4.6 HYDROLOGY AND WATER RESOURCES

This section presents the environmental setting and impact analysis for hydrology and water resources resulting from the Proposed Project and its alternatives. This section addresses baseline hydrology and water resources in the Proposed Project and alternative areas, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

4.6.1 Approach to Data Collection

Baseline hydrology and water resources in the Proposed Project area were evaluated by reviewing the following data sources on watersheds, water bodies, water quality, floodplain mapping, jurisdictional wetlands and waters, and local water resource policies:

- Aerial photography (Google, Inc. 2015)
- USGS topographic maps (Esri 2014)
- Federal Emergency Management Agency (FEMA) maps of flood zones (FEMA 2014)
- San Diego County Multi-Jurisdiction Hazard Plan maps (Office of Emergency Services and Unified Disaster Council 2010)
- City of San Diego General Plan (City of San Diego 2008)
- City of Carlsbad General Plan (City of Carlsbad 2015)
- SDRWQCB Water Quality Control Plan for the San Diego Basin (Basin Plan; SDRWQCB 1994)
- California Department of Water Resources (DWR) reports and bulletin No. 106-2 (DWR 1967)
- The California 2010 Integrated Report (303(d) List) for the San Diego Region (SWRCB 2010)
- Los Peñasquitos Lagoon Total Maximum Daily Load (TMDL) – Watershed Phase I Sediment Source Identification Study prepared for the City of San Diego (Weston Solutions 2009)
- Wetland delineation field studies conducted in September and October 2013 (Environmental Intelligence 2014)
- Jurisdictional delineation for additional work areas (access roads; Encina Hub; Mission—San Luis Rey Phase Transposition; and the SR-56, Evergreen Nursery, Camino Del Sur, Stowe, and Stonebridge staging yards) in January and February 2015 (Busby 2015a, 2015b)
- Jurisdictional delineation for Carmel Valley Road in June 2015 (Chambers Group Inc. 2015) and field verification of the site on September 2015 (Helix 2015)

4.6.2 Environmental Setting

4.6.2.1 Regional Setting

Table 4.6-1 describes the watersheds in the Proposed Project area. Figure 4.6-1 shows the locations of the watersheds in the Proposed Project area.

The Proposed Project area is located within the jurisdiction of the SDRWQCB. The SDRWQCB has jurisdiction over an approximately 3,900-square-mile regional area within southwest California, encompassing the majority of San Diego County, as well as the southwest portions of Riverside County and Orange County. The region has 13 main stream systems that originate in the western uplands and flow westward to the Pacific Ocean. Most of the streams have perennial and ephemeral segments due to the seasonal nature of rainfall and the relatively low amount of yearly rainfall, or due to effects from dams or other manmade obstructions.

The topography within the Proposed Project region consists of relatively flat to gently sloping marine terraces interspersed with canyons and valleys. Natural drainage patterns within the region have been modified by urban development (e.g., residential, commercial, road, and highway developments) and to minimize the risk of flooding in urbanized areas. Stormwater within San Diego is generally conveyed into the City's municipal separate stormwater system (MS4), which consists of modified natural drainages and built drainages. The San Diego MS4 conveys water into rivers, reservoirs, bays, and the Pacific Ocean (Office of Emergency Services and Unified Disaster Council 2010).

4.6.2.2 Proposed Project Setting

Surface Water Bodies

Drainages, Creeks, and Streams

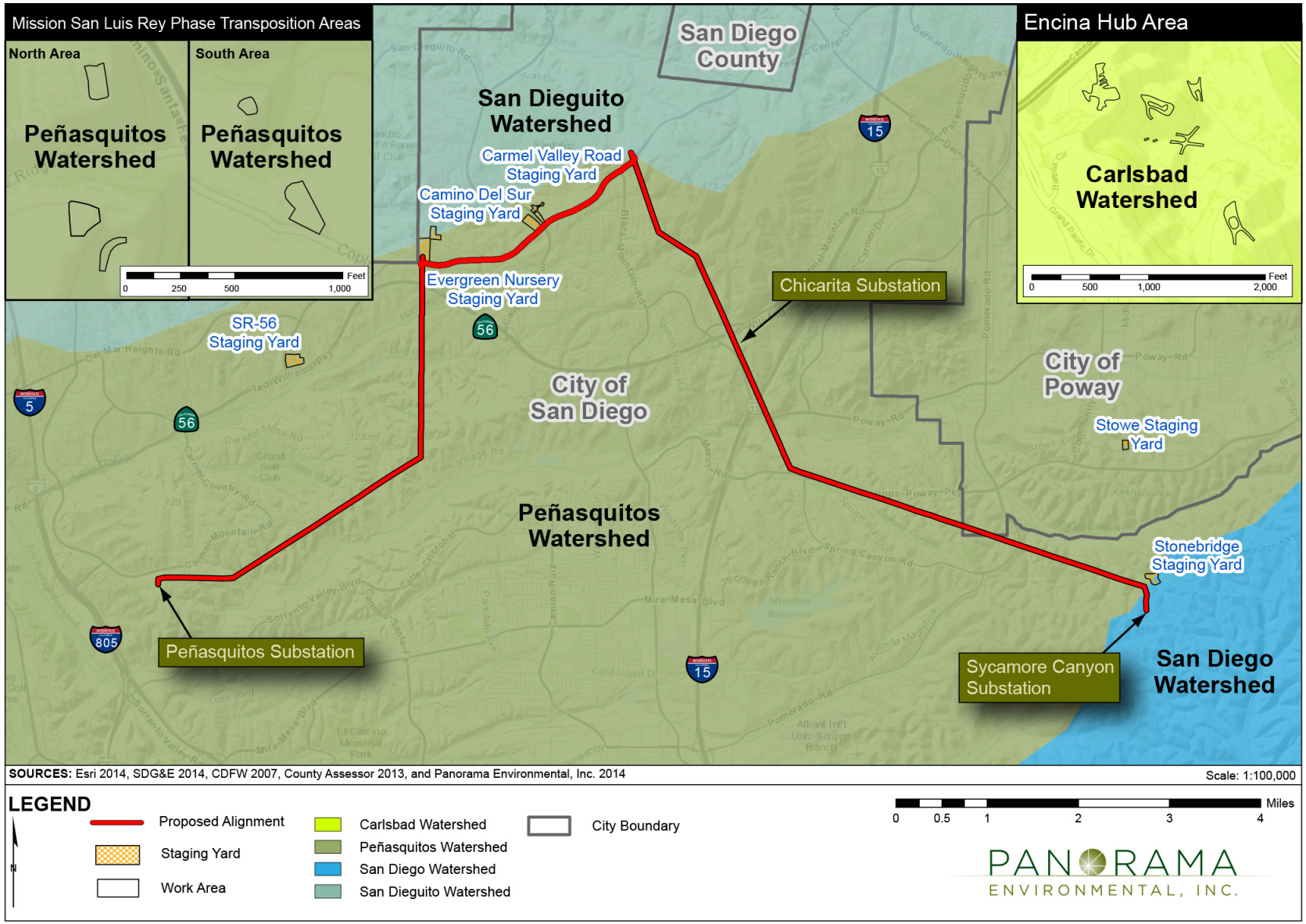
The majority of the Proposed Project is located within the 170-square-mile Peñasquitos watershed, within which Los Peñasquitos Creek is the major drainage feature. The northernmost portion of Segment A and the eastern third of Segment B are located in the San Dieguito watershed, within which the San Dieguito River is the major drainage feature. San Dieguito River drains to San Dieguito Lagoon. The watersheds in the Proposed Project area are shown on Figure 4.6-1. Creeks and streams within the Proposed Project area and downstream waterbodies are listed in Table 4.6-2 and shown on Figure 4.6-2. Surface water runoff within the Proposed Project area is predominantly captured by perennial creeks and underground stormwater systems associated with urban development (Busby Biological Services, Inc. 2014).

Table 4.6-1 Hydrologic Units in the Proposed Project Area

Watershed	Description	Segment A and Sycamore Substation	Segment B	Segment C	Segment D and Peñasquitos Substation	Encina Hub	Mission—San Luis Rey Phase Transposition	Staging Yards
Carlsbad Watershed	210 square miles; major streams are Agua Hedionda Creek, San Marcos Creek, Escondido Creek, Vista Creek, Encinas Creek, and Loma Alta Creek; four coastal lagoons including Buena Vista, Agua Hedionda, Batiquitos, and San Elijo					X		
Peñasquitos Watershed	170 square miles, no major streams, two coastal lagoons (Sorrento Lagoon or Los Peñasquitos Lagoon and Mission Bay), one major reservoir (Miramar Reservoir), annual precipitation 8 inches (coastal) to 18 inches (inland)	X		X	X		X	X
San Diego Watershed	440 square miles; major river is San Diego River; five major reservoirs (El Capitan, San Vicente, Cuyamaca, Jennings, and Murray reservoirs); annual precipitation 11 inches (coastal) to 35 inches (Cuyamaca and El Capitan Reservoir)	X						X
San Dieguito Watershed	350 square miles; major streams are San Dieguito River and tributaries, Santa Ysabel Creek, and Santa Maria Creek; one coastal lagoon (San Dieguito Slough); three major reservoirs (Lake Hodges, Sutherland Reservoir, and San Dieguito Reservoir); annual precipitation 13.5 inches (coastal) to 35 inches (inland) in larger San Dieguito Watershed	X	X					X

Source: SDRWQCB 1994

Figure 4.6-1 Watersheds in the Proposed Project Area



Reservoirs, Ponds, and Lakes

Miramar Reservoir (Lake Miramar) is located approximately 1 mile southwest of the midsection of Proposed Project Segment A. Miramar Reservoir contains imported Colorado River water and was constructed as part of the Second San Diego Aqueduct project. No reservoirs, ponds, or lakes are located in the Proposed Project area. No reservoirs, ponds, or lakes would be intersected or spanned by Proposed Project components. Reservoirs and lakes near the Proposed Project are shown on Figure 4.6-2. The Proposed Project area does not drain to Miramar Reservoir.

Flooding Potential and Dam Failure Inundation Areas

A Special Flood Hazard Area (SFHA), as defined by FEMA, is an area of land that has a 1 percent chance of being inundated by a flood during any given year. An SFHA is also referred to as a 100-year flood zone. Segment A of the Proposed Project would span an SFHA over Los Peñasquitos Creek (FEMA 2014). SFHAs for a tributary of La Zanja Canyon Creek and McGonigle Canyon Creek are located approximately 500 feet south and 200 feet north of the Segment B alignment, respectively. Segment C of the Proposed Project would span SFHAs for McGonigle Canyon Creek and Deer Canyon Creek (FEMA 2014). Segment D of the Proposed Project would span an SFHA for a tributary of Los Peñasquitos Creek. The northeast work area at Encina Hub is located within an SFHA for a tributary of Agua Hedionda Creek. FEMA flood zones in the Proposed Project area are shown on Figure 4.6-3. There are no SFHAs located within the substations, Mission—San Luis Rey phase transposition area, or staging yards.

There are several dams located in the County of San Diego regulated by the State Division of Safety of Dams (Office of Emergency Services and Unified Disaster Council 2010). The only dam in the Proposed Project vicinity is an unnamed dam on the west end of Miramar Reservoir. The dam inundation area for the reservoir extends westward from the west side of the reservoir where it intercepts Carroll Canyon Creek, which flows west and northwest to Los Peñasquitos Lagoon. There are no other dams or levees located within the Proposed Project area. The Proposed Project area is not located within a dam failure inundation area (Office of Emergency Services and Unified Disaster Council 2010).

Table 4.6-2 Creeks and Streams in the Proposed Project Area

Project Element/Area	Creeks within Project Area	Downstream Waterbodies
Transmission Line Segment A	Los Peñasquitos Creek Unnamed tributaries	Beeler Creek McGonigle Canyon Creek Los Peñasquitos Creek Los Peñasquitos Lagoon and Pacific Ocean
Transmission Line Segment B	Unnamed tributaries	McGonigle Canyon Creek La Zanja Canyon Creek
	Second San Diego Aqueduct	Lower Otay Reservoir
Transmission Line Segment C	McGonigle Canyon Creek Deer Canyon Creek Unnamed tributaries	McGonigle Canyon Creek Deer Canyon Creek Los Peñasquitos Creek
Transmission Line Segment D	Unnamed tributaries	Los Peñasquitos Creek
Sycamore Substation	None	Beeler Creek
Peñasquitos Substation	None	Los Peñasquitos Creek
Encina Hub	None	Agua Hedionda Creek
Mission—San Luis Rey Phase Transposition North	None	Los Peñasquitos Creek
Mission—San Luis Rey Phase Transposition South	None	Rose Canyon Creek
Staging Yards	None	Beeler Creek Poway Creek Los Peñasquitos Creek McGonigle Canyon Creek La Zanja Canyon Creek

Source: SDRWQCB 1994

Figure 4.6-2 Surface Waters in the Proposed Project Area

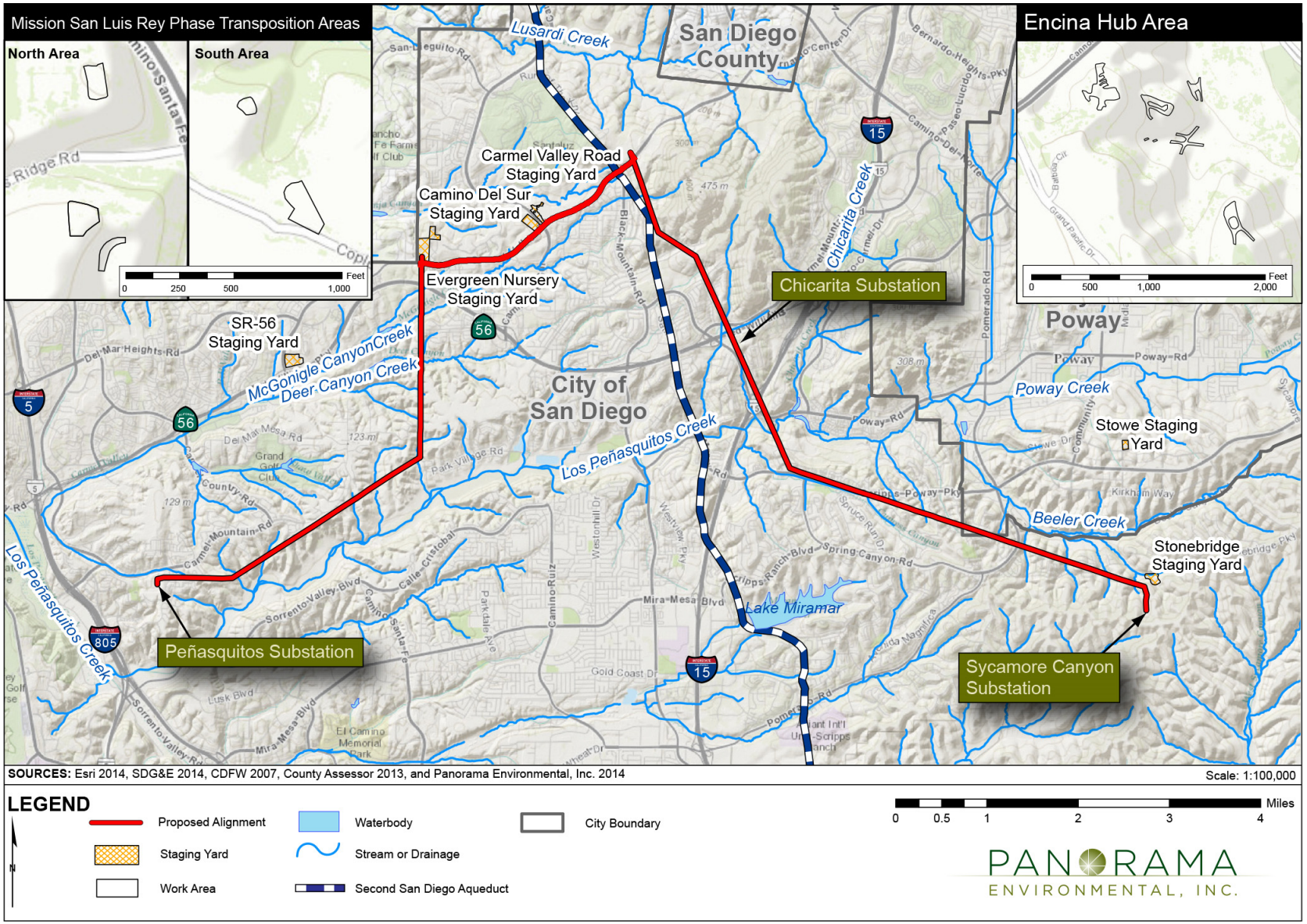
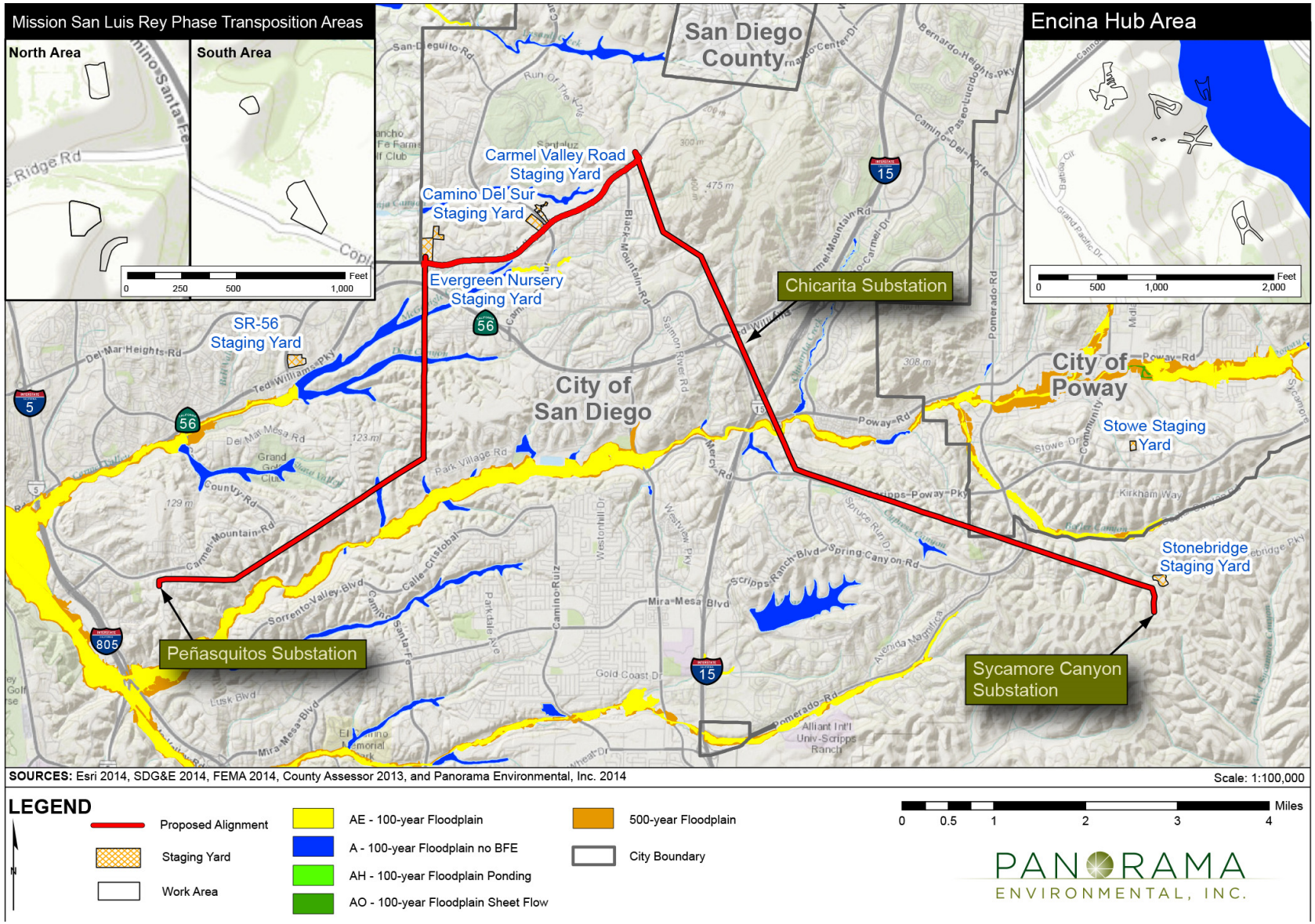


Figure 4.6-3 FEMA Flood Zones in the Proposed Project Area



Water Quality

Urban, rural, industrial, commercial, and agricultural runoff impacts water quality in the Proposed Project area. The major pollutants are sediment, nutrients, and pathogens (e.g., *E. coli*) (SWRCB 2010). Section 303(d) of the 1972 federal Clean Water Act (CWA) requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit a list, called the 303(d) list, to the EPA every two years. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant causing impairment, and establishes a priority for developing a control plan to address the impairment. Impaired (Section 303[d]-listed) water bodies and associated pollutants in the Proposed Project area and downstream of the Proposed Project are summarized in Table 4.6-3.

Table 4.6-3 Impaired Water Bodies Within and Downstream of the Proposed Project Area

Water Body	Approximate Distance from Project	Pollutant	Proposed TMDL Completion Date
Agua Hedionda Creek	0.3 mile north of Encina Hub	Enterococcus Fecal coliform Manganese Phosphorous Selenium Total Dissolved Solids (TDS) Total Nitrogen as N Toxicity	2019 (all pollutants)
Los Peñasquitos Creek (12-mile segment)	Spanned by Segment A	Enterrococcus Fecal coliform Selenium TDS Total Nitrogen as N Toxicity	2019 (all pollutants except toxicity) 2021 (including toxicity)
Los Peñasquitos Lagoon	1.2 miles west of Peñasquitos Substation (Segment D)	Sedimentation/siltation	Completed in 2012 (R9-2012-0033) and approved by USEPA October 30, 2014
Lower Otay Reservoir	Receiving water of Second San Diego Aqueduct (Segment B)	Color Iron Manganese Nitrogen, ammonia pH (high)	2019

Source: SWRCB 2010

Wetlands

Natural depressions accumulate runoff and seepage during wet periods, forming intermittent drainages and seasonal wetlands. Seasonal wetlands lack a restrictive layer, such as a hardpan or claypan; therefore, the hydrologic regime of these features is dominated by periods of saturated soil conditions rather than inundation.

Features within the Proposed Project component areas were reviewed for their potential to be federal or state jurisdictional waters. Wetland delineations were conducted for the entire Proposed Project area, the results of which are discussed further in Section 4.1: Biological Resources. Road rut pools and potential vernal pools are located within Proposed Project work areas and access roads. These pools are seasonally ponded after rain events.

A total of 36.4 acres of potential jurisdictional waters were identified during jurisdictional delineation of the Proposed Project study area, which consists of Proposed Project access roads with a 20-foot survey buffer and a 50-foot survey buffer for all other work areas (Environmental Intelligence 2014; Busby Biological Services, Inc. 2015a, 2015b). Jurisdictional features are summarized in Table 4.6-4.

Table 4.6-4 Jurisdictional Features in the Proposed Project Study Area by Regulatory Agency

Regulatory Agency	Total Area of Jurisdiction (approximate acres)
USACE	9.2
SDRWQCB[1]	9.6
CDFW	15.7
California Conservation Corps	1.9
TOTAL	**36.4**

Note:

[1] Excludes approximately 2.5 acres (approximately 39,234 linear feet) of exempt MS4 V-ditches.

Sources: Environmental Intelligence, LLC. 2014; Busby Biological Services, Inc. 2015a, 2015b

Tsunamis and Seiches

Tsunamis are seismically induced waves generated by sudden movements of the ocean bottom during earthquakes, landslides, or volcanic activity. The Pacific Ocean borders San Diego County to the west. Several active and potentially active earthquake faults are located near the Proposed Project area, including offshore (e.g., Rose Canyon fault zone; see Section 4.5: Geology, Soils, and Mineral Resources). An earthquake occurring offshore or as far away as Asia could result in tsunami generation that could impact the County of San Diego. The closest portion of the Proposed Project area to the Pacific Ocean (Encina Hub) is located approximately

2 miles from the coastline and within a tsunami inundation area (Office of Emergency Services and Unified Disaster Council 2010).

Seiches are wind- or earthquake-induced "standing waves" within enclosed water bodies, such as bays, lakes, or reservoirs. The proposed transmission line does not span any lakes, pools, or other enclosed water bodies. The midsection of Segment A is located about 1 mile north of Miramar Reservoir. Movement on any of the active or potentially active faults located in the Proposed Project vicinity could possibly result in creation of a seiche on the reservoir; however, the effects, if any, would be restricted to the immediate vicinity of the shoreline. The Proposed Project would not be located within the range of seiches originating on Miramar Reservoir.

Groundwater

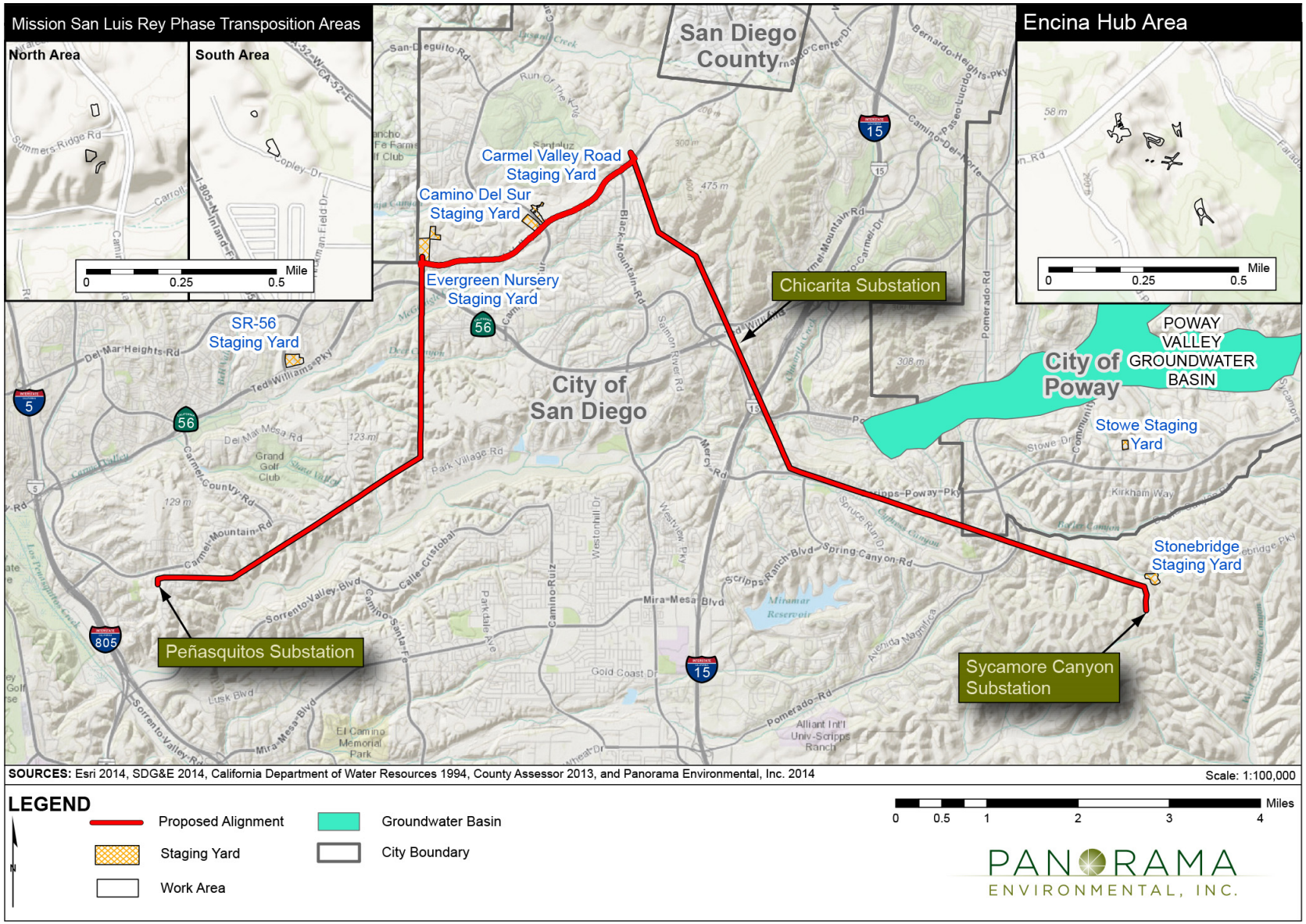
All major drainage basins in the San Diego County region contain groundwater. The groundwater basins are relatively small and generally shallow (SDRWQCB 1994). The aquifers are typically found in river and stream valleys, near the coastline, near lagoons, and in intermountain valleys. The Proposed Project area is near the Poway Valley Groundwater Basin as shown in Figure 4.6-4 (DWR 2004). There are no groundwater basins within the Proposed Project area.

The primary water-bearing units in the Power Valley Groundwater Basin are alluvium, residuum (produced by in-place weathering of crystalline bedrock), and Poway Group, which consists of sandstone and conglomerate units (DWR 2004). Recharge is primarily from percolation of precipitation and infiltration along Poway Creek. Water levels fluctuate seasonally, and water quality is affected by high chloride and TDS concentrations in various areas, which impairs irrigation and domestic use, respectively.

Previous geotechnical investigations conducted in the Proposed Project vicinity provide information on the depth to groundwater in the Proposed Project area. These geotechnical investigations were conducted for other projects. While these studies provide an indication of the depth to groundwater, they may not represent the current groundwater levels in the Proposed Project area because the studies were conducted several years to decades ago. Investigations indicate that groundwater was not observed in three borings drilled to depths ranging from 6.5 to 28 feet below ground surface (bgs) along the southern portion of the Segment A alignment (Benton Engineering, Inc. 1972). Groundwater also was not observed in a boring drilled to a depth of approximately 18 feet bgs along the TL 13804 alignment, near the intersection of Segments C and D (Geocon, Inc. 2012). Depth to groundwater in the Proposed Project area is variable and ranges from about 4 to 5 feet bgs to 60 feet bgs or more, depending on the topography (SWRCB 2014).

Groundwater wells within the Proposed Project area generally are less than 400 feet deep (*Ibid.*).Groundwater quality in the Proposed Project region is characterized by high TDS concentrations, with TDS concentrations decreasing with distance from the coastal plain (i.e., eastward). Groundwater is rated marginal to inferior for domestic use in the coastal plain because of high TDS content and is rated as suitable in the eastern part of the basin (*Ibid.*).

Figure 4.6-4 Groundwater Basins in the Proposed Project Vicinity



Drinking Water Supplies
The San Diego region receives more than 50 percent of its drinking water from the Colorado River, about 30 percent of its drinking water from the Bay-Delta in Northern California, and about 20 percent of its drinking water from local supplies consisting of surface water, groundwater, and recycled water (SDCWA 2015). Domestic water supply for the Proposed Project area is provided by the Cities of San Diego and Poway, member agencies of the San Diego County Water Authority, a public agency that operates as a wholesale water supplier in San Diego County.

4.6.3 Applicable Regulations, Plans, and Standards

4.6.3.1 Federal

Environmental Protection Agency
Clean Water Act
The CWA has regulated the discharge of pollutants to waters of the United States from any point source since it was enacted in 1972. Amendments to the CWA in 1987 added section 402(p), which established a framework for regulating non-point source stormwater discharges under the National Pollution Discharge Elimination System (NPDES) stormwater program, which is described below. Water resources, including wetlands, occurring within the Project area are potentially subject to federal jurisdiction under CWA sections 401 and 404.

Section 401. Section 401 of the CWA requires that any activity, including river or stream crossings during road, pipeline, or transmission line construction that may result in a discharge into a State waterbody must be certified by the SWRCB.

Section 404. Section 404 of the CWA authorizes USACE to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. The USACE issues individual site-specific or general (Nationwide) permits for such discharges.

Drinking Water Standards
The National Primary Drinking Water Regulations maximum contaminant levels (MCLs) are derived from regulations set forth by the EPA. The regulations are enforceable federal standards for public water systems. Secondary MCLs are derived from the National Secondary Drinking Water Regulations and are not enforceable, but the EPA recommends adherence to secondary standards. National Secondary Drinking Water Regulations act as a guideline to avoid contaminants that potentially lead to cosmetic or aesthetic effects.

Federal Emergency Management Agency
National Flood Insurance Act
The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, FEMA has developed Flood Insurance Rate Maps that can be used for planning purposes. Federal regulations governing development in a 100-year floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations, enabling FEMA to require municipalities that participate in the

National Flood Insurance Program to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

4.6.3.2 State

State Water Resources Control Board

Porter-Cologne Water Quality Control Act

SWRCB administers the Porter-Cologne Water Quality Control Act and Section 401 of the CWA through its RWQCBs. The Porter-Cologne Water Quality Control Act, Water Code section 13260, requires that "any person discharging waste, or proposing to discharge waste, within any region that could affect the 'waters of the State' file a report of discharge" with the appropriate RWQCB. Waters of the State, as defined in the Porter-Cologne Act (Water Code section 13050 (e)), are "any surface water or groundwater, including saline waters, within the boundaries of the state."

Section 401 of the Clean Water Act

Pursuant to CWA Section 401, SWRCB considers waters of the State to include, but not be limited to, rivers, streams, lakes, bays, marshes, mudflats, unvegetated seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked bay lands, seasonal wetlands, and riparian woodlands. SWRCB has also claimed jurisdiction and exercised discretionary authority over "isolated waters." Certification under Section 401 is issued through the appropriate RWQCB and ensures that a proposed activity does not violate State and/or federal water quality standards.

Section 303(d) of the Clean Water Act

CWA Section 303(d) requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated list, called the 303(d) list, to the EPA every 2 years. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. States are required to prioritize 303(d) water bodies for development of TMDLs.

National Pollutant Discharge Elimination System Program

The Proposed Project is located in the watersheds under the jurisdiction of SDRWQCB. Runoff water quality is regulated by the NPDES program (established through the CWA, as described above). The objective of the NPDES program is to control and reduce pollutant discharge to water bodies.

Projects disturbing more than 1 acre of land during construction are required to file a Notice of Intent and other permit registration documents with SWRCB to be covered under the state NPDES Construction General Permit for discharges of stormwater associated with construction. A SWPPP must be developed, submitted, and implemented for the Proposed Project area covered by the Construction General Permit and include BMPs that would reduce impacts to surface water quality.

San Diego Water Quality Control Plan

The San Diego Water Quality Control Plan (Basin Plan) is designed to preserve and enhance water quality and protect the beneficial uses of all waters under SDRWQCB jurisdiction. The San Diego Basin Plan presents the beneficial uses that SDRWQCB has specifically designated for local aquifers, streams, marshes, and rivers, as well as the water quality objectives and criteria that must be met to protect these uses.

Department of Water Resources

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act requires the formation of local groundwater sustainability agencies that must assess conditions in their local water basins and adopt locally-based management plans. The Sustainable Groundwater Management Act requires local agencies to form local groundwater sustainability agencies (GSAs). GSAs in high- or medium-priority basins need to adopt groundwater sustainability plans by 2020 and implement the plans to achieve the sustainability goal by 2040. The SWRCB may intervene if local agencies do not form GSAs or fail to adopt or implement a groundwater sustainability plan. No agencies have filed a Notice of Intent to become a GSA within the Proposed Project area (DWR 2015).

California Department of Fish and Wildlife

Section 1602 of the State Fish and Game Code

Section 1602 of the state Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel, or bank of any river, stream, or lake or proposing to use any material from a streambed, to first notify CDFW of such activity. The notification requirement generally applies to any work undertaken within the annual high water mark of a wash, stream, or lake that contains or once contained fish and wildlife, or supports riparian vegetation. SDG&E has proposed to avoid impacts to waters of the state; however, it may not be feasible to fully avoid impacts to waters depending on the alternative that is selected, the need to access work sites through vernal pool areas, and the potential need to conduct grading within or adjacent to potential vernal pools and riparian areas.

4.6.3.3 Local

City of San Diego General Plan

The City of San Diego General Plan (2008) establishes goals and objectives to provide guidance in the growth of the City. The following hydrology and water quality objectives that are relevant to the Proposed Project were identified in the City of San Diego General Plan:

Policy CE-B.4	Limit and control runoff, sedimentation, and erosion both during and after construction activity.
Policy CE-D.2	Protect drinking water resources by implementing guidelines for future development that may affect water supply watersheds, reservoirs, and groundwater aquifers. The guidelines should address site design, BMPs, and stormwater treatment measures.

a) Collaborate with other jurisdictions to reduce the potential for polluted runoff to [flow into] water supply reservoirs.

Policy CE-E.2 Apply water quality protection measures to land development projects early in the process-during project design, permitting, construction, and operations-in order to minimize the quantity of runoff generated on-site, the disruption of natural water flows and the contamination of storm water runoff.

Policy CE-E.3 Require contractors to comply with accepted storm water pollution prevention planning practices for all projects.

Policy CE-E.4 Continue to participate in the development and implementation of Watershed Management Plans for water quality and habitat protection

Policy CE-E.5 Assure that City departments continue to use "Best Practice" procedures so that water quality objectives are routinely implemented

Policy CE-E.7 Manage floodplains to address their multi-purpose use, including natural drainage, habitat preservation, and open space and passive recreation, while also protecting public health and safety.

City of San Diego Municipal Code

The Stormwater Management and Discharge Control Ordinance is in Chapter 4, Article 3, Division 3 of the City of San Diego Municipal Code. The intent of the ordinance is to protect and enhance the water quality of watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the CWA (33 USC Section 1251 *et seq.*) and NPDES Permit No. CA0108758, as amended. The ordinance contains discharge prohibitions and exemptions from the provisions. The ordinance sets out legally enforceable requirements to comply with the ordinance, including BMPs, plan and permit compliance requirements, and responsibilities for the protection of stormwater conveyance systems.

Chapter 14, Article 2, Division 2, Stormwater Runoff and Drainage Regulations, states that all stormwater runoff control, drainage, and flood control facilities shall be constructed in accordance with standards established in the Land Development Manual, and shall comply with Municipal Code Chapter 4, Article 3, Division 3 (Stormwater Management and Discharge Control). The following is required by the regulation:

> All development shall be conducted to prevent erosion and stop sediment and pollutants from leaving the property to the maximum extent practicable. The property owner is responsible to implement and maintain temporary and permanent erosion, sedimentation, and water pollution control measures to the satisfaction of the City Manager, whether or not such measures are a part of approved plans. The property owner shall install, monitor, maintain, and revise these measures, as appropriate, to ensure their effectiveness.

City of San Diego Land Development Manual

Appendix O of the Land Development Manual includes the stormwater standards for the City of San Diego. The stormwater standards provide information to applicants that are processed through the City's Development Services Department. Section IV of the Land Development Manual: Revegetation and Erosion Control Guidelines defines specific procedures for slope stabilization and revegetation. Appendix O of the Land Development Manual contains the Stormwater Standards Manual, which defines specific requirements for water quality treatment consistent with the Model Standard Urban Stormwater Mitigation Plan (SUSMP). It provides guidance on the selection, design, and incorporation of BMPs into project design.

City of Poway General Plan

The City of Poway General Plan includes policies and strategies for maintaining water quality and watershed functions within the City. Relevant policies include:

Policy B Waterways

The natural character of creeks and channels should be maintained or restored to the greatest extent possible with consideration for maintaining adequate flood protection. Development will comply with all State regulations relative to water quality protection to the maximum extent practicable.

The following are relevant strategies:

- Natural locations and rates of discharge into creeks and channels should not be increased without sufficient mitigation to ensure that significant alteration of the natural system will not occur
- Grading should not increase the natural rate of erosion or cause siltation of stream channels

Policy B Groundwater

Groundwater supplies should be protected and monitored to ensure that overdraft does not occur.

City of Poway Municipal Code

Ordinances related to urban runoff contain specific enforcement provisions or are enforceable under generally applicable enforcement provisions. Relevant ordinances include the following:

Stormwater Management and Discharge Control Ordinance (Chapter 13.09)

This ordinance addresses urban runoff. It contains discharge prohibitions, exemptions to discharge prohibitions, BMP requirements, maintenance of BMPs, and inspection and sampling. The ordinance also defines penalties. This ordinance is regulatory and applies to all development projects.

Excavation and Grading Ordinance (Chapter 16.40)

Includes provisions to establish a set of standards regulating design and construction of building sites by grading; protect adjacent properties from

damage caused by blockage, diversion, or channeling of natural runoff waters; and provide for erosion control and proper drainage. Grading permit requirements and exceptions are defined in Chapter 16.42.010.

Standard Urban Stormwater Mitigation Plan Ordinance (Chapter 16.100)

Objectives include ensuring that dischargers do not cause or contribute to a violation of water quality standards; prohibiting non-stormwater discharges in urban runoff; and reducing the discharge of pollutants from urban runoff conveyance systems to the maximum extent practicable. The regulations apply to the development plan approval process for discretionary development applications. The regulation provides methods for BMP selection and specifies standards for new developments including compliance with the City of Poway local SUSMP.

City of Poway Jurisdictional Urban Runoff Management Program

In 2002, the City of Poway adopted a Jurisdictional Urban Runoff Management Program (JURMP) as required by SDRWQCB Order No. 2001-01. The purpose of the JURMP is to present a strategy to reduce the discharge of pollutants from the MS4 to the maximum extent practicable. This involves improving existing programs and developing new programs intended to minimize or eliminate the effects of urban runoff from the City on receiving water bodies. The goal is to improve the quality of the discharge from the MS4, which will have beneficial effects on the local receiving water bodies. The JURMP includes management measures for a variety of different sectors and activity types such as municipal, industrial, commercial, construction, and significant development and re-development activities.

City of Carlsbad General Plan

The City of Carlsbad Open Space, Conservation, and Recreation Element includes policies designed to protect water quality. Relevant policies include:

4-P.58 Implement water pollution prevention methods to the maximum extent practicable, supplemented by pollutant source controls and treatment. Use small collection strategies located at, or as close as possible to, the source (i.e., the point where water initially meets the ground or source of potential pollution) to minimize the transport of urban runoff and pollutants offsite and into a municipal separate storm sewer system (MS4).

4-P.63 Preserve, where possible, natural watercourses or provide naturalized drainage channels within the city. Where feasible, implement restoration and rehabilitation opportunities

City of Carlsbad Watershed Urban Runoff Management Program

The Carlsbad Watershed Urban Runoff Management Program (WURMP) was prepared by the City of Carlsbad, as lead agency, in collaboration with the Cities of Oceanside, Vista, San Marcos, Escondido, Encinitas, Solana Beach, and the County of San Diego. The WURMP was prepared in compliance with NPDES Municipal Storm Water Permit (Order No. R9-2007-0001,

NPDES No. CAS0108758). The Municipal Storm Water Permit requires the development and implementation of WURMPs for each of nine watershed areas within San Diego County, including the Carlsbad Watershed Management Area. The goal of the Carlsbad WURMP is to reduce the discharges of pollutants from the MS4 to the maximum extent practicable and prevent urban runoff discharges from the MS4 from causing or contributing to a violation of water quality standards.

San Diego County Multi-Jurisdiction Hazard Mitigation Plan

The San Diego County Multi-Jurisdiction Hazard Mitigation Plan (MJHMP) is a countywide plan that identifies risks and ways to minimize damage by natural and manmade disasters, consistent with the Federal Disaster Mitigation Act of 2000. The Disaster Mitigation Act establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program. Section 322 of the Disaster Mitigation Act of 2000 specifically addresses mitigation planning at the state and local levels. The MJHMP is intended to serve many purposes, including helping San Diego County residents better understand the natural and manmade hazards that threaten public health, safety, welfare, and economic vitality. The MJHMP also describes the operational capability of important institutions. The MJHMP includes relevant hazard profiles for tsunamis, dam failure, flooding, and rain-induced landslides.

4.6.4 Applicant Proposed Measures

SDG&E has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of APMs and a significance determination is made. The implementation of APMs is then considered as part of the Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SDG&E would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project (refer to Chapter 9 of this EIR), and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs applicable to the hydrology and water quality analysis are provided in Table 4.6-5.

Table 4.6-5 Applicant Proposed Measures for Hydrology and Water Resources Impacts

APM Number	Requirements
APM HYDRO-1: Temporary BMPs	SDG&E's Water Quality Construction BMPs Manual (BMP Manual) organizes and presents SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operations, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination of potential water quality impacts during construction of linear projects such as the Proposed Project. The BMPs described within the BMP Manual were derived from several sources including the State of California guidelines as well as the Caltrans Water Quality BMPs. The BMP Manual will be utilized during construction (by way of preparation and implementation of the SWPPP), operation, and maintenance of the Proposed Project to ensure

APM Number	Requirements
	compliance with all relevant SDG&E and government-mandated regulatory water quality standards. Additionally SDG&E will follow the BMPs in the SDG&E Subregional NCCP.
APM HYDRO-2: Permanent BMPs	Once temporary surface disturbances are complete, areas that would not be subject to additional disturbance will be stabilized to control soil erosion. Disturbed areas must be stabilized per the project SWPPP.
APM HYDRO-3: Avoid Jurisdictional Drainages	To avoid impacts to jurisdictional drainages during road refreshing or reestablishment activities, the following minimization measures would be implemented: • Any excess soil would be spread on site outside of jurisdictional drainages to match existing contours and property compacted or hauled off site. • Graded areas would be stabilized to promote infiltration and reduce run-off potential. • Erosion protection and sediment control BMPs would be implemented in compliance with the General Construction General Permit, Stormwater Pollution Prevention Plan (SWPPP), SDG&E Water Quality Construction BMPs Manual (BMP Manual), and the SDG&E Subregional Natural Community Conservation Program (NCCP). • At designated jurisdictional drainage crossings locations along the access roads, the blade of the smoothing equipment would be lifted 25 feet on either side of the drainage to avoid impacts.
APM GEO-2: Geotechnical Recommendations	A geotechnical study will be conducted for the Proposed Project under the direction of a California-licensed Geotechnical Engineer or Certified Engineer Geologist, and recommendations identified in the geotechnical report will be carried out.
APM GEO-3: Minimize Soil Disturbance	Ground and soil disturbance will be minimized through the use of existing access routes, to the extent feasible. Soil erosion and topsoil loss would be controlled by implementing SDG&E's *BMP Manual* during the construction of the Proposed Project. Additionally, the Proposed Project would comply with the Construction General Permit, which would include the preparation of SWPPP. Topsoil would be salvaged from areas where grading would otherwise result in loss of topsoil, and the salvaged soil would be used to reclaim areas of temporary construction disturbance.
APM HAZ-1: Safety and Environmental Awareness Program	SDG&E will prepare a Safety and Environmental Awareness Program (SEAP) for project-personnel. The SEAP may include training for relevant topics such as: • General safety procedures • General environmental procedures • Fire safety • Biological resources • Cultural resources • Paleontological resources • Hazardous materials protocols and BMPs • SWPPP

APM Number	Requirements
APM HAZ-2: Consistency with State and Federal Regulations	SDG&E shall address potential impacts relating to the handling and use of hazardous materials through compliance with numerous state and federal regulations, including, but not limited to: • Federal Occupational Safety and Health Administration (OSHA) regulations for worker safety in hazardous material remediation and hazardous waste operations (29 CFR Section 1910.120) • Federal OSHA regulations hazard communication for workers (29 CFR Section 1910.1200) • Federal OSHA regulations for toxic air contaminants for workers (29 CFR Section 1910.1000) • CalOSHA regulations for worker safety in hazardous material remediation and hazardous waste operations (8 California Code of Regulations [CCR] 5192), • CalOSHA regulations for hazard communication for workers (8 CCR 5194), and • Department of Toxic Substances Control (DTSC) regulations implementing Resource Conservation and Recovery Act of 1976 (RCRA) and the California Hazardous Waste Control Law (HWCL) (22 CCR Division 4.5). SDG&E would implement standard operational procedures for the transport, use, storage, and disposal of hazardous materials. This includes, but is not limited to the use of absorbent pads for spill containment, specified locations for construction vehicle refueling, and a daily vehicle inspection schedule designed to identify leaking fuels and/or oils as early as possible.
APM HAZ-4: SDG&E Protocols for Herbicide Application	All herbicides utilized during maintenance around transmission and power line structures would follow SDG&E's existing procedures for application of herbicides.

4.6.5 CEQA Significance Criteria

Appendix G of the CEQA Guidelines (14 CCR 15000 *et seq.*) provides guidance on assessing whether a project would have significant impacts on the environment. Consistent with Appendix G, a project would have significant hydrology and water resources impacts if it 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 existing nearby wells would drop to a level that 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 that 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 that would result in flooding on or off site.

e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
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. Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
j. Cause inundation by seiche, tsunami, or mudflow.

4.6.6 Approach to Impact Analysis

This impact analysis considers whether implementation of the Proposed Project or alternatives would result in significant impacts to hydrology and water quality. The analysis focuses on reasonably foreseeable effects of the Proposed Project and alternatives as compared with baseline conditions. The analysis uses significance criteria based on the CEQA Appendix G Guidelines. The potential direct and indirect effects of the Proposed Project and alternatives are addressed; cumulative effects are addressed in Chapter 5: Cumulative Impacts. Effects that would result from operation and maintenance of the Proposed Project and alternatives are also addressed. Applicable APMs are identified and mitigation is defined to avoid or reduce significant hydrologic and water resources impacts.

4.6.7 Proposed Project Impacts and Mitigation Measures

Table 4.6-6 provides a summary of the significance of potential impacts to hydrology and water quality prior to application of APMs, after application of APMs and before implementation of mitigation measures, and after the implementation of mitigation measures.

Table 4.6-6 Summary of Proposed Project Impacts to Hydrology and Water Resources

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-1: Violate any water quality standards or waste discharge requirements	Construction	Significant	Significant APM HYDRO-1 APM HYDRO-2 APM HYDRO-3 APM HAZ-1 APM HAZ-2	Less than significant MM Hydrology-1 MM Hydrology-2 MM Biology-4 MM Biology-6 MM Hazards-2
	Operation and Maintenance	Less than significant	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-2: 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	Construction	Less than significant	---	---
	Operation and Maintenance	Significant	Significant	Less than significant MM Hydrology-3
Impact Hydro-3: 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 that would result in substantial erosion or siltation on or off site	Construction	Significant	Significant APM HYDRO-1 APM GEO-2 APM GEO-3	Less than significant MM Hydrology-1 MM Hydrology-2 MM Biology-6
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-4: 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 that would result in flooding on or off site	Construction	Less than significant	---	---
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Construction	Less than significant	---	---
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-6: Otherwise substantially degrade water quality	Construction	Significant	Significant APM HYDRO-1 APM HAZ-1 APM HAZ-2	Less than significant MM Hazards-2
	Operation and Maintenance	Significant	Less than significant APM HAZ-4	---
Impact Hydro-7: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-8: Locate structures that would impede or redirect flood flows within a 100-year flood hazard area	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-9: 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	Construction	Less than significant	---	---
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-10: Cause inundation by seiche, tsunami, or mudflow	Construction	Less than significant	---	---
	Operation and Maintenance	Less than significant	---	---

Impact Hydro-1: Would the Proposed Project violate water quality standards or waste discharge requirements? (*Less than significant with mitigation*)

Construction

Water Quality Standards

Construction would include the following activities that could violate water quality standards through release of sediment to impaired waterbodies or release of hazardous materials:

- Grading and construction of work pads at new pole locations in Segments A, C, and D, and potentially construction of a new pole at the Encina Hub
- Drilling pole foundations in Segments A, C, and D
- Excavations and trenching for the underground transmission duct bank in Segment B
- Construction of retaining walls around six new work pads in Segments A and D
- Grading of new access roads and minor grading and vegetation removal along existing access roads (i.e., access road refreshing)
- Vegetation clearing and grading for stringing sites, guard structures, and staging yards
- Pole installation and removal at guard structure locations
- Use of hazardous materials for construction vehicles and equipment

Table 4.6-7 provides a summary of the soil-disturbing construction activities proposed by Proposed Project component work areas. Disturbance of soil during construction could result in a water quality violation(s) as a result of soil erosion and and sediment deposition into local streams. Beneficial uses for surface water could be adversely affected through violation of SDRWQCB water quality standards for sediment, suspended solids, total dissolved solids, and turbidity. Portions of the proposed transmission line cross over Los Peñasquitos Creek,

McGonigle Canyon Creek, Deer Canyon Creek, tributaries of these three streams, as well as tributaries of Beeler Creek and La Zanja Canyon Creek.

Los Peñasquitos Lagoon, at the terminus of Los Peñasquitos Creek is listed for sedimentation/siltation and has an adopted TMDL for sediment. Discharge of sediment from the Proposed Project to downstream waterbodies and the resulting increase in sediment in Los Peñasquitos Lagoon would violate water quality standards including an established TMDL, resulting in a significant impact. The increase of impervious surface as a result of the Proposed Project would not violate water quality standards because the additional 95 square feet (0.002 acre) of impervious surface at each pole location would not cause a measurable increase in the volume or intensity of runoff and therefore would not cause or contribute to a water quality violation. Impacts from water quality violation as a result of increased sediment would be reduced by SDG&E's implementation of APMs HYDRO-1, HYDRO-2, and GEO-3 as part of the Proposed Project. APM HYDRO-1 requires compliance with SDG&E's BMP Manual (refer to Appendix L of this EIR) and project-specific SWPPP by implementing sediment and erosion

Table 4.6-7 Proposed Project Soil-Disturbing Activities and Nearest Waterbody

Project Component	Activities (Distance to Nearest Waterbody)	Downstream Waterbody
Transmission Line Segment A	• Grading at work pads (442 feet) • Drilling pole foundations (484 feet) • Retaining walls (450 feet) • Refreshing access roads (160 feet) • Guard structure installation (445 feet) • Stringing site clearing (2,153 feet)	Los Peñasquitos Creek
Transmission Line Segment B	• Cable pole construction (1,312 feet) • Trenching in roadways (808 feet)	McGonigle Canyon Creek
Transmission Line Segment C	• Refreshing access roads (0 feet[1]) • Stringing site clearing (269 feet)	McGonigle Canyon Creek
Transmission Line Segment D	• Grading at work pads (1,112 feet) • Drilling pole foundations (1,157 feet) • Retaining walls (2,521 feet) • Refreshing access roads (1,155 feet) • Guard structure installation (4,230 feet) • Stringing site clearing (1,694 feet)	Los Peñasquitos Creek
Substations	• Excavation for new equipment (3,980 feet)	Los Peñasquitos Creek
Encina Hub	• Pole installation (2,536 feet)	Agua Hedionda Creek
Mission–San Luis Rey Phase Transposition	• None	N/A
Staging Yards	• Vegetation removal (500 feet) • Minor grading/smoothing (500 feet)	Los Peñasquitos Creek

Note:

[1] The Segment C access road crosses McGonigle Creek at an existing culvert.

Sources: SDG&E 2014, CDFW 2007, San Diego County Assessor 2013

control BMPs during construction. APM HYDRO-2 requires stabilization of temporarily disturbed areas. APM GEO-3 would require minimization of ground and soil disturbance, including management of topsoil loss. Impacts would remain significant after APMs because these APMs do not require compliance with the TMDL for Los Peñasquitos Lagoon. In locations where temporary habitat impacts are restored following construction through revegetation, impacts to water quality from erosion and soil loss could still be significant with implementation of these APMs if the stabilization and revegetation of temporarily disturbed areas is not successful. Mitigation Measure Hydrology-1 requires SDG&E to prepare the SWPPP in compliance with the SWRCB Order 2012-0006 and City of San Diego Stormwater Standards Manual and to provide the SWPPP to the City and CPUC for review. Mitigation Measure Biology-6 requires monitoring of revegetated temporary disturbance areas and implementation of corrective actions to assure revegetation success which would reduce potential discharge of sediment and impacts to downstream waters. These mitigation measures would address the construction sources of sedimentation to avoid violation of water quality standards. Proposed Project construction impacts from grading and earth disturbance would be less than significant with mitigation.

The Proposed Project would involve the use of heavy machines, equipment, and helicopters that use petroleum products, hydraulic oil, and other hazardous chemicals. The Proposed Project could violate water quality standards and cause a significant impact if there were an untreated spill of hazardous materials in proximity to a waterbody. SDG&E would implement APMs HAZ-1 and HAZ-2 as part of the Proposed Project. APMs HAZ-1 and HAZ-2 would reduce impacts from hazardous material spills. APM HAZ-1 requires SDG&E to implement an environmental awareness program that would include training on hazardous materials protocols and BMPs. SDG&E also would be required to implement standard operational procedures for the transport, use, storage, and disposal of hazardous materials under APM HAZ-2. Construction impacts associated with untreated hazardous material spills still be significant because APM HAZ-1 does not specify when hazardous material protocols training would occur. Mitigation Measure Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials) requires that all construction personnel attend SEAP training prior to conducting any work on the project site which would assure that construction personnel are appropriately trained before construction starts. Therefore, Proposed Project construction impacts associated with untreated hazardous material spills would be less than significant with mitigation.

Waste Discharge Requirements

The Proposed Project may require discharge of shallow groundwater during foundation construction. The Proposed Project would also involve earthwork and access road use near surface waters subject to SDRWQCB jurisdiction. The Proposed Project would violate waste discharge requirements and cause a significant impact if pumped shallow groundwater or fill materials were discharged to waters of the state or U.S. SDG&E would implement APM HYDRO-3 as part of the Proposed Project. APM HYDRO-3 defines the methods for access road refreshing and grading to avoid discharge of fill materials to jurisdictional waters. Impacts would still be significant with APMs if groundwater were discharged to a stream or storm

drain. Mitigation Measure Hydrology-1 requires that shallow groundwater be applied in a manner that the water would not be discharged to a stream. Therefore, Proposed Project construction impacts associated with the discharge of fill materials would be less than significant with APMs and impacts associated with discharge of shallow groundwater would be less than significant with mitigation.

Construction of the Proposed Project requires use of approximately 25 million gallons of water for dust control and compaction. Mitigation Measure Utilities-1 requires that the water supply for construction be obtained from non-potable sources. RWQCB Waiver Number 2 requires that recycled water not be discharged to Waters of the U.S., Waters of the State or any part of the MS4. The Proposed Project could violate this waste discharge requirement if water for dust control were applied to already wet soils resulting in runoff. Mitigation Measure Hydrology-2 requires that water for dust control be applied in a manner that it does not contribute to runoff. Impacts would be less than significant with mitigation.

The Proposed Project would involve discharge of dredged or fill materials to waters of the state (0.05 acre of permanent impact and 0.06 acre of temporary impact) from access road improvements and work pads in vernal pool and road rut pool areas. All crossing of streams would occur via existing road and culverts and there would be no impact from crossings of streams. Impacts from fills of vernal pools or road rut pools would violate waste discharge requirements and would be significant. Mitigation Measure Biology-4 defines methods for avoidance and minimization of vernal pool and road rut pool impacts. Impacts from fills to waters of the state would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance activities would involve use of existing access routes and would not involve any new areas of ground disturbance that could result in erosion or sedimentation or that would otherwise affect water quality in the Proposed Project area. SDG&E currently operates and maintains similar transmission facilities along all of the Proposed Project alignment except Segment B. SDG&E would continue to regularly inspect, maintain, and repair the new and reconstructed transmission line, power line, and distribution line facilities and substations following completion of Proposed Project construction. Pole brushing would be conducted around the new poles to keep the area clear of vegetation for inspections and maintenance. Segment B would be inspected annually from the ten new vaults by visual examination and using diagnostic instrumentation. The increase of impervious surface as a result of the Proposed Project would not violate water quality standards because the additional 95 square feet (0.002 acre) of impervious surface at each pole location would not cause a measurable increase in the volume or intensity of runoff and would not cause or contribute to a water quality violation. During performance of operation and maintenance activities, the potential risk of contamination from the release of chemicals from equipment or vehicles into existing storm drains or natural drainages would be low. Any accidental spills would be small in volume because the volume would be limited to the oil or hazardous substance contained in a single inspection vehicle, limited in extent, and would be cleaned up immediately by maintenance personnel. Impacts to water quality would be further reduced through

implementation of SDG&E's BMP Manual as required by APM HYDRO-1. Therefore, Proposed Project operation and maintenance impacts to water quality standards or waste discharge requirements would be less than significant. No mitigation is required.

Mitigation Measures: Hydrology-1 and Hydrology-2; Biology-4 and Biology-6 (refer to Section 4.1: Biological Resources); and Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials)

Mitigation Measures Hydrology-1: SWPPP and Treatment of Shallow Groundwater Discharge. SDG&E shall prepare a Stormwater Pollution Prevention Plan in compliance with the State Water Resources Control Board Construction General Permit CAS000002 (Order No. 2012-0006-DWQ) and City of San Diego Stormwater Standards Manual (2012). Project construction plans and the SWPPP shall be submitted to the CPUC and the City of San Diego for review and approval prior to construction. The SWPPP shall address erosion and sedimentation control, groundwater dewatering procedures, hazardous materials identification, handling, disposal and emergency spill procedures, and any other best management procedures necessary to prevent sediment or contaminants from entering Los Peñasquitos Creek.

Groundwater extracted during construction dewatering shall not be discharged to any surface waters or storm drains. If dewatering is necessary, the water shall either be used (i) to irrigate upland areas, (ii) for dust control, or (iii) as makeup for a construction process (e.g., concrete production).

Mitigation Measure Hydrology-2: Restrict Dust Control Water Usage. Water shall only be applied under APM AIR-1 to maintain moist soils. No water shall be applied during or immediately following rain events when soils are already damp. Dust control water shall be applied in a manner that does not create or contribute to runoff.

Significance after mitigation: Less than significant.

Impact Hydro-2: Would the Proposed Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level? (*Less than significant with mitigation*)

Construction

Water would be used for the following construction activities:

- Dust control on disturbed surfaces, access roads, and at staging yards, as required by APM AIR-1
- Compaction of fill soils at retaining walls and permanent work pads to meet engineering specifications
- Irrigation for seeded/planted areas requiring revegetation

The estimated water demand from construction is approximately 25 million gallons over 12 months. SDG&E has proposed use of potable and reclaimed water for construction needs. Mitigation Measure Utilities-1 requires the use of reclaimed water for dust control and soil compaction. Reclaimed water would be obtained from the City of San Diego's North City Water Reclamation Plant located near I-805 and Eastgate Mall, approximately 2.7 miles south of Peñasquitos Substation. The reclaimed water would be obtained from reclaimed water distribution pipelines or would be stored in water towers at Proposed Project staging yards. The water required for Proposed Project construction would be obtained from reclaimed sources and would not be obtained from groundwater supplies. The use of water for construction would therefore have no impact on groundwater supplies.

The new poles to be installed to accommodate the transmission line would result in the creation of approximately 95 square feet of impervious surface at each pole location with a total of 0.14 acre of impervious surface within the 16.3 mile long transmission corridor. No permanent impervious surface is anticipated to be created within the staging yards or at any of the substations where Proposed Project construction work would be performed. The maximum of 0.14 acre of new impervious surface spread out over the Proposed Project area would not significantly impact infiltration to the groundwater table because the area of impervious surface is too small to impact infiltration and there is no groundwater aquifer underlying the Proposed Project area. Therefore, Proposed Project construction impacts to groundwater recharge would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance of the Proposed Project could require water for irrigation of temporarily disturbed areas. Approximately 25.36 acres of temporarily disturbed habitat areas would require revegetation per the NCCP, APM HYDRO-2, and Mitigation Measure Biology-6. Mitigation Measure Biology-6 requires irrigation as needed to achieve revegetation success. Limited supplemental irrigation is expected because Mitigation Measure Biology-6 also requires the use of native species for habitat revegetation; however, if irrigation water were obtained from groundwater supplies it could result in a significant impact because groundwater resources in the project vicinity have already been impacted by over withdrawal. Mitigation Measure Hydrology-3 requires the use of reclaimed water for irrigation of revegetated areas. Therefore, Proposed Project operation and maintenance impacts associated with groundwater depletion would be less than significant with mitigation.

The Proposed Project would not affect water supplies from the creation of impervious surfaces because the total area of impervious surfaces created by the Proposed Project (0.14 acre) is too small to affect groundwater recharge and supply and there is no underlying groundwater aquifer that could be impacted. There would be no impact from the addition of 0.14 acre of impervious surface.

Mitigation Measures: Hydrology-3

> **Mitigation Measures Hydrology-3: Reclaimed Water Use for Irrigation.** Water for operation and maintenance activities, including irrigation of restoration areas, shall be obtained solely from reclaimed water sources. Groundwater shall not be used.

Significance after mitigation: Less than significant.

Impact Hydro-3: Would the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on or off site? (*Less than significant with mitigation*)

Construction

No construction would occur within a stream or river. The Proposed Project would therefore not alter the course of a stream or a river, and there would be no impact from alteration of a stream or a river. The section below describes Proposed Project modifications to area drainage, impervious surfaces, and runoff.

Transmission Line Segments A, C, and D

Drainage Alteration. The proposed poles would be located in steeply sloped areas, particularly along canyons in Segments A and D. Construction of individual flat pads would substantially alter the drainage pattern of the work pad site and, in six locations, require a retaining wall to support the flat pad. Construction of new work pads could cause substantial erosion due to the resulting increased slopes created around the flat pads, which would be a significant impact. As part of the Proposed Project, SDG&E would implement APMs HYDRO-1, GEO-2, and GEO-3, which would reduce erosion. APM HYDRO-1 and GEO-3 require implementation of BMPs consistent with SDG&E's BMP Manual and SWPPP during construction. APM GEO-2 requires SDG&E to conduct a geotechnical study under the direction of a certified engineer and implement the recommendations in the geotechnical report. While these APMs would reduce erosion, the APMs do not provide for review of the SWPPP to verify that the document complies with local standards for sediment and erosion control. These APMs also do not specify requirements to ensure successful revegetation of disturbed areas. Impacts would remain significant after implementation of APMs. Mitigation Measure Hydrology-1 requires City of San Diego and CPUC review to verify that the SWPPP defines adequate sediment and erosion control practices. Mitigation Measure Biology-6 defines standards for revegetation success. Impacts on erosion from drainage alteration would be less than significant with mitigation.

Impervious Surfaces. Construction of the transmission line would involve the addition of impervious surfaces, which can increase the rate of runoff and potentially cause offsite erosion relative to native vegetation. The work pads at each pole location would be compacted and vegetation would be removed from the work pad. The pole foundations would be impervious. Each pole foundation would be approximately 95 square feet. The increase in runoff from an additional 95 square feet of impervious surface would not be substantial and would not cause

erosion on or off site. The increased impervious surface from all of the pole foundations (0.14 acre) is also less than substantial because the total area is too small to contribute noticeably to an increase in runoff. Furthermore, the new impervious surfaces (pole foundations) are dispersed along Segments C and D and do not drain in the same direction or to the same surface waters. Therefore, the increased impervious surfaces are minimal and would not measurably increase the rate or amount of surface runoff. The Proposed Project construction impact to downstream flooding along the transmission line alignment would be less than significant. No mitigation is required.

Runoff. Construction of the transmission line would require approximately 25 million gallons of water for dust control and compaction of soils. SDG&E would implement APM AIR-1 as part of the Proposed Project. APM AIR-1 requires that water be applied to the surface for dust control and to maintain damp soils. The application of water could create runoff if water were over-applied or applied to soils that were already moist or saturated. The creation of surface runoff would be a significant impact if it caused erosion on or offsite. Mitigation Measure Hydrology-2 requires that water only be applied to dry soils and in a manner that does not create runoff. Therefore, Proposed Project construction impacts associated with erosion from created runoff along the transmission alignment would be less than significant with mitigation.

Substations, Encina Hub, and Mission—San Luis Rey Phase Transposition

Substation, Encina Hub, and Mission—San Luis Rey phase transposition construction would not involve any changes in area drainage patterns or alteration of a stream or river. There would be no impact.

Staging Yards

Staging yard preparation could involve grading or smoothing at the Camino Del Sur staging yard. The proposed smoothing would not change the drainage patterns of the staging yard site. The staging yard would be stabilized as required by the SWPPP and APM HYDRO-1 as part of the Proposed Project; however, these APMs do not specify specific BMP requirements or review for the SWPPP. Mitigation Measure Hydrology-1 requires City of San Diego and CPUC review of the SWPPP. Site preparation and use of staging yards would not cause significant erosion with Mitigation Measure Hydrology-1. Impacts from staging yard preparation and use would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Proposed Project area nor divert the course of a stream or river. Maintenance activities would be conducted in areas that were previously disturbed during construction. Operation and maintenance activities would involve use of existing access routes and would not involve any new ground disturbance that could result in erosion or sedimentation in the Proposed Project area. SDG&E currently operates and maintains similar transmission facilities along all of the Proposed Project alignment except Segment B. SDG&E would continue to regularly inspect, maintain, and repair the new and reconstructed transmission line, power line, and distribution line facilities and substations following completion of Proposed Project construction. Segment B would be

inspected annually from the ten new vaults by visual examination and using diagnostic instrumentation. Operation and maintenance work would not result in increased erosion and siltation. Therefore, Proposed Project operation and maintenance impacts would be less than significant. No mitigation is required.

Mitigation Measures: Hydrology-1 and Hydrology-2 (refer to Impact Hydro-1); Biology-6 (refer to Section 4.1: Biological Resources)

Significance after mitigation: Less than significant.

Impact Hydro-4: Would the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff, in a manner that would result in flooding on or off site? (*Less than significant; no mitigation required*)

Construction

Transmission Line

No construction would occur within a stream or river. The Proposed Project would therefore not alter the course of a stream or a river, and there would be no impact.

The Proposed Project would create approximately 95 square feet of impervious surface at each new pole, as discussed in Impact Hydro-3. These impervious surfaces are small and would not increase the rate of runoff to the extent that it would cause flooding on or off site. The amount of water that would be applied for dust control would be limited to the volume of the water truck (approximately 5,000 gallons). Even if this water were to spill and there were a discharge of water from the water truck in one location, the total volume of water carried by a water truck is too small to cause flooding on or off-site. The impact to flooding would be less than significant. No mitigation is required.

Substations, Encina Hub, and Mission—San Luis Rey Phase Transposition

Substation, Encina Hub, and Mission—San Luis Rey phase transposition construction would not involve any changes in area drainage patterns, alteration of a stream or river, or increase in impervious surfaces. There would be no impact.

Staging Yards

Staging yard preparation may include grading or smoothing to create a flat surface for staging or material storage. The proposed smoothing would not change the drainage patterns of the staging yards. Staging yards would be stabilized as required by the SWPPP and APM HYDRO-1 as part of the Proposed Project. Site preparation and staging yard use would not cause significant changes in the rate of runoff. Therefore, Proposed Project construction impacts associated with staging yard grading (if required) and use would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Proposed Project area nor divert the course of a stream or river. Maintenance activities would be conducted in areas that were previously disturbed during construction. Operation and maintenance activities would involve use of existing access routes and would not involve any new ground disturbance that could result in an increase in surface runoff in the Proposed Project area. SDG&E currently operates and maintains similar transmission facilities along all of the Proposed Project alignment except Segment B. SDG&E would continue to regularly inspect, maintain, and repair the new and reconstructed transmission line, power line, and distribution line facilities and substations following completion of Proposed Project construction. Segment B would be inspected annually from the ten new vaults by visual examination and using diagnostic instrumentation. Operation and maintenance work would not result in the creation of impervious surfaces. Therefore, Proposed Project operation and maintenance impacts would be less than significant. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-5: Would the Proposed Project have the potential to create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (*Less than significant; no mitigation required*)

Construction

Water would be required for dust control and also may be required to keep sandy soils firm during excavation of pole foundations. Runoff from water applied for these tasks could create or contribute runoff water if water were over applied or if there were a leak or spill from a water truck. The volume of water that is carried by each water truck is approximately 5,000 gallons and the addition of 5,000 gallons or less of water to a stormwater drainage system would not exceed the planned capacity of the drainage system. Therefore, Proposed Project construction impacts from runoff of dust control water would be less than significant. No mitigation is required.

Approximately 95 square feet of impervious surface would be created at each pole foundation and a total of 0.14 acre of impervious surface would be created within the transmission corridor. No impervious surface is anticipated to be created within the staging yards or at any of the substations. The maximum of 0.14 acres of new impervious surface would not significantly impact the volume of water infiltrating the soil and therefore would not result in creation of large volumes of runoff water. In addition, the pole foundations are dispersed along the 16.3 mile transmission corridor and the runoff from all of the individual poles would not drain to the same stormwater drainage system. Therefore, Proposed Project construction impacts associated with creating or contributing runoff water that would exceed the capacity of stormwater drainage systems would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities for the new transmission line would not result in creation or contribution of runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Water would be used in the post-construction period for site restoration; however, the volume of water required for irrigation of up to 47.42 acres of restored areas would be minimal and would not exceed the capacity of a stormwater drainage system. Water would infiltrate the soil within applied areas and runoff from the site would be minimal. Therefore, Proposed Project operation and maintenance impacts would be less than significant. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-6: Would the Proposed Project have the potential to otherwise substantially degrade water quality? (*Less than significant with mitigation*)

Construction

As discussed in Impact Hydro-1, Proposed Project construction would involve the use of hazardous materials, which could impact water quality in the case of a spill. The direct or indirect discharge of these materials to surface waters would degrade water quality and cause a significant impact. SDG&E would implement APMs HYDRO-1, HAZ-1 and HAZ-2 as part of the Proposed Project, which would reduce impacts from hazardous material spills. APM HYDRO-1 requires implementation of protocols for use, transport, and disposal of hazardous materials and would minimize the potential for the generation of polluted runoff. APM HAZ-1 requires SDG&E to implement an environmental awareness program that would include training on hazardous materials protocols and BMPs. APM HAZ-2 requires implementation of standard operational procedures for the transport, use, storage, and disposal of hazardous materials. Construction impacts associated with untreated hazardous material spills would still be significant because APM HAZ-1 doesn't specify when hazardous material protocols training would occur. Mitigation Measure Hazards-2 requires that all construction personnel attend SEAP training prior to conducting any work on the project site which would assure that construction personnel are appropriately trained before construction starts. Therefore, Proposed Project construction impacts associated with degrading water quality within stormwater drainage systems would be less than significant with mitigation.

Operation and Maintenance

Operational activities also would not generate polluted runoff. Herbicides may be used to prevent vegetation that is cleared during vegetation management activities from re-establishing during Proposed Project operation. The application of herbicides would cause a significant impact if the herbicides were spilled or incorrectly applied and transported to a surface waterbody. SDG&E would implement APM HAZ-4 as part of the Proposed Project, which requires adherence to SDG&E protocols for herbicide application. These herbicides and protocols are currently being applied within the transmission corridor and the use of herbicides on the new poles would not increase the risk of spills or degradation of water resources.

Therefore, Proposed Project operation and maintenance impacts would be less than significant with APMs. No mitigation is required.

Mitigation Measures: Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials)

Significance after mitigation: Less than significant.

Impact Hydro-7: Would the Proposed Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (*No impact*)

The Proposed Project does not involve building or placement of new housing. As described in Impact Hydro-3, the Proposed Project would not increase the rate of runoff to the extent that it would cause downstream flooding. No impact would occur.

Mitigation Measures: None required.

Impact Hydro-8: Would the Proposed Project locate structures that would impede or redirect flood flows within a 100-year flood hazard area? (*No impact*)

The Proposed Project alignment would span several 100-year flood hazard areas, including those for Los Peñasquitos Creek, a tributary of Los Peñasquitos Creek, McGonigle Canyon Creek, and Deer Canyon Creek. The transmission line route is approximately 200 feet north of the McGonigle Canyon Creek flood zone and approximately 500 feet south of the La Zanja Canyon Creek flood zone along Segment B. Segment B Project elements would not intersect these flood zones and all Segment B structures are located underground where they would not intersect the flood zone. The Encina Hub work area is located within a 100-year flood zone. An existing pole may be replaced at the Encina Hub; however, no additional new structures are proposed that could impede 100-year flood flows. None of the other Proposed Project work areas are located within a 100-year flood zone. No structures would be installed within flood zones. No impact would occur.

Mitigation Measures: None required.

Impact Hydro-9: Would the Proposed Project have the potential to expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? (*Less than significant; no mitigation required*)

There are no levees or dams within the Proposed Project area. The closest dam is an unnamed dam on the west end of Miramar Reservoir, located approximately 1 mile south of the midsection of Segment A. The Proposed Project area is not located within the dam failure inundation area for the dam on Miramar Reservoir. Proposed Project construction and operation would not expose people or structures to significant risk of loss, injury, or death as a result of flooding as a result of levee or dam failure. There would be no impact related to flooding from levee or dam failure.

Transmission Line
The Proposed Project alignment would span several 100-year flood hazard areas, including those for Los Peñasquitos Creek, a tributary of Los Peñasquitos Creek, McGonigle Canyon Creek, and Deer Canyon Creek. The transmission line route is approximately 200 feet north of the McGonigle Canyon Creek flood zone and approximately 500 feet south of the La Zanja Canyon Creek flood zone along Segment B. Segment B project elements would not intersect these flood zones. Transmission line construction or maintenance work would not be conducted within flood zones and the proposed transmission line would not expose people or structures to a risk of loss, injury, or death involving flooding. There would be no impact.

Encina Hub
A portion of the Encina Hub work area intersects a 100-year flood zone for Agua Hedionda Creek. The proposed work includes relocation of transmission and power lines on existing structures and potential replacement of a transmission pole. The line relocation work would not expose new structures to a significant risk of loss because the work would be conducted on an existing structure that is currently located within the flood zone and no new structures would be placed within the flood zone. The line relocation at Encina Hub would not increase the risk to SDG&E workers from flooding because the structure within the flood zone at Encina Hub currently exists and the operation and maintenance requirements at the pole would not change as a result of the Proposed Project. Therefore, impacts from flooding would be less than significant. No mitigation is required.

Substations, Mission—San Luis Rey Phase Transposition, and Staging Yards
Sycamore and Peñasquitos substations, the Mission—San Luis Rey phase transposition work area, and all Proposed Project staging yards are located outside of a 100-year flood hazard area. There would be no impact from flooding as a result of construction, operation, or maintenance activities in these areas.

Mitigation Measures: None required.

Impact Hydro-10: Would the Proposed Project have the potential to cause inundation by seiche, tsunami, or mudflow? (*Less than significant; no mitigation required*)

Transmission Line All Segments
The risk of inundation from a tsunami is greatest along an exposed coast and greatly decreases with distance from the coast. The closest portion of the Proposed Project area (west end of Segment D) is located approximately 2.4 miles from the Pacific Ocean coastline and is elevated outside of a coastal inundation area; therefore, there is no impact from tsunami. The Proposed Project area does not span any lakes, pools, or other closed water bodies. Miramar Reservoir is located approximately 1 mile south of Segment A and separated from Miramar Reservoir by steep topography. Effects from a seiche would be localized and would not propagate to the Proposed Project area due to the distance between the Proposed Project and Miramar Reservoir. There is no potential for damage due to seiche. Most structures that would be installed for the Proposed Project would be on topographical high points (i.e., terraces and ridges) and,

therefore, would not be susceptible to mudflows. Tubular steel poles and cable poles would be installed at depths of 10 to 40 feet bgs depending on foundation type and soil conditions and, therefore, would be able to withstand a mudflow in the unlikely event one was to occur. Impacts would be less than significant. No mitigation is required.

Encina Hub
The Encina Hub work area is located approximately 2 miles from the Pacific Ocean and within a tsunami inundation area. The work at Encina Hub involves relocation of existing transmission lines and potential replacement of an existing transmission pole. The Proposed Project would not cause inundation from a tsunami because the structures at Encina Hub currently exist and would either be left in place or replaced in the same location. Therefore, the impact of inundation by tsunami would be less than significant. No mitigation is required.

Encina Hub is not located within a seiche inundation area and there is no potential for the project to cause a mudflow or be inundated by a mudflow due to the relative flat nature of the terrain at Encina Hub. The Proposed Project would have no impact related to inundation by seiche or mudflow.

Substations
The Sycamore Canyon and Peñasquitos Substations are not located in tsunami or seiche inundation areas or areas that are subject to mudflows. The additional racks at these substations would not change the current substation footprints and would be constructed in a similar manner to the existing substations. Therefore, there would be no impact related to inundation by seiche, tsunami, or mudflow.

Mission—San Luis Rey Phase Transposition and Staging Yards
Mission—San Luis Rey phase transposition work area and all Proposed Project staging yards are located outside of a tsunami or seiche inundation areas. The transposition of transmission line conductor and the addition of staging materials would not cause a mudflow because the ground disturbance associated with these activities would be very minor and would not destabilize the relatively flat work areas. Therefore, there would be no impact from inundation by a tsunami, seiche, or mudflow as a result of construction, operation, or maintenance activities in these areas.

Mitigation Measures: None required.

4.6.8 Alternative 1: Eastern Cable Pole at Carmel Valley Road (Avoids Cable Pole in Black Mountain Ranch Community Park)

Alternative 1 would involve installation of a new cable pole immediately south of and adjoining Carmel Valley Road within existing SDG&E ROW, transitioning the Segment A overhead transmission line directly into the proposed Carmel Valley Road Segment B underground alignment. Alternative 1 would avoid installation of a cable pole and underground duct bank within the Black Mountain Ranch Community Park. This alternative is described in more detail in Chapter 3: Alternatives.

4.6.8.1 Alternative 1 Environmental Setting

There are no surface water resources, groundwater basins, or FEMA floodplains located in the vicinity of Alternative 1. Alternative 1 would be constructed immediately adjacent to Carmel Valley Road and the associated stringing site and work areas would be located in Black Mountain Ranch Community Park.

4.6.8.2 Alternative 1 Impacts and Mitigation Measures

Table 4.6-8 summarizes the impacts to hydrology and water resources from Alternative 1.

Table 4.6-8 Summary of Alternative 1 Impacts to Hydrology and Water Resources

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-1: Violate any water quality standards or waste discharge requirements	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-2: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-3: 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 that would result in substantial erosion or siltation on or off site	Construction	Significant	Less than significant APM HYDRO-1 APM HYDRO-2 APM GEO-3	---
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-4: 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 that would result in flooding on or off site	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-6: Otherwise substantially degrade water quality	Construction	Significant	Significant APM HYDRO-1 APM HAZ-1 APM HAZ-2	Less than significant MM Hazards-2
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-7: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-8: Locate structures that would impede or redirect flood flows within a 100-year flood hazard area	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-9: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-10: Cause inundation by seiche, tsunami, or mudflow	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Alternative 1 would have no impact on eight CEQA significance criteria for hydrology and water resources: Impacts Hydro-1, -2, -4, -5, -7, 8, -9, and -10, as indicated in Table 4.6-8 above. Alternative 1 would have no impact on these criteria because the alternative is not located in the vicinity of any waterbodies, floodplains, or groundwater basins. The cable pole, 137-foot by 38-foot concrete access pad, and driveway would not cause substantial flooding or exceed the capacity of a stormwater drainage system.

Impact Hydro-3: Would Alternative 1 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 that would result in substantial erosion or siltation on or off site? (*Less than significant; no mitigation required*)

Construction

Construction of Alternative 1 would involve grading of the hill slope around the cable pole site that was previously constructed for Carmel Valley Road; therefore, grading would not alter the drainage patter of the area or alter the course of a stream or river. Construction of the flat pad and retaining wall around the cable pole within the Carmel Valley Road hill slope could result in erosion if the hill slope grading is not stabilized throughout the construction process. Erosion from the cable pole construction would be a significant impact. Implementation of APMs

HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), and GEO-3 (minimize soil disturbance) would reduce erosion-related impacts from the cable pole construction through the use of temporary and permanent erosion and sediment control BMPs. Impacts would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Alternative 1 area nor divert the course of a stream or river. Maintenance of the Alternative 1 cable pole would be conducted from the flat pad surrounding the cable pole and maintenance activities would not involve any new ground disturbance that could result in erosion or sedimentation in the area. Operation and maintenance work would not result in increased erosion or siltation. Impacts would be less than significant. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-6: Would Alternative 1 have the potential to otherwise substantially degrade water quality? (*Less than significant with mitigation*)

Construction

Construction of Alternative 1 would use construction equipment that requires hazardous materials (e.g., diesel, oil, hydraulic fluids) to operate. A spill of hazardous materials could impact water quality. While there are no surface waters in the Alternative 1 area, hazardous materials could be transported to surface waters via a storm drain. The discharge of hazardous materials to surface waters would degrade water quality and cause a significant impact. Alternative 1 would not otherwise substantially degrade water quality. Implementation of APMs HYDRO-1 (temporary BMPs), HAZ-1 (SEAP), and HAZ-2 (consistency with state and federal regulations) would reduce impacts from hazardous material spills. Construction impacts associated with untreated hazardous material spills would still be significant because APM HAZ-1 doesn't specify when hazardous material protocols training would occur. Mitigation Measure Hazards-2 requires that all construction personnel attend SEAP training prior to conducting any work on the project site which would assure that construction personnel are appropriately trained before construction starts. Therefore, Alternative 1 construction impacts associated with untreated hazardous material spills would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance activities would be conducted from the flat pad surrounding the cable pole and paved roadways. Equipment and vehicles used during operation and maintenance would be similar to existing vehicles traveling on Carmel Valley Road. Impacts to water quality would be less than significant. No mitigation is required.

Mitigation Measures: Mitigation Measure Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials)

Significance after mitigation: Less than significant.

4.6.9 Alternatives 2a and 2b: Eastern Cable Pole at Pole P40 and Underground Alignment through City Open Space or City Water Utility Service Road (Avoids Cable Pole in Black Mountain Ranch Community Park)

Alternative 2 would involve installation of a new cable pole in the same location for both Alternatives 2a and 2b, approximately 300 feet south of Carmel Valley Road within existing SDG&E ROW, transitioning the Segment A overhead transmission line into the proposed Carmel Valley Road Segment B underground alignment via one of two underground alignment options. Alternative 2a would locate the underground duct bank west of SDG&E ROW through City of San Diego open space and into Carmel Valley Road. Alternative 2b would locate the underground duct bank east of SDG&E ROW through a City of San Diego water utility service road and into Carmel Valley Road. Both Alternative 2a and 2b would avoid installation of a cable pole and underground duct bank within the Black Mountain Ranch Community Park. This alternative is described in more detail in Chapter 3: Alternatives.

4.6.9.1 Alternative 2 Environmental Setting

There are no surface water resources, groundwater basins, or FEMA floodplains located in the vicinity of Alternative 2. Alternative 2 would be constructed south of Carmel Valley Road and would require an underground transmission line to Carmel Valley Road. The Alternative 2 stringing site would be located in Black Mountain Ranch Community Park.

4.6.9.2 Alternative 2 Impacts and Mitigation Measures

Table 4.6-9 summarizes the impacts to hydrology and water resources from Alternative 2.

Table 4.6-9 Summary of Alternatives 2 Impacts to Hydrology and Water Resources

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-1: Violate any water quality standards or waste discharge requirements	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-2: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-3: 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 that would result in substantial erosion or siltation on or off site	Construction	Significant	Less than significant APM HYDRO-1 APM HYDRO-2 APM GEO-3	---
	Operation and Maintenance	Less than significant	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-4: 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 that would result in flooding on or off site	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-6: Otherwise substantially degrade water quality	Construction	Significant	Significant APM HYDRO-1 APM HAZ-1 APM HAZ-2	Less than significant MM Hazards-2
	Operation and Maintenance	Significant	Less than significant APM HAZ-4	---
Impact Hydro-7: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-8: Locate structures that would impede or redirect flood flows within a 100-year flood hazard area	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-9: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-10: Cause inundation by seiche, tsunami, or mudflow	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Alternatives 2 would have no impact on eight CEQA significance criteria for hydrology and water resources: Impacts Hydro-1, -2, -4, -5, -7, -8, -9, and -10, as shown in Table 4.6-9 above. Alternative 2 would have no impact on these criteria because the alternative is not located in the vicinity of any waterbodies, floodplains, or groundwater basins. Alternative 2 would not cause substantial flooding or exceed the capacity of a stormwater drainage system because no additional runoff would be generated from the alternative; neither option 2a nor 2b would require additional impervious surface relative to the Proposed Project.

Impact Hydro-3: Would Alternative 2 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 that would result in substantial erosion or siltation on or off site? (*Less than significant; no mitigation required*)

Construction

Construction of Alternative 2 would involve soil disturbance and excavation to install the cable pole. There would also be earth disturbance during duct bank construction (e.g., trenching) and installation of the underground transmission line in either option 2a or 2b. The cable pole installation and duct bank construction would not alter the drainage pattern of the area or alter the course of a stream or river. Construction of the cable pole and underground duct bank could result in erosion if disturbed and excavated soils were not stabilized. Erosion from Alternative 2 construction would be a significant impact. Implementation of APMs HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), and GEO-3 (minimize soil disturbance) would reduce erosion-related impacts from the cable pole and duct bank construction through the use of temporary and permanent erosion and sediment control BMPs. Impacts would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Alternative 2 area nor divert the course of a stream or river. Maintenance of the Alternative 2 cable pole and underground alignment would be conducted from existing access roads and from the vaults installed during construction of the underground transmission line. Operation and maintenance activities would not involve any new ground disturbance that could result in erosion or sedimentation in the area. Operation and maintenance work would not result in increased erosion or siltation. Impacts would be less than significant. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-6: Would Alternative 2 have the potential to otherwise substantially degrade water quality? (*Less than significant with mitigation*)

Construction

Construction of Alternative 2 would use construction equipment that requires hazardous materials (e.g., diesel, oil, hydraulic fluids) to operate. A spill of hazardous materials could impact water quality. While there are no surface waters in the Alternative 2 area, hazardous materials could be transported to surface waters via a storm drain. The discharge of hazardous

materials to surface waters would degrade water quality and cause a significant impact. Alternative 2 would not otherwise substantially degrade water quality. Implementation of APMs HYDRO-1 (temporary BMPs), HAZ-1 (SEAP) and HAZ-2 (consistency with state and federal regulations) would reduce impacts from hazardous material spills. Construction impacts associated with untreated hazardous material spills would still be significant because APM HAZ-1 doesn't specify when hazardous material protocols training would occur. Mitigation Measure Hazards-2 requires that all construction personnel attend SEAP training prior to conducting any work on the project site which would assure that construction personnel are appropriately trained before construction starts. Therefore, Alternative 2 construction impacts associated with untreated hazardous material spills would be less than significant with mitigation.

Operation and Maintenance

The application of herbicides to control invasive weeds and to maintain clearance around the cable pole would cause a significant impact if the herbicides were spilled or incorrectly applied and transported to a surface waterbody. Implementation of APM HAZ-4 (SDG&E protocols for herbicide application) would reduce operational impacts from herbicide spills to a less-than-significant level. Other hazardous materials that could be used include petroleum products (e.g., oil, grease, fuel) included in maintenance vehicles. These materials would be similar in quantity to other vehicles operating on Carmel Valley Road directly adjacent to the cable pole. The infrequent maintenance activity would not increase the potential for spills of these petroleum products. Operation and maintenance of the transmission line would not otherwise degrade water quality because the transmission line and maintenance of the transmission line would not produce or release water quality pollutants. No mitigation is required.

Mitigation Measures: Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials)

Significance after mitigation: Less than significant.

4.6.10 Alternative 3: Los Peñasquitos Canyon Preserve – Mercy Road Underground (Avoids Overhead in Northern Half of Segment A, Underground in Segment B, and Overhead in Segment C)

Alternative 3 would include installing an underground alignment starting at a new cable pole where the existing SDG&E ROW crosses Ivy Hill Road and ending at a new cable pole approximately 550 feet west of the Peñasquitos Junction (i.e., where Proposed Project Segments C and D meet). The underground alignment would follow Scripps Poway Parkway, Mercy Road, Black Mountain Road, and finally Park Village Road. Alternative 3 would bypass the northern half of Proposed Project Segment A and all of Proposed Project Segments B and C. This alternative is described in more detail in Chapter 3: Alternatives.

4.6.10.1 Alternative 3 Environmental Setting

Watersheds
Alternative 3 would be underground in City of San Diego roads and a small portion at the eastern and western end of the alignment would be located underground in unpaved access roads where the alternative connects to the Proposed Project route. Alternative 3 would be located in the Peñasquitos watershed and would drain to Los Peñasquitos Creek.

Flood Zones
Alternative 3 crosses the flood zone for Los Peñasquitos Creek Flood zones as shown on Figure 4.6-5. Alternative 3 is not located in a tsunami or seiche inundation area.

Waterbodies
Alternative 3 crosses six unnamed tributaries to Los Peñasquitos Creek, Los Peñasquitos Creek within the Los Peñasquitos Preserve, and the Second San Diego Aqueduct. The location of surface waters in relation to Alternative 3 is shown on Figure 4.6-6. The Los Peñasquitos Creek crossing would be at the location of an existing bridge on Black Mountain Road. All crossings of unnamed tributaries to Los Peñasquitos Creek and the Second San Diego Aqueduct would occur within the existing roadway where culverts or bridges already exist.

Water Quality
Los Peñasquitos Creek is an impaired waterbody on the 303(d) list (refer to Table 4.6-3, above). Los Peñasquitos Creek drains to Los Peñasquitos Lagoon, which has an adopted TMDL for sediment (Resolution No. 2014-0001). The Second San Diego Aqueduct is a tributary to the Lower Otay Reservoir. Lower Otay Reservoir is on the 303(d) list of impaired waterbodies for color, iron, manganese, nitrogen, ammonia (total ammonia), and pH (high).

Groundwater
There are no groundwater basins in the vicinity of Alternative 3, as shown on Figure 4.6-4. Groundwater may be encountered in excavations due to perched groundwater or shallow groundwater near natural drainages.

Figure 4.6-5 FEMA Flood Zones in the Project Alternative Areas

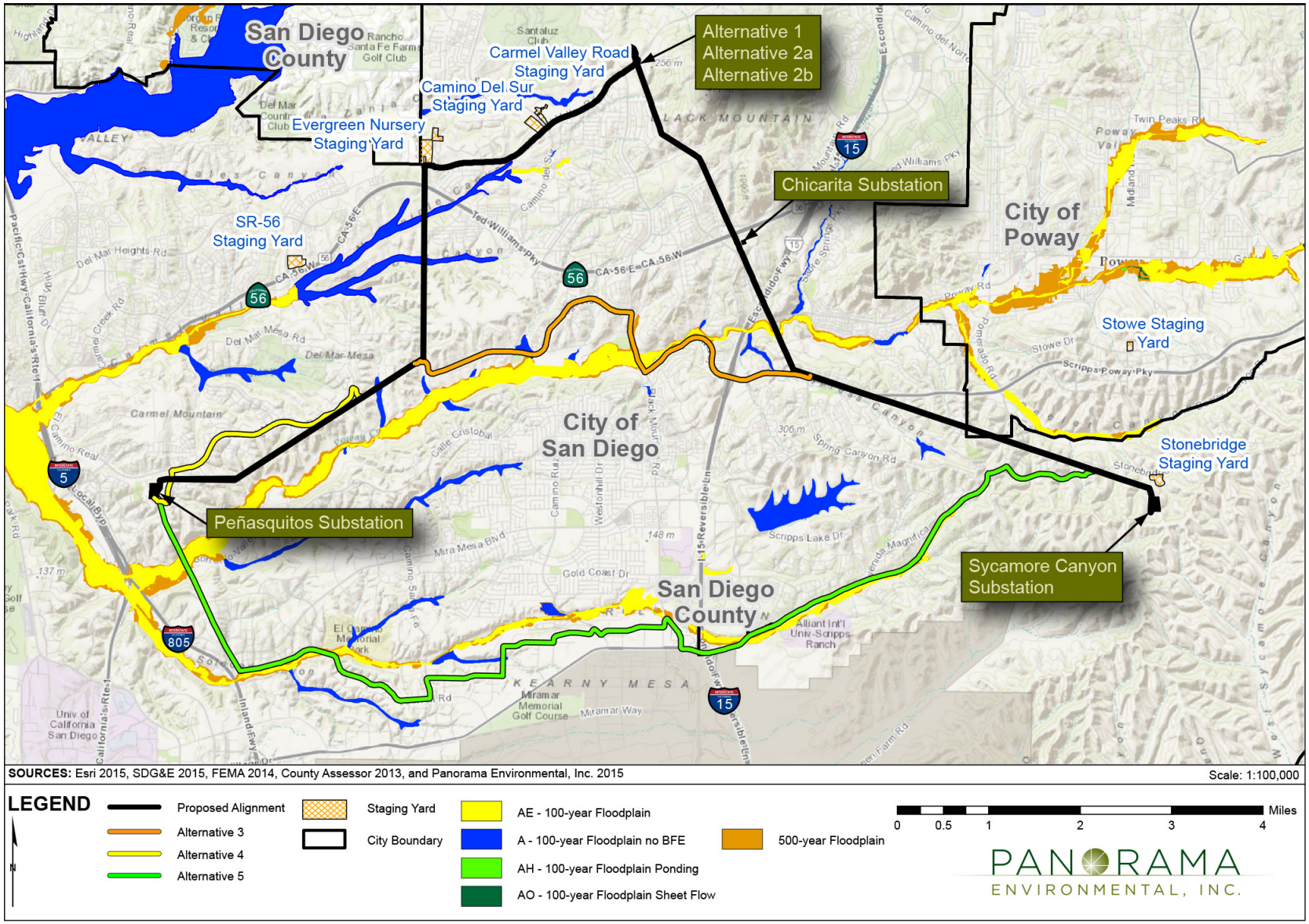
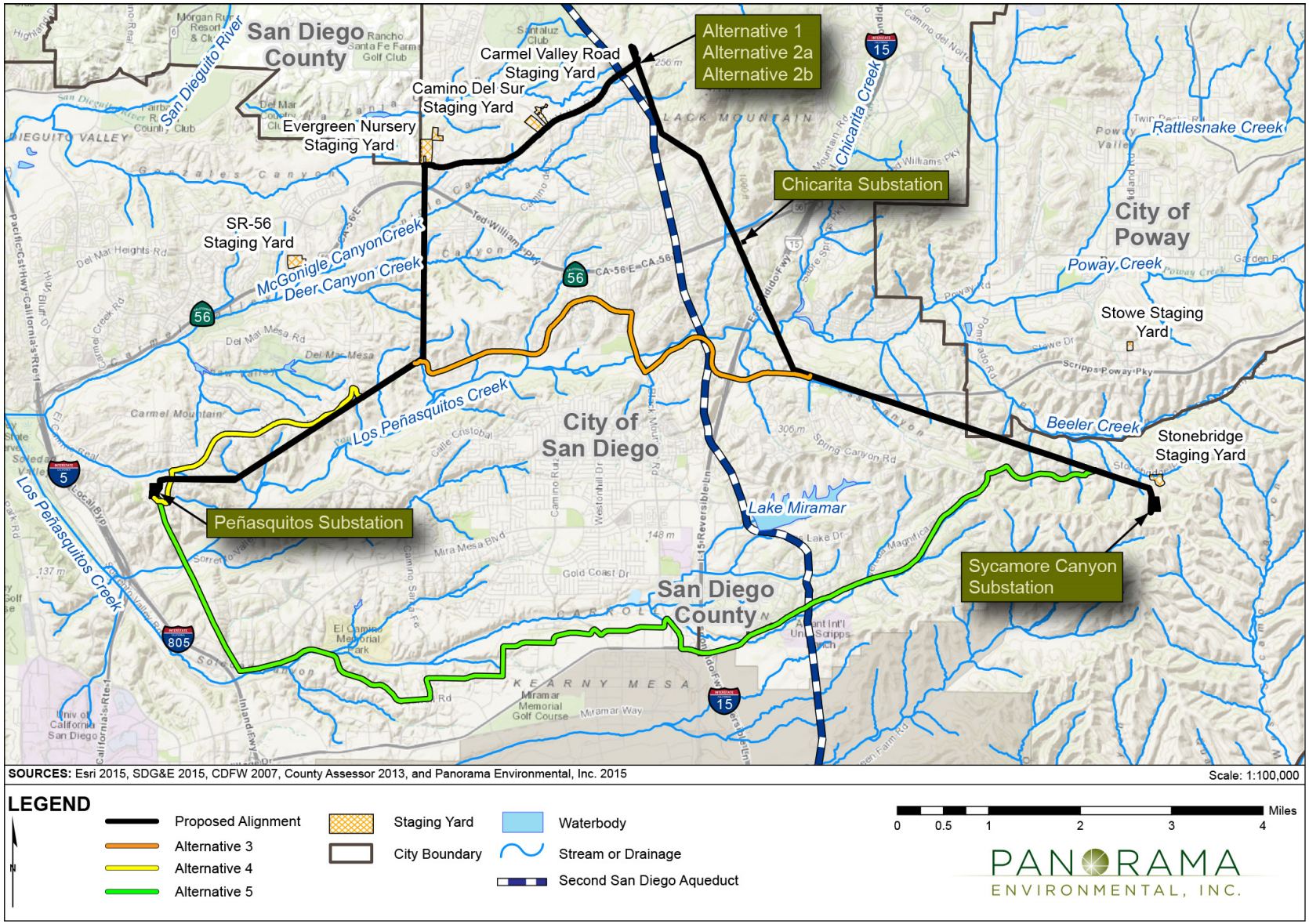


Figure 4.6-6 Surface Waters in the Project Alternative Areas



4.6.10.2 Alternative 3 Impacts and Mitigation Measures

Table 4.6-10 summarizes the impacts to hydrology and water resources from Alternative 3.

Table 4.6-10 Summary of Alternative 3 Impacts to Hydrology and Water Resources

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-1: Violate any water quality standards or waste discharge requirements	Construction	Significant	Significant APM HYDRO-1 APM HYDRO-2 APM HAZ-1 APM HAZ-2 APM GEO-3	Less than significant MM Hydrology-1 MM Hydrology-4
	Operation and Maintenance	Less than Significant	---	---
Impact Hydro-2: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-3: 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 that would result in substantial erosion or siltation on or off site	Construction	Significant	Less than significant APM HYDRO-1 APM HYDRO-2 APM GEO-3	---
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-4: 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 that would result in flooding on or off site	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-6: Otherwise substantially degrade water quality	Construction	Significant	Significant APM HYDRO-1 APM HAZ-1 APM HAZ-2	Less than significant MM Hazards-2
	Operation and Maintenance	No impact	---	---
Impact Hydro-7: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-8: Locate structures that would impede or redirect flood flows within a 100-year flood hazard area	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-9: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-10: Cause inundation by seiche, tsunami, or mudflow	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Alternatives 3 would have no impact on seven CEQA significance criteria for hydrology and water resources: Impacts Hydro-2, -4, -5, -7, -8, -9, and -10, as shown in Table 4.6-10 above. Alternative 3 would have no impact on these criteria because the alternative is not located in the vicinity of any groundwater basins and the underground alignment would be installed under existing impervious roadways where it would not interfere with any floodplains. Alternative 3 would not cause substantial flooding or exceed the capacity of a stormwater drainage system because no additional runoff would be generated from the alternative; Alternative 3 would not create additional impervious surfaces because it would be located underground in existing paved roadways.

Impact Hydro-1: Would Alternative 3 violate any water quality standards or waste discharge requirements? (*Less than significant with mitigation*)

Construction

Alternative 3 involves crossings of Los Peñasquitos Creek and Second San Diego Aqueduct and involves construction in areas that drain to Los Peñasquitos Creek and Second San Diego

Aqueduct, which are impaired waterbodies. Los Peñasquitos Creek is a perennial creek and the tributaries are ephemeral. Alternative 3 construction would violate water quality standards if construction activities (e.g., trenching, excavation, paving) discharge sediment or waste to a waterbody or if hazardous materials (e.g., oil, grease, gas, hydraulic fluid) are spilled and transported to a waterbody; these impacts would be significant. Implementation of APMs HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), GEO-3 (minimize soil disturbance), HAZ-1 (SEAP), and HAZ-2 (consistency with state and federal regulations) would reduce impacts from soil disturbance and hazardous materials during Alternative 3 construction. While these APMs would reduce impacts, Alternative 3 could still result in a significant impact from discharge of sediment, which could violate water quality standards, particularly during construction in Los Peñasquitos Canyon because the downstream waterbody, Los Peñasquitos Lagoon, has a TMDL for sediment. Mitigation Measure Hydrology-1 requires that SDG&E prepare a SWPPP that complies with the requirements of the City of San Diego Storm Water Standards Manual. Impacts would be less than significant with mitigation.

Alternative 3 involves a crossing of an unnamed tributary to Los Peñasquitos Canyon within an unpaved access road west of Park Village Road. The underground alignment is also located in roadways that cross several unnamed tributaries via culverts. The crossing of Los Peñasquitos Creek would be overhead via the existing roadway bridge and would not impact water quality or violate waste discharge requirements. Underground duct bank construction within waters of the state or U.S. would violate waste discharge requirements if SDG&E did not obtain a waiver of waste discharge requirements from San Diego Regional Water Quality Control Board, or if construction occurred when the creek contained flowing water. The violation of waste discharge requirements would be a significant impact. Mitigation Measure Hydrology-4 would reduce impacts by restricting construction within creeks or natural drainages to periods when the drainage would be dry and requiring SDG&E to obtain a waiver of waste discharge requirements prior to any construction within a natural drainage. SDRWQCB would include measures to protect water quality in the waiver of waste discharge requirements. Implementation of all measures included in the waiver of waste discharge requirements would prevent violation of a waste discharge requirement. Impacts would be less than significant with mitigation.

Operation and Maintenance

Alternative 3 operation and maintenance would not involve any new areas of ground disturbance that could result in erosion or sedimentation or that would otherwise affect water quality in the Alternative 3 area. The risk of contamination from the release of hazardous materials during operation and maintenance of Alternative 3 would be the same as baseline conditions because the vehicles and equipment involved in inspection and maintenance would be similar to vehicles and equipment currently traveling on the area roadways. Therefore, impacts would be less than significant. No mitigation is required.

Mitigation Measures: Hydrology-1 (refer to Section 4.6.7) and Hydrology-4

Mitigation Measure Hydrology-4: Underground Construction Only During Dry Conditions. Construction of the underground transmission line across any creeks or natural drainages shall only occur when the watercourse is dry and no less than 72 hours after any rain event. No construction shall occur within 100 feet of any stream within 48 hours of a rain event with a forecast of 50 percent or greater chance of precipitation. No earthwork shall occur within any Water of the State prior to SDG&E obtaining a waiver of Waste Discharge Requirements from San Diego Regional Water Quality Control Board.

Significance after mitigation: Less than significant.

Impact Hydro-3: Would Alternative 3 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 that would result in substantial erosion or siltation on or off site? (*Less than significant; no mitigation required*)

Construction

The underground portion of Alternative 3 would not alter the course of a stream or cause any changes in drainage patterns because construction would occur under existing roads where there are no streams, and the road would be restored to existing conditions after the duct bank and transmission line are installed. There would be no impact to drainage patterns from the Alternative 3 because the alternative would be located underground. Construction of the cable poles and underground duct bank could result in erosion if disturbed and excavated soils were not stabilized. Erosion from Alternative 3 construction would be a significant impact. Implementation of APMs HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), and GEO-3 (minimize soil disturbance) would reduce erosion-related impacts from the cable pole and duct bank construction through the use of temporary and permanent erosion and sediment control BMPs. Impacts would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Alternative 3 area nor divert the course of a stream or river. Maintenance activities would be conducted in areas that would be disturbed during construction and would not involve any new ground disturbance that could result in erosion or sedimentation in the Alternative 3 area. Operation and maintenance work would not result in increased erosion or siltation. Impacts would be less than significant. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-6: Would Alternative 3 have the potential to otherwise substantially degrade water quality? (*Less than significant with mitigation*)

Construction

As discussed in Impact Hydro-1, Alternative 3 construction would involve the use of hazardous materials, which could impact water quality in the case of a spill. The direct or indirect discharge of these materials to surface waters would degrade water quality and cause a

significant impact. Implementation of APMs HYDRO-1 (temporary BMPs), HAZ-1 (SEAP) and HAZ-2 (consistency with state and federal regulations) would reduce impacts from hazardous material spills. Construction impacts associated with untreated hazardous material spills would still be significant because APM HAZ-1 doesn't specify when hazardous material protocols training would occur. Mitigation Measure Hazards-2 requires that all construction personnel attend SEAP training prior to conducting any work on the project site which would assure that construction personnel are appropriately trained before construction starts. Therefore, Alternative 3 construction impacts associated with untreated hazardous material spills would be less than significant with mitigation.

Operation and Maintenance

The application of herbicides to control invasive weeds and to maintain clearance around the cable poles would cause a significant impact if the herbicides were spilled or incorrectly applied and transported to a surface waterbody. Implementation of APM HAZ-4 (SDG&E protocols for herbicide application) would reduce operational impacts from herbicide spills to a less-than-significant level. Other hazardous materials that could be used include petroleum products (e.g., oil, grease, fuel) in maintenance vehicles. These materials would be similar in quantity to other vehicles operating on roads within the Alternative 3 area. The infrequent maintenance activity would not increase the potential for spills of these petroleum products. No mitigation is required.

Mitigation Measures: Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials)

Significance after mitigation: Less than significant.

4.6.11 Alternative 4: Segment D 69-kV Partial Underground Alignment (Reduces New TSPs in Segment D)

Alternative 4 would include the installation of a double 69-kV underground alignment starting at two new cable poles (P48AA and P48BB) in Proposed Project Segment D near existing lattice tower E17. The underground alignment would follow Carmel Mountain Road and East Ocean Air Drive, ending at the Peñasquitos Substation. Within Proposed Project Segment D, an existing 69-kV line would be removed from the existing steel lattice towers, and a second 69-kV power line on existing H-frame structures would be de-energized and left in place. Construction within Proposed Project Segment D would be reduced under Alternative 4. The 230-kV transmission line would be installed on the existing steel lattice towers similar to the Proposed Project; however, the H-frame structures would not be removed, and no new TSPs would be installed between lattice tower E17 and the Peñasquitos Substation. This alternative is described in more detail in Chapter 3: Alternatives.

4.6.11.1 Alternative 4 Environmental Setting

Watersheds

Alternative 4 would be located in the Peñasquitos watershed and would drain to Los Peñasquitos Creek. Surface waters within the Alternative 4 area are shown on Figure 4.6-6.

Flood Zones
Alternative 4 does not cross any FEMA flood zones. FEMA flood zones near the Alternative 4 area are shown on Figure 4.6-5.

Waterbodies
Alternative 4 would cross two unnamed tributaries to Los Peñasquitos Creek. There are existing bridges on Carmel Mountain Road at each of the crossings of unnamed tributaries.

Water Quality
Alternative 4 drains to Los Peñasquitos Creek. Los Peñasquitos Creek is an impaired waterbody on the 303(d) list (refer to Table 4.6-3, above). Los Peñasquitos Creek drains to Los Peñasquitos Lagoon, which has an adopted TMDL for sediment.

Groundwater
There are no groundwater basins in the vicinity of Alternative 4.

4.6.11.2 Alternative 4 Impacts and Mitigation Measures

Table 4.6-11 summarizes the impacts to hydrology and water resources from Alternative 4.

Table 4.6-11 Summary of Alternative 4 Impacts to Hydrology and Water Resources

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-1: Violate any water quality standards or waste discharge requirements.	Construction	Significant	Significant APM HYDRO-1 APM HYDRO-2 APM HAZ-1 APM HAZ-2 APM GEO-3	Less than significant MM Hydrology-1
	Operation and Maintenance	Less than Significant	---	---
Impact Hydro-2: 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.	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-3: 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 that would result in substantial erosion or siltation on or off site.	Construction	Significant	Less than significant APM HYDRO-1 APM HYDRO-2 APM GEO-3	---
	Operation and Maintenance	Less than significant	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-4: 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 that would result in flooding on or off site.	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-6: Otherwise substantially degrade water quality.	Construction	Significant	Significant APM HYDRO-1 APM HAZ-1 APM HAZ-2	Less than significant MM Hazards-2
	Operation and Maintenance	Significant	Less than significant APM HAZ-4	---
Impact Hydro-7: 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.	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-8: Locate structures that would impede or redirect flood flows within a 100-year flood hazard area.	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-9: 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.	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-10: Cause inundation by seiche, tsunami, or mudflow.	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Alternatives 4 would have no impact on seven CEQA significance criteria for hydrology and water resources: Impact Hydro-2, -4, -5, -7, -8, -9, and -10, as indicated in Table 4.6-11 above. Alternative 4 would have no impact on these criteria because the alternative is not located in the vicinity of any floodplains or groundwater basins. The underground 69-kV double circuit alignment would be located under existing impervious roadways. The overhead 230-kV transmission line would be located on existing structures and no permanent new poles would be required. Alternative 4 would not cause substantial flooding or exceed the capacity of a stormwater drainage system because no additional runoff would be generated from the alternative. Alternative 4 would not create additional impervious surfaces because it would be located underground in existing paved roadways and on existing steel lattice towers.

Impact Hydro-1: Would Alternative 4 violate any water quality standards or waste discharge requirements? (*Less than significant with mitigation*)

Construction

Alternative 4 involves two crossings of ephemeral tributaries to Los Peñasquitos Creek overhead and via Carmel Mountain Road. Los Peñasquitos Creek is an impaired waterbody. The underground crossings would occur via Carmel Mountain Road where there are existing bridges across the tributaries. Alternative 4 construction would violate water quality standards if construction activities (e.g., trenching, excavation, paving) discharge sediment or waste to Los Peñasquitos Creek or if hazardous materials (e.g., oil, grease, gas, hydraulic fluid) are spilled and transported to the creek; these impacts would be significant. Implementation of APMs HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), GEO-3 (minimize soil disturbance), HAZ-1 (SEAP), and HAZ-2 (consistency with state and federal regulations) would reduce impacts from soil disturbance and hazardous materials during Alternative 4 construction. These APMs would reduce potential discharge of sediment, waste or hazardous materials; however, impacts would still be significant because there is a TMDL for sediment on Los Peñasquitos Lagoon, a downstream waterbody. Mitigation Measure Hydrology-1 requires that SDG&E prepare a SWPPP that complies with the requirements of the City of San Diego Storm Water Standards Manual. Impacts from violation of water quality standards would be less than significant with mitigation.

Alternative 4 involves two overhead crossings of unnamed tributaries to Los Peñasquitos Creek via Carmel Mountain Road. It is assumed that both crossings would be overhead via the existing bridge or an adjacent bridge attachment structure would be constructed to span the creek overhead due to the steep slope next to the creek. The overhead crossing would of the creek would avoid violation of waste discharge requirements. Impacts to drainages would be less than significant. No mitigation is required.

Operation and Maintenance

Similar to the Proposed Project, operation and maintenance activities associated with Alternative 4 would not involve any new areas of ground disturbance or change in activities that could result in erosion or sedimentation or that would otherwise affect water quality or

violate water quality standards or waste discharge requirements. Impacts would be less than significant. No mitigation is required.

Mitigation Measures: Hydrology-1 (refer to Section 4.6.7)

Significance after mitigation: Less than significant.

Impact Hydro-3: Would Alternative 4 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 that would result in substantial erosion or siltation on or off site? (*Less than significant; no mitigation required*)

Construction

The construction of 69-kV power lines underground in Alternative 4 would not alter the course of a stream or cause any changes in drainage patterns because construction would occur on existing roads where there are no streams and the road would be restored to existing conditions after the duct bank and power lines are installed. Alternative 4 would therefore not alter the course of a stream or cause any changes in drainage patterns.

Construction of the cable poles and underground duct bank could result in erosion if disturbed and excavated soils were not stabilized. Erosion from Alternative 4 construction would be a significant impact. Implementation of APMs HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), and GEO-3 (minimize soil disturbance) would reduce erosion-related impacts from the cable pole and duct bank construction through the use of temporary and permanent erosion and sediment control BMPs. Impacts would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Alternative 4 area nor divert the course of a stream or river. Maintenance activities would be conducted in areas that would be disturbed during construction and would not involve any new ground disturbance that could result in erosion or sedimentation. Operation and maintenance work would not result in increased erosion or siltation. Impacts would be less than significant. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-6: Would Alternative 4 have the potential to otherwise substantially degrade water quality? (*Less than significant with mitigation*)

Construction

As discussed in Impact Hydro-1, construction of Alternative 4 would involve the use of hazardous materials, which could impact water quality in the case of a spill. The direct or indirect discharge of these materials to surface waters would degrade water quality and cause a significant impact. Implementation of APMs HYDRO-1 (temporary BMPs), HAZ-1 (SEAP), and HAZ-2 (consistency with state and federal regulations) would reduce construction impacts from

hazardous material spills. Construction impacts associated with untreated hazardous material spills would still be significant because APM HAZ-1 doesn't specify when hazardous material protocols training would occur. Mitigation Measure Hazards-2 requires that all construction personnel attend SEAP training prior to conducting any work on the project site which would assure that construction personnel are appropriately trained before construction starts. Alternative 4 construction impacts associated with untreated hazardous material spills would be less than significant with mitigation.

Operation and Maintenance

The application of herbicides to control invasive weeds and to maintain clearance around the cable pole would cause a significant impact if the herbicides were spilled or incorrectly applied and transported to a surface waterbody. Implementation of APM HAZ-4 (SDG&E protocols for herbicide application) would reduce operational impacts from herbicide spills to a less-than-significant level. Other hazardous materials that could be used include petroleum products (e.g., oil, grease, fuel) in maintenance vehicles. These materials would be similar in quantity to other vehicles operating on roads in the Alternative 4 area. The infrequent maintenance activity would not increase the potential for spills of these petroleum products. No mitigation is required.

Mitigation Measures: Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials)

Significance after mitigation: Less than significant.

4.6.12 Alternative 5: Pomerado Road to Miramar Area North Combination Underground/Overhead (Avoids All Proposed Project Segments)

Alternative 5 would include underground installation of the transmission line with the exception of the east and west ends where the transmission line would be installed in an overhead within existing SDG&E ROWs. Under this alternative, the alignment would exit the Sycamore Canyon Substation at MCAS Miramar an overhead line and travel westerly within an existing SDG&E ROW toward Stonebridge Parkway. The transmission line would transition to underground beneath Stonebridge Parkway in the vicinity of Greenstone Court, then continue underground on Pomerado Road, Miramar Road, Kearny Villa Road, Black Mountain Road, Activity Road, Camino Ruiz, Miralani Drive, Arjons Drive, Trade Place, Camino Santa Fe, Carroll Road/Carroll Canyon Road and Scranton Road. The transmission line would temporarily transition to an overhead alignment via two new cable poles and two new interset poles, where it would cross I-15. At the western end of the underground portion, the line would transition back to overhead structures located within an existing SDG&E ROW heading northward into the Peñasquitos Substation. Alternative 5 would avoid construction within the Proposed Project alignment with the exception of approximately 3,400 feet of existing SDG&E ROW in Segment A connecting to the Sycamore Canyon Substation. This alternative is described in more detail in Chapter 3: Alternatives.

4.6.12.1 Alternative 5 Environmental Setting

Watersheds
The entire Alternative 5 alignment is located in the Peñasquitos watershed, which drains to the Pacific Ocean.

Flood Zones
Flood zones near the Alternative 5 alignment are shown on Figure 4.6-5. The underground alignment would be constructed within a 100-year floodplain on Pomerado Road and Carroll Canyon Road. The Alternative 5 alignment is not located in a tsunami or seiche inundation area.

Surface Waters
Surface waters in the Alternative 5 alignment are shown on Figure 4.6-6. Alternative 5 would cross Carroll Canyon Creek (a tributary to Los Peñasquitos Creek), Los Peñasquitos Creek, and the Second San Diego Aqueduct, which is a tributary to the Lower Otay Reservoir.

Water Quality
Los Peñasquitos Creek is an impaired waterbody on the 303(d) list (refer to Table 4.6-3, above). Los Peñasquitos Creek drains to Los Peñasquitos Lagoon, which has an adopted TMDL for sediment. Lower Otay Reservoir is on the 303(d) list of impaired waterbodies for color, iron, manganese, nitrogen, ammonia (total ammonia), and pH (high).

Groundwater Basins
There are no groundwater basins in the vicinity of the Alternative 5 underground alignment, as shown on Figure 4.6-4. Shallow groundwater may be encountered in excavations particularly near creek crossings.

4.6.12.2 Alternative 5 Impacts and Mitigation Measures

Table 4.6-12 summarizes the impacts to hydrology and water resources from Alternative 5.

Table 4.6-12 Summary of Alternative 5 Impacts to Hydrology and Water Resources

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-1: Violate any water quality standards or waste discharge requirements	Construction	Significant	Significant APM HYDRO-1 APM HYDRO-2 APM HAZ-1 APM HAZ-2 APM GEO-3	Less than significant MM Hydrology-1 MM Hydrology-2 MM Hydrology-4
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-2: Substantially deplete groundwater supplies or interfere substantially with	Construction	Less than significant	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level	Operation and Maintenance	Less than significant	---	---
Impact Hydro-3: 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 that would result in substantial erosion or siltation on or off site	Construction	Significant	Less than significant APM HYDRO-1 APM HYDRO-2 APM GEO-3	---
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-4: 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 that would result in flooding on or off site	Construction	Less than significant	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-5: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	Construction	Less than significant	---	---
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-6: Otherwise substantially degrade water quality	Construction	Significant	Significant APM HYDRO-1 APM HAZ-1 APM HAZ-2	Less than significant MM Hazards-2
	Operation and Maintenance	Significant	Less than significant APM HAZ-4	---
Impact Hydro-7: 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	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---
Impact Hydro-8: Locate structures that would impede or redirect flood flows within a 100-year flood hazard area	Construction	No impact	---	---
	Operation and Maintenance	No impact	---	---

Significance Criteria	Project Phase	Significance Prior to APMs	Significance after APMs and before Mitigation	Significance after Mitigation
Impact Hydro-9: 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	Construction	Significant	Significant ---	Less than significant MM Hydrology-5
	Operation and Maintenance	Less than significant	---	---
Impact Hydro-10: Cause inundation by seiche, tsunami, or mudflow	Construction	No Impact	---	---
	Operation and Maintenance	No Impact	---	---

Alternatives 5 would have no impact on three CEQA significance criteria for hydrology and water resources: Impact Hydro-7, -8, and -10 as indicated in Table 4.6-12 above. Alternative 5 would have no impact on these criteria because the alternative would be underground within the vicinity of floodplains or would span the floodplains overhead and would not affect flood flows. The alternative would not be located in the vicinity of a seiche or tsunami area.

Impact Hydro-1: Would Alternative 5 violate any water quality standards or waste discharge requirements? (*Less than significant with mitigation*)

Construction

Water Quality Standards

The Alternative 5 overhead alignment would cross Los Peñasquitos Creek near Peñasquitos Substation. The underground alignment would cross Second San Diego Aqueduct and Carroll Canyon Creek twice along Pomerado Road and once at Carroll Canyon Road. Alternative 5 would violate water quality standards if construction activities (e.g., trenching, excavation, paving) increase sediment loading in Second San Diego Aqueduct, Carroll Canyon Creek or Los Peñasquitos Creek. This alternative would also violate water quality standards if hazardous materials (e.g., oil, grease, gas, hydraulic fluid) are spilled and transported to these waterbodies. These impacts would be significant. SDG&E would implement APMs HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), GEO-3 (minimize soil disturbance), HAZ-1 (SEAP), and HAZ-2 (consistency with state and federal regulations) to reduce impacts from soil disturbance and hazardous materials during construction. These APMs would reduce potential discharge of sediment, waste or hazardous materials; however, impacts would still be significant because there is a TMDL for sediment on Los Peñasquitos Lagoon, a downstream waterbody. Mitigation Measure Hydrology-1 requires that SDG&E prepare a SWPPP that complies with the requirements of the City of San Diego Storm Water Standards Manual. Impacts would be less than significant with mitigation.

Waste Discharge Requirements

Alternative 5 would violate waste discharge requirements and cause a significant impact if pumped shallow groundwater were discharged to waters of the state or U.S., if reclaimed water applied for dust control (Mitigation Measure Utilities-1) were discharged to waters of the state or U.S., or if fill materials were discharged to waters of the state during underground duct bank construction across Carroll Canyon Creek. Implementation of Mitigation Measures Hydrology-1, Hydrology-2, and Hydrology-4 would reduce impacts through treatment of shallow groundwater, application of reclaimed water for dust control in a manner that does not contribute to runoff, avoiding discharge in a flowing creek, and obtaining a waiver of waste discharge requirements. Impacts would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance activities associated with Alternative 5 would not involve any new areas of ground disturbance that could result in erosion or sedimentation or that would otherwise affect water quality or violate water quality standards or waste discharge requirements. Impacts would be less than significant. No mitigation is required.

Mitigation Measures: Hydrology-1 (refer to Section 4.6.7), Hydrology-2 (refer to Section 4.6.7), and Hydrology-4 (refer to Section 4.6.10)

Significance after mitigation: Less than significant.

Impact Hydro-2: Would Alternative 5 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? (*Less than significant; no mitigation required*)

Construction

The water required for construction of Alternative 5 would not be obtained from groundwater supplies. Mitigation Measure Utilities-1 requires that construction water for dust control and compaction be obtained from reclaimed water sources. The underground transmission line alignment does not intersect any groundwater basin (refer to Figure 4.6-4). The construction of the underground transmission line would not affect groundwater supplies because the duct bank construction would not intersect a groundwater basin. There would be no impact on groundwater supplies from Alternative 5 construction. Alternative 5 would create a negligible area of additional impervious surface because the vast majority of the transmission line components would be placed underground within existing roadways that are already impervious. Approximately 95 square feet of impervious area would be added at each of the ten new poles required for Alternative 5. The additional 0.02 acre of impervious surface would not significantly impact infiltration to the groundwater table. Impacts to groundwater recharge would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance of Alternative 5 could require water for irrigation of temporarily disturbed areas. Because the total area of revegetation would be limited to the ten pole work areas and associated stringing sites, the potential for temporary irrigation to impact

groundwater resources would be less than significant. No other water would be required during operation and maintenance. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-3: Would Alternative 5 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 that would result in substantial erosion or siltation on or off site? (*Less than significant; no mitigation required*)

Construction

The overhead alignment would not involve any new structures in a watercourse and would therefore not alter the course of a stream or a river. The underground alignment would cross Carroll Canyon Creek via existing roadway culverts. The underground duct bank construction and transmission line installation would not alter the course of a stream or river because it would be located in the existing roadway alignment above or below the stream channel.

Construction impacts related to alteration of drainage, addition of impervious surfaces, and runoff would be less than significant. The increased impervious surfaces (0.02 acre) from foundations for ten new poles would be minimal and would not substantially increase the rate or amount of surface runoff. The 11.5-mile underground segment of Alternative 5 would be constructed within existing roadways that are already impervious, and there would be no change in drainage patterns in these areas. The overhead alignment from Carroll Canyon Road to Peñasquitos Substation would be installed on existing transmission poles, and there would be no change in drainage patterns or new impervious surfaces from installation of the transmission line on those poles. Construction of the cable poles and underground duct bank could result in erosion if disturbed and excavated soils were not stabilized. Erosion from Alternative 5 construction would be a significant impact. Implementation of APMs HYDRO-1 (temporary BMPs), HYDRO-2 (permanent BMPs), and GEO-3 (minimize soil disturbance) would reduce erosion-related impacts from the cable pole and duct bank construction through the use of temporary and permanent erosion and sediment control BMPs. Impacts from erosion would be less than significant after APMs. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Alternative 5 area nor divert the course of a stream or river. Maintenance activities would be conducted in areas that would be disturbed during construction. Operation and maintenance work would not result in increased erosion or siltation. Impacts would be less than significant. No mitigation is required.

Mitigation Measures: None Required.

Impact Hydro-4: Would Alternative 5 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 that would result in flooding on or off site? (*Less than significant; no mitigation required*)

Construction

No construction would occur within a stream or river. There would be no impact caused by the alteration of the course of a stream or river.

The small impervious surfaces created by Alternative 5 (see Impact Hydro-3) would be negligible and would not increase the rate of runoff to the extent that it would cause flooding on or off site. Similar to the Proposed Project (refer to Section 4.6.7), even if a water truck were to spill in one location, the total volume of water carried for dust control is too small to cause flooding on or off-site. The impact to flooding would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Alternative 5 area nor divert the course of a stream or river. Maintenance activities would be conducted in areas that would be disturbed during construction and would not involve any activities that could result in an increase in surface runoff. No impact would occur.

Mitigation Measures: None required.

Impact Hydro-5: Would Alternative 5 have the potential to create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (*Less than significant; no mitigation required*)

Construction

Runoff from water applied for dust control and to keep sandy soils firm during excavation could create or contribute runoff if water were over applied or if there were a leak or spill from a water truck. The addition of up to 5,000 gallons of water to a stormwater drainage system from a water truck (i.e., water truck capacity) would not exceed the planned capacity of the drainage system. Impacts would be less than significant. No mitigation is required.

The creation of 0.02 acre of impervious surface within the Alternative 5 area would not significantly impact the volume of water infiltrating the soil and would therefore not result in the creation of large volumes of runoff water. Impacts would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities for Alternative 5 would not result in creation or contribution of runoff water that would exceed the capacity of existing or planned stormwater drainage systems. A negligible amount of water would be required during operation and

maintenance for revegetation at disturbed areas around the four TSPs in the eastern overhead portion of the Alternative 5 alignment and at the two cable pole locations. Therefore, Alternative 5 operation and maintenance impacts would be less than significant. No mitigation is required.

Mitigation Measures: None required.

Impact Hydro-6: Would Alternative 5 have the potential to otherwise substantially degrade water quality? (*Less than significant with mitigation*)

Construction

As discussed in Impact Hydro-1, Alternative 5 construction would involve the use of hazardous materials, which could impact water quality in the case of a spill. The direct or indirect discharge of hazardous materials to surface waters would degrade water quality and cause a significant impact. Implementation of APMs HYDRO-1 (temporary BMPs), HAZ-1 (SEAP) and HAZ-2 (consistency with state and federal regulations) would reduce construction impacts from hazardous material spills. Construction impacts associated with untreated hazardous material spills would still be significant because APM HAZ-1 doesn't specify when hazardous material protocols training would occur. Mitigation Measure Hazards-2 requires that all construction personnel attend SEAP training prior to conducting any work on the project site which would assure that construction personnel are appropriately trained before construction starts. Therefore, Alternative 5 construction impacts associated with untreated hazardous material spills would be less than significant with mitigation.

Operation and Maintenance

The application of herbicides for revegetation purposes would cause a significant impact if the herbicides were spilled or incorrectly applied and transported to a surface waterbody. Implementation of APM HAZ-4 (SDG&E protocols for herbicide application) would reduce operational impacts from herbicide spills to less than significant. Other hazardous materials that could be used include petroleum products (e.g., oil, grease, fuel) in maintenance vehicles. These materials would be similar in quantity to other vehicles operating in the Alternative 5 area. The infrequent maintenance activity would not increase the potential for spills of these petroleum products. No mitigation is required.

Mitigation Measures: Hazards-2 (refer to Section 4.11: Hazards and Hazardous Materials)

Significance after mitigation: Less than significant.

Impact Hydro-9: Would Alternative 5 have the potential to expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? (*Less than significant with mitigation*)

Similar to the Proposed Project, the Alternative 5 area is not located within any dam failure inundation area. Construction and operation of Alternative 5 would not expose people or

structures to significant risk of loss, injury, or death as a result of flooding as a result of levee or dam failure. There would be no impact related to flooding from levee or dam failure.

The Alternative 5 alignment would span the Los Peñasquitos Creek 100-year flood hazard zone and the underground alignment would be located within the Carroll Canyon Creek 100-year flood zone. Alternative 5 would be located underground within existing roads; however, the transmission line could be exposed by scour at creek crossings if the transmission line were not constructed deep enough. Mitigation Measure Hydrology-5 requires SDG&E to bury the transmission line below the 100-year flood flow scour depth. Impacts from loss as a result of flooding would be less than significant with mitigation.

Mitigation Measures: Hydrology-5

> **Mitigation Measure Hydrology-5: Protection from Scour.** At locations where the buried power line is to be at or adjacent to a stream bed capable of scour, the power line shall be located below the expected depth of scour from a 100-year flood, or otherwise protected from exposure by scour which, for purposes of this mitigations measure, also includes lateral (streambank) erosion and potential scour associated with flows overtopping or bypassing a culvert or bridge crossing. During final design, a registered civil engineer with expertise in hydrology, hydraulics, and river mechanics shall make a determination of where the underground line could be at risk of exposure through scour or erosion from a 100-year event. Plans for burying the line below the 100-year scour depth, or otherwise protecting the line from erosion, shall be submitted to CPUC for review and approval prior to construction.

Significance after mitigation: Less than significant.

4.6.13 No Project Alternative

The No Project Alternative would involve construction of the CAISO approved Mission—Peñasquitos 230-kV transmission line and Second Poway—Pomerado 69-kV power line. The No Project Alternative would also involve installation of a series reactor at Sycamore Canyon Substation. This alternative is described in more detail in Chapter 3: Alternatives.

The surface waters present within the No Project Alternative area are shown on Figure 4.6-7. The No Project Alternative would result in a greater impact on hydrology and water quality than the Proposed Project because the No Project Alternative would include more crossings of surface water bodies. Construction would involve soil disturbance and potential for erosion and sedimentation near impaired creeks including tributaries to Los Peñasquitos Lagoon, which has a TMDL for sedimentation. These impacts would be similar to the Proposed Project described in Section 4.6.7 above. Implementation of standard mitigation measures similar to those applied to the Proposed Project would reduce these impacts to a less than significant level.

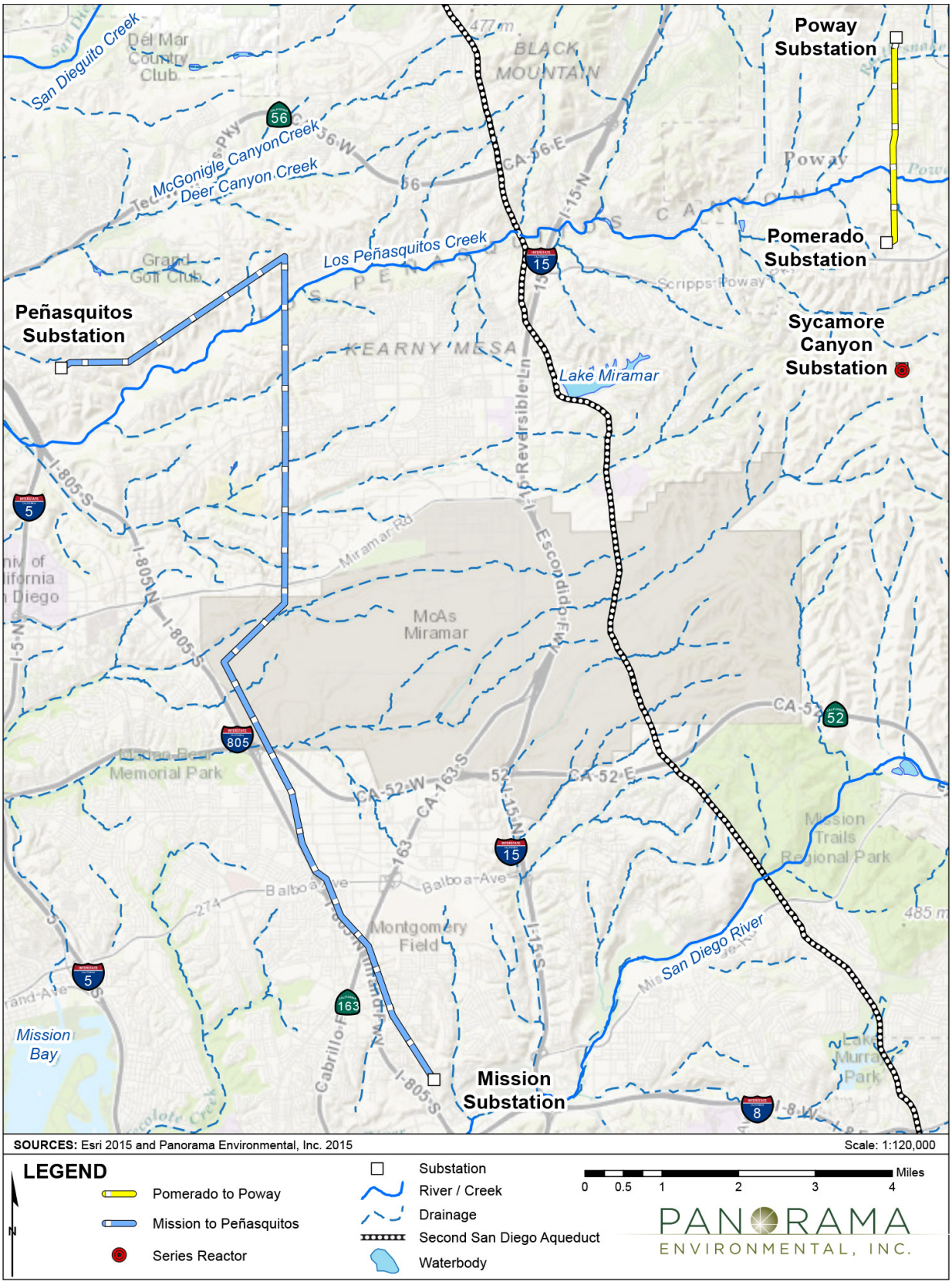
4.6.13.1 Mission—Peñasquitos 230-kV Transmission Line and Second Poway—Pomerado 69-kV Power Line

The Mission—Peñasquitos 230-kV transmission line would require replacement of wood H-frames with steel H-frames for 4.2 miles within and near MCAS Miramar and installation of new 69-kV TSPs for 3.3 miles in Los Peñasquitos Canyon (Segment D of the Proposed Project). The Second Poway—Pomerado 69-kV power line would involve replacement of existing wood poles with new double-circuit 69-kV poles or installation of new single-circuit 69-kV poles for approximately 2.6 miles to accommodate a second 69-kV line. Both the Mission—Peñasquitos transmission line and Poway—Pomerado power line cross Los Peñasquitos Creek and require pole replacements in areas that drain to Los Peñasquitos Creek and its tributaries. Ground disturbance in proximity to Los Peñasquitos Creek or a tributary could increase sedimentation in Los Peñasquitos Creek and downstream Los Peñasquitos Lagoon, which would be a significant impact. The construction of the Mission—Peñasquitos and Second Poway—Pomerado lines would require use of equipment and vehicles, which use hazardous materials (e.g., oil, grease, and hydraulic fluid). The spill of hazardous materials and discharge to a downstream waterbody would significantly impact water resources. These impacts could be reduced to less than significant through implementation of standard mitigation measures similar to those defined for the Proposed Project.

4.6.13.2 Series Reactor at Sycamore Canyon Substation

Installation of a series reactor at Sycamore Substation would be conducted within the previously graded substation pad and would not result in erosion or sedimentation. The oil within the series reactor would be similar in quantity to the oil in surrounding transformers and the risk of impacts to water quality from a spill of hazardous materials would not increase. The impact to hydrology and water quality from the series reactor would be less than significant.

Figure 4.6-7 Surface Waters in the No Project Alternative Area



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