site Alternative is located within close proximity to the Proposed Project. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measure HYDRO-1 (Class II).

Under this alternative, excavation would be completed in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Broadway and Palomar Site Alternative are located in an area with groundwater depths that would likely be encountered during construction. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Potential impacts associated with potentially depleting local water supplies are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Broadway and Palomar Site Alternative is located within close proximity and would result in the same ground disturbance as identified under the Proposed Project. Potential impacts would be less than significant (Class III).

Under this alternative, impervious area at the Broadway and Palomar site would be maintained with project implementation. Potential impacts associated with creating new impervious areas that would increase runoff resulting in flooding or increased erosion downstream are expected to be the same as described in Section D.9.3.3 for the Proposed Project. Runoff would be directed toward water quality basins, and drainage basins would be designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Potential impacts would be less than significant (Class III).

The Broadway and Palomar Site Alternative is not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map) or expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam. As a result, the Broadway and Palomar Site Alternative would not impact flood flows.

Under this alternative, as under the Proposed Project, the Broadway and Palomar site has the potential to result in an accidental release of contaminants from project facilities that could degrade water quality. Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the Broadway and Palomar Site Alternative would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Similar to the Proposed Project, during operation and maintenance of substation facilities, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However, implementation of Mitigation Measure HAZ-1d would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant (Class II).

Under this alternative, the project would change the existing drainage patterns in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Broadway and Palomar Site Alternative are located in an area known to contain groundwater resources at shallow depths. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c,

and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Under this alternative, the site is located approximately 1 mile east of San Diego Bay, which is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Broadway and Palomar Site Alternative area being flat, the Broadway and Palomar Site Alternative would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The Broadway and Palomar Site – Gas Insulated Substation Alternative would require approximately 6 acres for construction and operation of the substation, whereas the Proposed Project would require approximately 10 acres. Hydrology and water quality impacts resulting from the construction and operation of the Broadway and Palomar Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.6 Goodrich South Campus Site Alternative

Environmental Setting

The overall hydrologic setting identified in Section D.9.1 is located within the vicinity of the Proposed Project and, therefore, would also be applicable to this alternative. More specifically, San Diego Bay is located approximately 330 feet to the west and an existing L-shaped drainage ditch (L-Ditch) traverses the Goodrich South Campus. The L-Ditch is approximately a 50-foot-wide feature. The L-Ditch is a drainage feature that contains wetland habitat.

Due to the presence of the contamination from the former Goodrich South Campus and Goodrich North Campus, the RWQCB issued a Cleanup and Abatement Order (CAO No. 98-08, revised April 2, 1998) identifying areas requiring remediation and setting standards for post-cleanup conditions. The Cleanup and Abatement Order addresses all current and former property used, leased, or otherwise controlled by Goodrich since its inception on the Chula Vista waterfront as

Rohr Aircraft Company. This includes contaminant releases within the Goodrich South Campus site and H Street Yard site. Contaminant removal from the L-Ditch is a requirement under the Cleanup and Abatement Order issued by the RWQCB for the Goodrich South Campus remediation. A Remedial Action Plan is being prepared to determine the most appropriate and effective manner by which remediation of the L-Ditch can be achieved to the satisfaction of the RWQCB (Port District 2010).

The environmental setting for the Air Insulated Substation and Gas Insulated Substation Alternatives at the Goodrich South Campus site would be the same; therefore, the environmental setting is not further discussed in Sections D.9.4.6.1 and D.9.4.6.2.

D.9.4.6.1 Goodrich South Campus Site – Air Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

During construction of the proposed substation and associated improvements, grading would expose soils that would compromise soil structure and increase the risk of erosion. The Goodrich South Campus site would require limited grading in comparison to the Proposed Project because the site consists of a level pad site that was previously used for the Goodrich South Campus. Therefore, impacts to water quality as a result of soil erosion associated with this alternative would be reduced in comparison to those described for the Proposed Project. As described in Section D.9.3.3, implementation of Mitigation Measure HYDRO-1 would mitigate these impacts. Potential impacts resulting from construction activity that could degrade water quality due to erosion and sedimentation would be mitigated to a level that is considered less than significant (Class II).

Potential impacts associated with construction activity potentially degrading water quality through spills of potentially harmful materials are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Goodrich Campus Site Alternative is located within close proximity to the Proposed Project. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measure HYDRO-1 (Class II).

Under this alternative, excavation would be completed in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Goodrich South Campus Site Alternative are located immediately adjacent to San Diego Bay.

Construction activities would require excavations up to 45 feet in depth for construction of transmission poles that would be required to tie in existing transmission facilities to the proposed substation. Groundwater depth studies completed as part of the Silvergate Transmission Project, which traverses a portion of the Goodrich South Campus site, indicate that groundwater levels

range from 5 to 14 feet below the existing grade (GEOCON 2005; URS 2005). Trenching activities below the water table could result in potentially significant impacts to groundwater. In areas known to contain contaminated groundwater, the potential exists for construction activities to facilitate mobilization of contaminates from areas of high concentration to areas of low concentration. Mobilization of hazardous substances from areas of known contamination to areas previously not contaminated resulting from construction would be considered a significant impact. In addition, permanent facilities located below the groundwater table could alter groundwater flows and result in mobilization of existing contaminates that differ from historic conditions. Substantially altering historic groundwater and contaminant migration patterns would be considered a significant impact. Mitigation Measures H-5a and H-5b would ensure the groundwater discharges are in accordance with regulations governed by the RWQCB and would reduce impacts to a less-than-significant level (Class II). Implementation of Mitigation Measure H-5c in conjunction with Mitigation Measures HAZ-2a, HAZ-2b, HAZ-2d, and HAZ-3b (see Section D.8, Public Health and Safety) would ensure that impacts to changes in groundwater flow patterns or migration of existing contaminants through project-related excavation would be less than significant (Class II).

Potential impacts associated with potentially depleting local water supplies are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Goodrich South Campus Site Alternative is located within close proximity and would result in the same ground disturbance as identified under the Proposed Project. Potential impacts would be less than significant (Class III).

Under this alternative, impervious area at the Goodrich South Campus Site Alternative would be maintained with project implementation. Potential impacts associated with creating new impervious areas that would increase runoff resulting in flooding or increased erosion downstream are expected to be the same as described in Section D.9.3.3 for the Proposed Project. Runoff would be directed toward water quality basins, and drainage basins would be designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Potential impacts would be less than significant (Class III).

The Goodrich South Campus Site Alternative is not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map) or expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam. As a result, the Goodrich South Campus Site Alternative would not impact flood flows.

Under this alternative, as under the Proposed Project, the Goodrich South Campus Site Alternative has the potential to result in an accidental release of contaminants from project

facilities that could degrade water quality. Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the Goodrich South Campus Site Alternative would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Similar to the Proposed Project, during operation and maintenance of substation facilities, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However, implementation of Mitigation Measure HAZ-1d would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant (Class II).

Under this alternative, the project would change the existing drainage patterns in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Goodrich South Campus Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Under this alternative, as under the Proposed Project, the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Goodrich South Campus Site Alternative area being flat, the Goodrich South Campus Site Alternative would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

Comparison to the Proposed Project

Hydrology and water quality impacts resulting from the construction and operation of the Goodrich South Campus Site – Air Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1, -2, -4, -5, -6, -7, -8, -9, and -10. Potential impacts associated with HYD-3 would be increased from those identified under the Proposed Project due to the presence of groundwater contamination from the former Goodrich South Campus.

D.9.4.6.2 Goodrich South Campus Site – Gas Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

Under this alternative, a similar development footprint and layout as identified for the Gas Insulated Substation Technology Alternative in Section D.9.4.1 would be required for the new substation and would be constructed at the Goodrich South Campus site. Hydrology and water quality impacts resulting from the construction and operation of the Goodrich South Campus Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1, -2, -4, -5, -6, -7, -8, -9, and -10. Potential impacts associated with HYD-3 would be increased from those identified under the Proposed Project due to the presence of groundwater contamination from the former Goodrich South Campus.

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The Goodrich South Campus Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1, -2, -4, -5, -6, -7, -8, -9, and -10. Potential impacts associated with HYD-3 would be increased from those identified under the Proposed Project due to the presence of groundwater contamination from the former Goodrich South Campus.

D.9.4.7 H Street Yard Site Alternative

Environmental Setting

The overall hydrologic setting identified in Section D.9.1 is located within the vicinity of the Proposed Project and, therefore, would also be applicable to this alternative. More specifically, San Diego Bay is located approximately 400 feet to the west.

Due to the presence of the contamination from the former Goodrich South Campus and Goodrich North Campus, the RWQCB issued a Cleanup and Abatement Order (CAO No. 98-08, revised April 2, 1998) identifying areas requiring remediation and setting standards for post-cleanup conditions. The Cleanup and Abatement Order addresses all current and former property used, leased, or otherwise controlled by Goodrich since its inception on the Chula Vista waterfront as Rohr Aircraft Company. This includes contaminant releases within the Goodrich South Campus site and H Street Yard site. Contaminant removal from the L-Ditch is a requirement under the Cleanup and Abatement Order issued by the RWQCB for the Goodrich South Campus remediation. A Remedial Action Plan is being prepared to determine the most appropriate and effective manner by which remediation of the L-Ditch can be achieved to the satisfaction of the RWQCB (Port District 2010).

The environmental setting for the Air Insulated Substation and Gas Insulated Substation Alternatives at the H Street Yard site would be the same; therefore, the environmental setting is not further discussed in Sections D.9.4.7.1 and D.9.4.7.2.

D.9.4.7.1 H Street Yard Site – Air Insulated Substation Alternative

During construction of the proposed substation and associated improvements, grading would expose soils that would compromise soil structure and increase the risk of erosion. The H Street Yard site would require limited grading in comparison to the Proposed Project because the site consists of a level pad site that was previously used for the Goodrich South Campus. Therefore, impacts to water quality as a result of soil erosion associated with this alternative would be reduced in comparison to those described for the Proposed Project. As described in Section D.9.3.3, implementation of Mitigation Measure HYDRO-1 would mitigate these impacts. Potential impacts resulting from construction activity that could degrade water quality due to erosion and sedimentation would be mitigated to a level that is considered less than significant (Class II).

Potential impacts associated with construction activity potentially degrading water quality through spills of potentially harmful materials are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the H Street Yard Site Alternative is located within close proximity to the Proposed Project. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measure HYDRO-1 (Class II).

Under this alternative, excavation would be completed in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and H Street Yard Site Alternative are located immediately adjacent to San Diego Bay.

Construction activities would require excavations up to 45 feet in depth for construction of transmission poles that would be required to tie in existing transmission facilities to the proposed substation. Groundwater depth studies completed as part of the Silvergate Transmission Project, which traverses a portion of the Goodrich South Campus site, indicate that groundwater levels range from 5 to 14 feet below the existing grade (GEOCON 2005; URS 2005). Trenching activities below the water table could result in potentially significant impacts to groundwater. In areas known to contain contaminated groundwater, the potential exists for construction activities to facilitate mobilization of contaminates from areas of high concentration to areas of low concentration. Mobilization of hazardous substances from areas of known contamination to areas previously not contaminated resulting from construction would be considered a significant impact. In addition, permanent facilities located below the groundwater table could alter groundwater flows and result in mobilization of existing contaminates that differ from historic conditions. Substantially altering historic groundwater and contaminant migration patterns would

be considered a significant impact. Mitigation Measures H-5a and H-5b would ensure the groundwater discharges are in accordance with regulations governed by the RWQCB and would reduce impacts to a less-than-significant level (Class II). Implementation of Mitigation Measure H-5c in conjunction with Mitigation Measures HAZ-2a, HAZ-2b, HAZ-2d, and HAZ-3b (see Section D.8, Public Health and Safety) would ensure that impacts to changes in groundwater flow patterns or migration of existing contaminants through project-related excavation would be less than significant (Class II).

Potential impacts associated with potentially depleting local water supplies are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the H Street Yard Site Alternative is located within close proximity and would result in the same ground disturbance as identified under the Proposed Project. Potential impacts would be less than significant (Class III).

Under this alternative, impervious area at the H Street Yard Site Alternative would be maintained with project implementation. Potential impacts associated with creating new impervious areas that would increase runoff resulting in flooding or increased erosion downstream are expected to be the same as described in Section D.9.3.3 for the Proposed Project. Runoff would be directed toward water quality basins, and drainage basins would be designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Potential impacts would be less than significant (Class III).

The H Street Yard Site Alternative is not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map) or expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam. As a result, the H Street Yard Site Alternative would not impact flood flows.

Under this alternative, as under the Proposed Project, the H Street Yard Site Alternative has the potential to result in an accidental release of contaminants from project facilities that could degrade water quality. Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the H Street Yard Alternative would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Similar to the Proposed Project, during operation and maintenance of substation facilities, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However, implementation of Mitigation Measure HAZ-1d would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant (Class II).

Under this alternative, the project would change the existing drainage patterns in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and H Street Yard Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Under this alternative, as under the Proposed Project, the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the H Street Yard Site Alternative area being flat, the H Street Yard Site Alternative would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

Comparison to the Proposed Project

Hydrology and water quality impacts resulting from the construction and operation of the H Street Yard Site – Air Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1, -2, -4, -5, -6, -7, -8, -9, and -10. Potential impacts associated with HYD-3 would be increased from those identified under the Proposed Project due to the presence of groundwater contamination from the former Goodrich South Campus.

D.9.4.7.2 H Street Yard Site – Gas Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

Under this alternative, a similar development footprint and layout as identified for the Gas Insulated Substation Technology Alternative in Section D.9.4.1 would be required for the new substation and would be constructed at the H Street Yard site. Hydrology and water quality impacts resulting from the construction and operation of the H Street Yard Site – Gas Insulated Substation Alternative would be the same as described in Section D.9.4.7.1.

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The H Street Yard Gas Insulated Substation Alternative would require approximately 6 acres for construction and operation of the substation, whereas the H Street Yard – Air Insulated Substation Alternative would require approximately 10 acres. Hydrology and water quality impacts resulting from the construction and operation of the H Street Yard Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1, -2, -4, -5, -6, -7, -8, -9, and -10. Potential impacts associated with HYD-3 would be increased from those identified under the Proposed Project due to the presence of groundwater contamination from the former Goodrich South Campus.

D.9.4.8 Bayside Site Alternative

Environmental Setting

The overall hydrologic setting identified in Section D.9.1 is located within the vicinity of the Proposed Project and, therefore, would also be applicable to this alternative. More specifically, San Diego Bay is located approximately 100 feet to the west.

The environmental setting for the Air Insulated Substation and Gas Insulated Substation Alternatives at the Bayside Site Alternative would be the same; therefore, the environmental setting is not further discussed in Sections D.9.4.8.1 and D.9.4.8.2.

D.9.4.8.1 Bayside Site – Air Insulated Substation Alternative

During construction of the proposed substation and associated improvements, grading would expose soils that would compromise soil structure and increase the risk of erosion. The Bayside Site Alternative would require limited grading in comparison to the Proposed Project because the site consists of a level pad site. Therefore, impacts to water quality as a result of soil erosion associated with this alternative would be reduced in comparison to those described for the Proposed Project. As described in Section D.9.3.3, implementation of Mitigation Measure HYDRO-1 would mitigate these impacts. Potential impacts resulting from construction activity that could degrade water quality due to erosion and sedimentation would be mitigated to a level that is considered less than significant (Class II).

Potential impacts associated with construction activity potentially degrading water quality through spills of potentially harmful materials are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Bayside Site Alternative is located within

close proximity to the Proposed Project. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measure HYDRO-1 (Class II).

Under this alternative, excavation would be completed in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Bayside Site Alternative are located immediately adjacent to San Diego Bay.

Under this alternative, excavation would be completed in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Bayside Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Potential impacts associated with potentially depleting local water supplies are expected to be the same as described in Section D.9.3.3 for the Proposed Project because the Bayside Site Alternative is located within close proximity and would result in the same ground disturbance as identified under the Proposed Project. Potential impacts would be less than significant (Class III).

Under this alternative, impervious area at the Bayside Site Alternative would be maintained with project implementation. Potential impacts associated with creating new impervious areas that would increase runoff resulting in flooding or increased erosion downstream are expected to be the same as described in Section D.9.3.3 for the Proposed Project. Runoff would be directed toward water quality basins, and drainage basins would be designed to ensure stormwater flows will not exceed the capacity of the storm drain system. Potential impacts would be less than significant (Class III).

The Bayside Site Alternative is not located within a 100-year flood hazard area. Therefore, no new structures would be constructed that would impede or redirect flood flow (Figure D.9-1, Hydrology and Flood Zone Map) or expose people or structures to a significant loss due to flooding as a result of the failure of a levee or dam. As a result, the Bayside Site Alternative would not impact flood flows.

Under this alternative, as under the Proposed Project, the Bayside Site Alternative has the potential to result in an accidental release of contaminants from project facilities that could

degrade water quality. Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, and HAZ-2a would reduce potential impacts to less than significant. With implementation of the mitigation measures outlined, the Bayside Site Alternative would not result in a prohibited discharge as defined in the RWQCB Basin Plan or conflict with any of the water quality objectives. Impacts would be less than significant (Class II).

Similar to the Proposed Project, during operation and maintenance of substation facilities, impacts could occur as a result of the accidental release of hazardous materials used and stored on the site during routine or emergency maintenance or normal operations. However, implementation of Mitigation Measure HAZ-1d would mitigate impacts of hazardous material spills and releases during operation and maintenance to less than significant (Class II).

Under this alternative, the project would change the existing drainage patterns in a similar manner to the Proposed Project in relation to groundwater since both the Proposed Project and Bayside Site Alternative are located immediately adjacent to San Diego Bay. Where the project may encounter groundwater, as described for the Proposed Project in Section D.9.3.3, potential impacts may occur to groundwater quality and would be mitigated with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a. As with excavation under the Proposed Project, under this alternative, where excavation would potentially expose groundwater, these mitigation measures would ensure that potential groundwater would be identified and that specific procedures would be followed to reduce the risk of accidental spill and groundwater contamination. Potential impacts would be mitigated to less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-2b, HAZ-1c, and HAZ-2a (Class II).

Under this alternative, as under the Proposed Project, the southern edge of San Diego Bay is protected from tsunamis by natural land formations such as Coronado, Silver Strand, and Point Loma. Although the force of a tsunami could cause substantial damage, the geologic conditions off the coast are not conducive to tsunamis. In addition, due to the Bayside Site Alternative area being flat, the Bayside Site Alternative would not contribute to mudflows. As a result, it is reasonable to assume there is a low likelihood for a tsunami or mudflow to occur. Therefore, impacts would be less than significant (Class III).

Comparison to the Proposed Project

Hydrology and water quality impacts resulting from the construction and operation of the Bayside Site – Air Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.8.2 Bayside Site – Gas Insulated Substation Alternative

Environmental Impacts and Mitigation Measures

Under this alternative, a similar development footprint and layout as identified for the Gas Insulated Substation Technology Alternative in Section D.9.4.1 would be required for the new substation and would be constructed at the Bayside site. Hydrology and water quality impacts resulting from the construction and operation of the Bayside Site – Gas Insulated Substation Alternative would be the same as described in Section D.9.4.8.1.

Comparison to the Proposed Project

This alternative would result in a smaller overall footprint than the Proposed Project. The Bayside Site – Gas Insulated Substation Alternative would require approximately 6 acres for construction and operation of the substation, whereas the Bayside Site – Air Insulated Substation Alternative would require approximately 10 acres. Hydrology and water quality impacts resulting from the construction and operation of the Bayside Site – Gas Insulated Substation Alternative would be the same when compared to the Proposed Project for Impacts HYD-1 through HYD-10.

D.9.4.2 Environmental Impacts of the No Project Alternative

Under the No Project Alternative, none of the facilities associated with the Project would be constructed; therefore, none of the impacts in this section would occur. Under the No Project Alternative SDG&E may be required to develop additional transmission upgrades as described in Section C.7 of this EIR which would generate potential short-term construction related impacts to hydrology and water quality. However, it is anticipated that overall impacts would be reduced when compared to the Proposed Project due to the elimination of demolition activities associated with the South Bay Substation, construction of the Bay Boulevard Substation, construction of the transmission interconnections, and associated construction-related impacts to hydrology and water quality.

D.9.5 Mitigation Monitoring, Compliance, and Reporting

Table D.9-1 shows the mitigation monitoring, compliance, and reporting program (MMCRP) for hydrology and water quality. The California Public Utilities Commission (CPUC) shall be responsible for ensuring compliance with the provisions of the monitoring program. In addition, the RWQCB may elect to enforce mitigation measures under their jurisdiction at any point during the project. The agency mitigation measures as well as the APM that SDG&E has made part of the Bay Boulevard Substation Project are listed. Table D.9-1 indicates whether the measure is applicant proposed or agency recommended.

Table D.9-1
MMCRP for Hydrology and Water Quality

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
Impact HYD-7: Accidental releases of contaminants from project facilities could degrade water quality.		APM-HAZ-01	SDG&E would prepare and implement a project-specific Hazardous Substance Management and Emergency Response Plan during the construction period to reduce or avoid potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials.			
Impact HYD-1: Construction activity could degrade water quality due to erosion and sedimentation. Impact HYD-2: Construction activity could degrade water quality through spills of potentially harmful materials. Impact HYD-5: Creation of new impervious areas could cause increased runoff, resulting in flooding or increased erosion downstream.	HYDRO-1	—	In accordance with the stormwater pollution prevention plan (SWPPP) to be prepared under the State General Construction Permit, work crews shall use erosion control measures during grading activities. Implementation of the SWPPP shall help stabilize soil in graded areas and waterways and reduce erosion and sedimentation. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during construction activities. The SWPPP shall be submitted to the California Public Utilities Commission prior to construction activities.	SDG&E to implement measure as defined and incorporate commitments into construction contracts.	CPUC to ensure that commitments have been incorporated into construction contracts. CPUC to inspect periodically to ensure minimization of disturbance and erosion. SDG&E to submit SWPPP to CPUC in order to verify.	Prior to and during construction. This measure applies to grading activities.

Table D.9-1
MMCRP for Hydrology and Water Quality

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
Impact HYD-3: Excavation could degrade groundwater quality in areas of shallow groundwater. Impact HYD-7: Accidental releases of contaminants from project facilities could degrade water quality.	HYDRO-2a	—	Prior to construction, SDG&E shall consult with the San Diego Regional Water Quality Control Board (RWQCB) to determine whether an individual discharge permit is required for dewatering at any of the project areas anticipated to encounter groundwater. A copy of the permit or a waiver from the RWQCB, if required, shall be provided to the California Public Utilities Commission prior to dewatering activities.	SDG&E to implement measure as defined.	CPUC to review documentation of coordination with RWQCB. If necessary, SDG&E to provide applicable permit/waiver to CPUC to verify.	Prior to construction.
Impact HYD-3: Excavation could degrade groundwater quality in areas of shallow groundwater. Impact HYD-7: Accidental releases of contaminants from project facilities could degrade water quality.	HYDRO-2b	—	SDG&E shall submit to California Public Utilities Commission prior to construction a typical dewatering drawing that shall be implemented during dewatering activities. The drawing shall include the location of pumps within secondary containment, fuel storage areas, anticipated discharge point, scour protection measures, intake hose screening, and monitoring procedures to ensure that hazardous materials spills are addressed in a timely manner and discharge hoses are frequently inspected for leaks.	SDG&E to implement measure as defined and incorporate into construction plans. Monitoring procedure to be incorporated into construction contracts.	SDG&E to provide dewatering drawing to CPUC in order to verify.	Prior to construction.
Impact HYD-3: Excavation could degrade	HYDRO-2c	—	Creek and drainage crossings shall be conducted in a manner that does not result in a sediment-laden discharge or hazardous materials release to the water	SDG&E to implement measure as defined and incorporate	CPUC to inspect jack-and-bore operations to	During jack-and-bore operations at all creek and

Table D.9-1
MMCRP for Hydrology and Water Quality

Impact	MM	APM No.	Mitigation Measure/ Applicant Proposed Measure	Implementation Actions	Monitoring Requirements and Effectiveness Criteria	Timing of Action and Location
groundwater quality in areas of shallow groundwater. Impact HYD-7: Accidental releases of contaminants from project facilities could degrade water quality.			body. The following measures shall be implemented during jack-and-bore operations: 1. Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages. 2. Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of bank or wetland/riparian boundary for Telegraph Creek and the drainage along Bay Boulevard. Spoil shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention). 3. Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times. 4. Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion and temporary sediment barriers left in place until restoration is deemed successful.	measures into construction contracts.	ensure that discharged materials does not impact receiving waters.	drainage crossings.

D.9.6 References

14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

40 CFR 144. Chapter I, Environmental Protection Agency, Subchapter D, Water Programs, Part 144, Underground Injection Control Program.

33 U.S.C. 1251–1387. Federal Water Pollution Control Act, as amended (commonly referred to as the Clean Water Act).

42 U.S.C. 201. Safe Drinking Water Act of 1974, as amended.

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