Chapter 12
Hydrology and Water Quality

12.1 Overview

This chapter describes the setting and potential impacts of the Proposed Project related to hydrology and water quality. Potential impacts are evaluated in light of existing laws and regulations and the existing physical environmental conditions as they relate to hydrology and water quality.

Resources used to prepare this chapter include the San Diego Regional Water Quality Control Board's (SDRWQCB's) Basin Plan, the California Department of Water Resources' (DWR's) Bulletin 118, and the proponent's environmental assessment (PEA) submitted to the California Public Utilities Commission (CPUC) by NextEra Energy Transmission West, LLC (NEET West).

12.2 Regulatory Setting

12.2.1 Federal Laws, Regulations and Policies

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters. The key sections of the CWA which are applicable to the Proposed Project are described below.

Section 303(d)

Under CWA Section 303(d), states are required to identify and make a list of water bodies that are polluted. In California, this responsibility falls to the State Water Resources Control Board (SWRCB) and its nine RWQCBs. In addition to identifying impaired water bodies, states must identify the pollutants causing the impairments; establish priority rankings for waters on the list, and develop a schedule for development of control plans to improve water quality, including development of Total Maximum Daily Loads (TMDLs). Water bodies downstream of the Proposed Project listed as impaired and requiring TMDLs are listed in Section 12.3, "Environmental Setting."

Section 401

Section 401 of the CWA regulates discharges of fill or dredged material to waters of the U.S. and state. Section 401 applies to any project or applicant seeking a federal permit (e.g., CWA Section 404 permit) for any activity which may result in a discharge to a water body. The CWA Section 401 program follows a general approach of: (1) impact avoidance as a first priority, (2) minimization of impacts if avoidance is not possible, and (3) mitigation to compensate for unavoidable permanent impacts and ensure no net loss of water resources

occurs (SWRCB 2016). The SWRCB and its nine RWQCBs issue water quality certifications for projects subject to section 401 of the CWA. Each RWQCB is responsible for implementing section 401 in compliance with the CWA and its water quality control plan (also known as a Basin Plan; discussed further in Section 12.2.2, "State Laws, Regulations, and Policies," below).

Section 402

CWA Section 402 regulates facilities that discharge pollutants into waters of the U.S. through the National Pollutant Discharge Elimination System (NPDES). Under the NPDES, all facilities discharging pollutants from any point source into waters of the U.S. must obtain a NPDES permit. While originally focused on municipal and industrial discharges from pipes or other point sources, Section 402 of the CWA was amended in 1987 to include stormwater discharges which may be non-point source in nature. Phase I of the NPDES Storm Water Program imposed permitting requirements on several types of stormwater discharges, including certain industrial activities, medium (i.e., serving 100,000 to 250,000 people) and large (serving greater than 250,000 people) municipal separate sanitary sewer systems (MS4s), and construction sites disturbing 5 or more acres. Phase II of the Storm Water Program regulations, issued in 1999, expanded permitting requirements to include small (serving less than 100,000 people) MS4s, construction sites of 1 to 5 acres, and other certain previously exempt industrial facilities.

General Construction Stormwater Permit

Most construction projects that disturb 1 acre or more of land are required to obtain coverage under the SWRCB's *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ), in accordance with CWA Section 402. The general permit requires the applicant to file a public notice of intent to discharge stormwater and prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP must include a site map and a description of the proposed construction activities; demonstrate compliance with relevant local ordinances and regulations, and present a list of best management practices (BMPs) that will be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters. Permittees are further required to conduct monitoring and reporting to ensure that BMPs are correctly implemented and are effective in controlling the discharge of construction-related pollutants.

Municipal Stormwater Permitting Program

The SWRCB regulates stormwater discharges from MS4s, in accordance with Section 402 of the CWA, through its Municipal Storm Water Permitting Program. As described above, the MS4 permitting requirements were developed in two phases: Phase I and II. MS4 permits continue to be issued under Phase I or Phase II depending on the size of the MS4 seeking authorization. Phase I permits for medium and large MS4s require the discharger to develop and implement a Storm Water Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP), including identifying what BMPs will be used to address specific program areas (SWRCB 2013).

San Diego Regional Stormwater Permit

The San Diego Regional Stormwater Permit (Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100) is a Phase I MS4 stormwater permit covering the County of San Diego, the City of San Diego, and numerous other jurisdictions in the San Diego region. The San Diego Regional Permit prohibits "discharges from MS4s in a manner causing, or threatening to cause, a condition of pollution, contamination, or nuisance in receiving waters of the state" (SDRWQCB 2015). The San Diego Regional Stormwater Permit requires that the County develop new and updated Runoff Management Plans and Programs, including Water Quality Improvement Plans and a Jurisdictional Runoff Management Plan (County of San Diego 2016). In unincorporated San Diego County, the permit requirements are generally implemented under the authority of the Watershed Protection, Stormwater Management, and Discharge Control Ordinance (WPO), which is described in this chapter under Section 12.2.3, "Local Laws, Regulations, and Policies."

Section 404

Section 404 of the CWA prohibits discharges of dredged or fill material into waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). Waters of the U.S. are generally defined as follows:

1. Waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. Interstate waters, including interstate wetlands;
3. The territorial seas;
4. Impoundments of waters otherwise identified in items 1 through 3 above;
5. Tributaries of waters identified in items 1 through 3 above;
6. Waters adjacent to a water identified in items 1 through 5 above, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters;
7. Waters determined, on a case-specific basis, to have a significant nexus to other waters of the U.S.; and
8. Waters located within the 100-year floodplain of a water identified in items 1 through 3 above and all waters located within 4,000 feet of the high tide line or ordinary high water mark (OHWM) of a water identified in items 1 through 5 above where they are determined on a case-specific basis to have a significant nexus to a water identified in items 1 through 3 above.

The following are not considered waters of the U.S. even when otherwise meeting the above criteria: wastewater treatment systems, ditches with ephemeral or intermittent flow, and features such as artificially irrigated areas or artificially constructed lakes or ponds.

12.2.2 State Laws, Regulations, and Policies

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (also known as the Porter-Cologne Act), passed in 1969, established the SWRCB and divided the State into nine hydrogeologic regions, each overseen by an RWQCB. In conjunction with the federal CWA, the Porter-Cologne Act is the principal law governing water quality regulation in California (SWRCB 2014). The Porter-Cologne Act requires that each RWQCB develop a water quality control plan (also known as a Basin Plan) to identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. Waters of the State are defined differently than waters of the U.S., described above under CWA, Section 404, and include any surface water or groundwater, including saline waters, which are within the boundaries of the State.

The Porter-Cologne Act also implements many provisions of the CWA, such as the NPDES permitting program, described above under Section 12.2.1, "Federal Laws, Regulations, and Policies." Any entity discharging or proposing to discharge materials that could affect water quality must file a report of waste discharge with the applicable RWQCB (SWRCB 2014).

SDRWQCB Basin Plan

As described above, the purpose of the Basin Plan is to preserve and enhance water quality and protect the beneficial uses of all regional waters (SDRWQCB 1994). Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy; (3) describes implementation programs to protect the beneficial uses of all waters in the region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan (SDRWQCB 1994). Designated beneficial uses for water bodies in the San Diego Basin potentially affected by the Proposed Project are shown in Table 12-1 in Section 12.3, "Environmental Setting."

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), passed in 2014, became law in 2015 and created a legal and policy framework to locally manage groundwater sustainably. The SGMA allows local agencies to customize groundwater sustainability plans to their regional economic and environmental conditions and needs, and establish new governance structures, known as Groundwater Sustainability Agencies (GSAs). The SGMA is intended to prevent undesireable results from groundwater use, which are defined as the following:

- Chronic lowering of groundwater levels (not including overdraft during a drought if a basin is otherwise managed).
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.

- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- Significant and unreasonable land subsidence that substantially interferes with surface land uses.
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

Storm Water Strategy

The SWRCB's Strategy to Optimize Resource Management of Storm Water (Storm Water Strategy) (SWRCB 2016) identifies the goals, objectives, and actions needed for the SWRCB and RWQCBs to improve the regulation, management, and utilization of California's storm water resources. The overarching intent of the Storm Water Strategy is to establish the value of storm water as resource in California and encourage its application to beneficial uses (SWRCB 2016). Goals and objectives in the Storm Water Strategy potentially applicable to the Proposed Project include management of storm water to preserve watershed processes and increasing source control to prevent pollution.

12.2.3 Local Laws, Regulations, and Policies

The CPUC has exclusive jurisdiction over the siting and design of electric transmission facilities. Therefore, it is exempt from local land use and zoning regulations. However, CPUC General Order (G.O.) 131-D states that in locating electric transmission facilities, the public utilities shall consult with the local agencies regarding land use matters. CPUC and NEET West have been in contact with applicable local agencies for the Proposed Project, and local laws and regulations are presented here for consideration of potential impacts related to hydrology and water quality.

County of San Diego General Plan

The County of San Diego General Plan (2011) guides land use and development in the unincorporated areas of the county. Goals and policies in the General Plan related to hydrology and water quality and the Proposed Project include the following:

Conservation and Open Space Element

Goal COS-4: Water Management. A balanced and regionally integrated water management approach to achieve the long-term viability of the County's water quality and supply.

Policy COS-4.3 – Stormwater Filtration. Maximize stormwater filtration and/or infiltration in areas that are not subject to high groundwater by maximizing the natural drainage patterns and the retention of natural vegetation and other pervious surfaces. This policy shall not apply in areas with high groundwater, where raising the water table could cause septic system failures, moisture damage to building slabs, and/or other problems.

Goal COS-5: Protection and Maintenance of Water Resources. Protection and maintenance of local reservoirs, watersheds, aquifer-recharge areas, and natural drainage systems to maintain high-quality water resources.

Policy COS-5.2 – Impervious Surfaces. Require development to minimize the use of directly connected impervious surfaces and to retain stormwater run-off caused from the development footprint at or near the site of generation.

Policy COS-5.3 – Downslope Protection. Require development to be appropriately sited and to incorporate measures to retain natural flow regimes, thereby protecting downslope areas from erosion, capturing runoff to adequately allow for filtration and/or infiltration, and protecting downstream biological resources.

County of San Diego Grading Ordinance

The County of San Diego Grading Ordinance requires property owners or persons proposing to conduct grading or clearing within the County to obtain a grading permit. General stormwater drainage precautions required by the Grading Ordinance include removing all loose dirt from the grading site and providing adequate erosion control or drainage devices, debris basins, or other safety devices. The Grading Ordinance includes a number of design standards and performance requirements that serve to protect hydrology and water quality, including those related to fill material, drainage and erosion prevention (County of San Diego 2012).

County of San Diego Watershed Protection Ordinance

The County of San Diego's WPO is intended to protect water resources and to improve water quality within the County by controlling the stormwater conveyance system and receiving waters, among other related functions. As noted above under Section 12.2.1, "Federal Laws, Regulations, and Policies," the County's WPO also serves to implement requirements of the San Diego Regional Stormwater Permit, including the Jurisdictional Runoff Management Program. In accordance with the regional MS4 permit, the WPO generally prohibits discharges of pollutants directly or indirectly into the stormwater conveyance system or receiving waters, and requires that stormwater discharges from a site do not contain sediments in amounts in excess of the sediments that would have been discharged from the site in an undisturbed condition (County of San Diego 2016). The WPO also requires a number of general BMPs for applicable projects, including removing accumulations of eroded soils from slopes prior to the rainy season, protection of slopes from erosion, and storage/containment of materials and wastes with the potential to pollute stormwater.

12.3 Environmental Setting

12.3.1 General Regional and Watershed Setting

The Proposed Project is located in the inland portion of the South Coast Hydrologic Region (HR) (CDOC 2010). The South Coast HR covers approximately 6.78 million acres (10,600 square miles) of southern California that drains to the Pacific Ocean, including all of Orange County, most of San Diego and Los Angeles Counties, parts of Riverside, San Bernardino, and Ventura counties, and small portions of Kern and Santa Barbara Counties (DWR 2003). With

over 50 percent of the State's population in only 7 percent of the State's surface area, the South Coast HR has the highest population density of any HR in California (DWR 2003). The South Coast HR is divided into the Los Angeles, Santa Ana, and San Diego subregions, which are overseen by RWQCBs #4, #8, and #9, respectively. The Proposed Project would be located in the San Diego subregion, or "Basin." Subregions are further subdivided into hydrologic units (HUs), hydrologic areas (HAs), and hydrologic subareas (HSAs). The Proposed Project would be located in the Loveland Reservoir HSA of the Upper Sweetwater River HA of the Sweetwater River HU (SDRWQCB 2011). Figure 12-1 shows the location of the Proposed Project with respect to the hydrologic identifiers described above.

12.3.2 Topography and Climate

The South Coast HR is bound on the east by the Peninsular Range. The Peninsular Range includes the Santa Ana, Agu Tibia, Palomar, Vulcan, Cuyamaca, and Laguna Mountains, and is the most prominent physical feature in the region, trending from the northwest to the southeast (SDRWQCB 2011). The San Diego Basin, which occupies the southern portion of the South Coast HR, is characterized by three distinct physiographic areas (from west to east): a coastal plain area, a central mountain-valley area, and an eastern mountain valley area (SDRWQCB 2011). The coastal plain area comprises a series of wave cut benches covered by thin terrace deposits which have been deeply dissected by streams draining to the sea, and smoothed and rounded by local erosion. This coastal area ranges in elevation from sea level to about 1,200 feet above mean sea level (msl), and extends from the coast to about 10 miles inland. The central mountain-valley area is characterized by ridges and intermontane basins, which are generally of fault block origin modified by erosion (SDRWQCB 2012). The floors of the intermontane valleys are generally underlain by moderate thicknesses of alluvium and residuum, and range in elevation from 500 to about 5,000 feet above msl. The eastern mountain-valley area occurs northeast of the Elsinore fault zone. This area contains broad, flat valleys of block fault origin, which rise to the southeast from about 1,000 feet above msl near Temecula to about 3,000 to 3,500 feet above msl in the plateaus of Glenoak, Lewis and Reed valleys (SDRWQCB 2011).

The Proposed Project would be located in the central mountain-valley area of the San Diego Basin, approximately 30 miles inland from the coast. The local topography in the vicinity of the Proposed Project is undulating with steep hills interspersed by narrow valleys and deep canyons. Elevations in the Project vicinity range from between 3,000 to 3,200 feet above msl. The topography of the proposed Static VAR compensator (SVC) site itself slopes generally downward from the northeast to the southwest (Kleinfelder 2015). The elevation at the site ranges from a high of approximately 3,087 feet above msl on the northeast to a low of approximately 3,047 feet above msl at the southwest corner, for a total differential of roughly 40 feet (Kleinfelder 2015).

The greater San Diego area is characterized by a Mediterranean climate, with warm to hot, dry summers, and mild to cool, wet winters. The coastal climate is generally mild, with temperatures averaging 65 degrees Fahrenheit (°F) and precipitation averaging 10 to 13 inches (SDRWQCB 2011). Average temperatures generally decrease and precipitation totals generally increase as one moves inland from the coast, with most precipitation falling from November through February throughout the region. Monthly average precipitation in the Project vicinity (i.e., Alpine, CA) ranges from a high of 3.6 inches in February to a low of 0.2 inches in August (National Oceanic and Atmospheric Administration [NOAA] 2016). Monthly average temperature ranges from 76°F in August to 54°F in December (NOAA 2016).

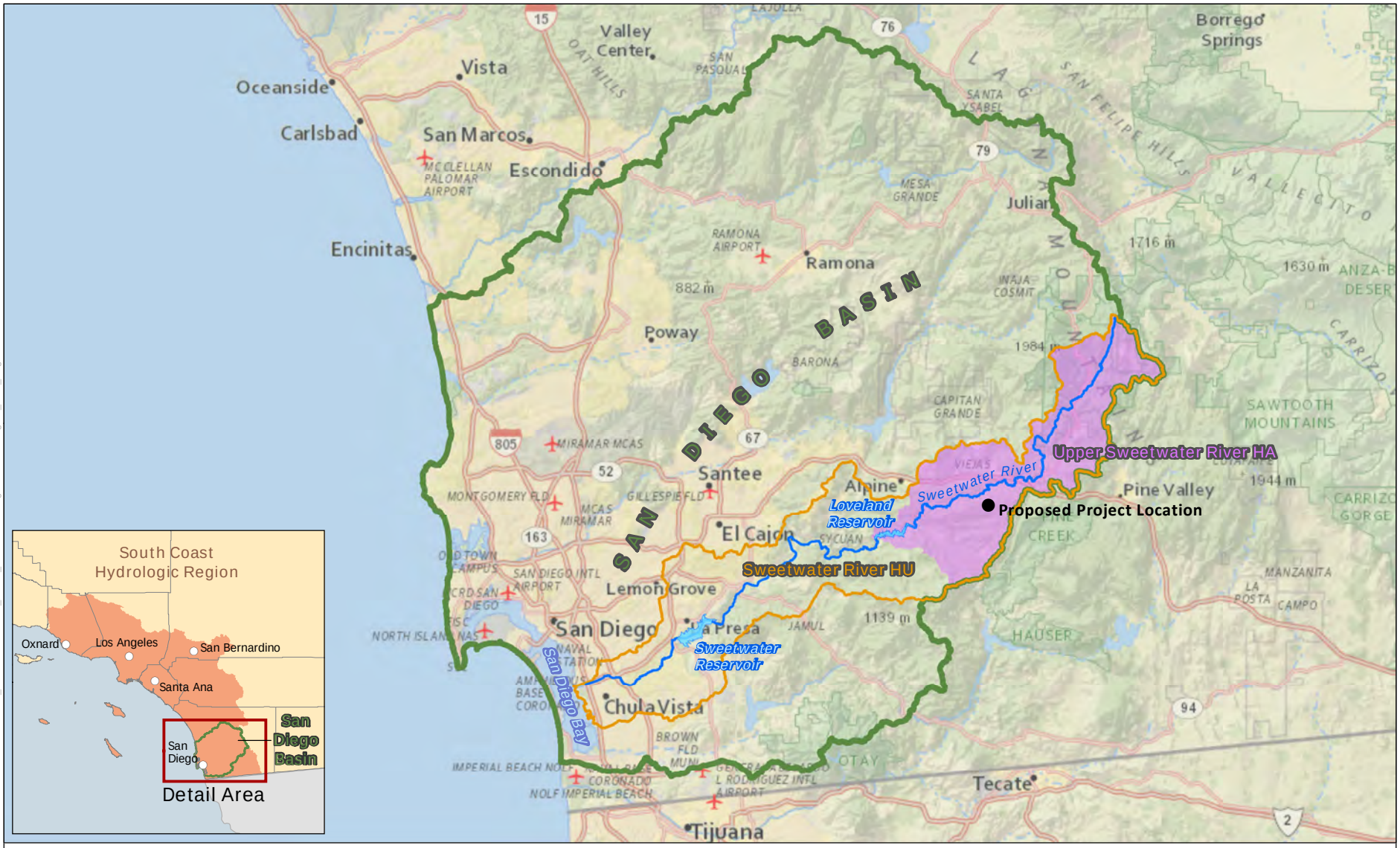

Figure 12-1
Regional Watershed Setting

N

0 10 20
Miles

- Proposed Project Location
- Upper Sweetwater River Hydrologic Area (HA)
- Sweetwater River Hydrologic Unit (HU)
- San Diego Basin

Prepared by:
Horizon WATER and ENVIRONMENT

Sources: Content may not reflect National Geographic's current map policy.
Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.
USGS National Hydrology Dataset; State of California, CalWater 2.2.1

Suncrest Dynamic Reactive Power Support Project

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12.3.3 Surface Water Hydrology and Quality

Surface Waters and Flows

As described above in Section 12.3.1, "General Regional and Watershed Setting," the Proposed Project would be located in the Sweetwater River HU. The Sweetwater River HU covers an area of approximately 230 square miles and is traversed along its length by the Sweetwater River, which flows 55 miles from its headwaters in the Cuyamaca Mountains in a generally northeast to southwest direction, ultimately draining to the San Diego Bay. The Sweetwater River is located approximately 1 mile northwest of the proposed SVC site and approximately 0.7 mile north of the proposed transmission line at the location of the proposed riser pole.

Other surface water features in the Proposed Project vicinity include Taylor Creek (located approximately 0.55 mile south of the proposed SVC site), which runs east to west in the vicinity of the Proposed Project and ultimately drains to the Sweetwater River and Loveland Reservoir. Palo Verde Lake is a relatively small impoundment on the Sweetwater River located approximately 2.15 miles west to northwest of the existing San Diego Gas & Electric (SDG&E) Suncrest Substation and approximately 3.10 miles west to northwest of the proposed SVC site. Loveland Reservoir is a larger impoundment (25,387 acre-feet [AF]) along the Sweetwater River located approximately 4.57 miles west of the existing substation and approximately 5.5 miles west of the proposed SVC site. Following Loveland Reservoir, the Sweetwater River flows west to southwest through increasingly urbanized areas before reaching the Sweetwater Reservoir and then ultimately discharging into the San Diego Bay. In addition to Sweetwater River and Taylor Creek, a number of unnamed natural drainages, ephemeral streams, and dry washes also exist in the immediate Project vicinity[1]. Several of these features cross Bell Bluff Truck Trail via culverts. Figure 12-2 shows the surface waters in the Proposed Project vicinity.

The streams and surface features in the Project vicinity are all generally intermittent in nature. Even the Sweetwater River, which is the largest drainage feature in the HU, is typically dry for long periods during the summer and fall (U.S. Geological Survey [USGS] 2016). This may be owing to the relatively minor and highly seasonal precipitation rates in the area, and the lack of significant contributions of groundwater to base flows (see Section 12.3.5, "Groundwater," for additional discussion on groundwater).

The Proposed Project site is shown in more detail on the topographic map of Figure 12-2. The site occupies a topographic saddle, along the watershed divide between the Sweetwater River watershed to the north and the Taylor Creek watershed to the south. The site drains to unnamed tributaries to both the north and south directions which then join these larger watersheds to the north and south of the Proposed Project. Drainages that contribute runoff to the project site, on the slopes to the east and west of the project site, as well as, other unnamed tributaries that drain along or across the Bell Bluff Truck Trail, are dry during much of the year (i.e., summer and fall months), with flows occurring only ephemerally after rainfall events. As noted above, the Sweetwater River and Taylor Creek both flow generally in a

[1] "Vicinity" in this chapter is used to describe the area surrounding the Proposed Project site. There is no set distance which defines the Project vicinity, but it generally refers to within 5-10 miles of the Project site.

northwest to southeast direction, with adjacent small contributing channels flowing into the main river/creek channels.

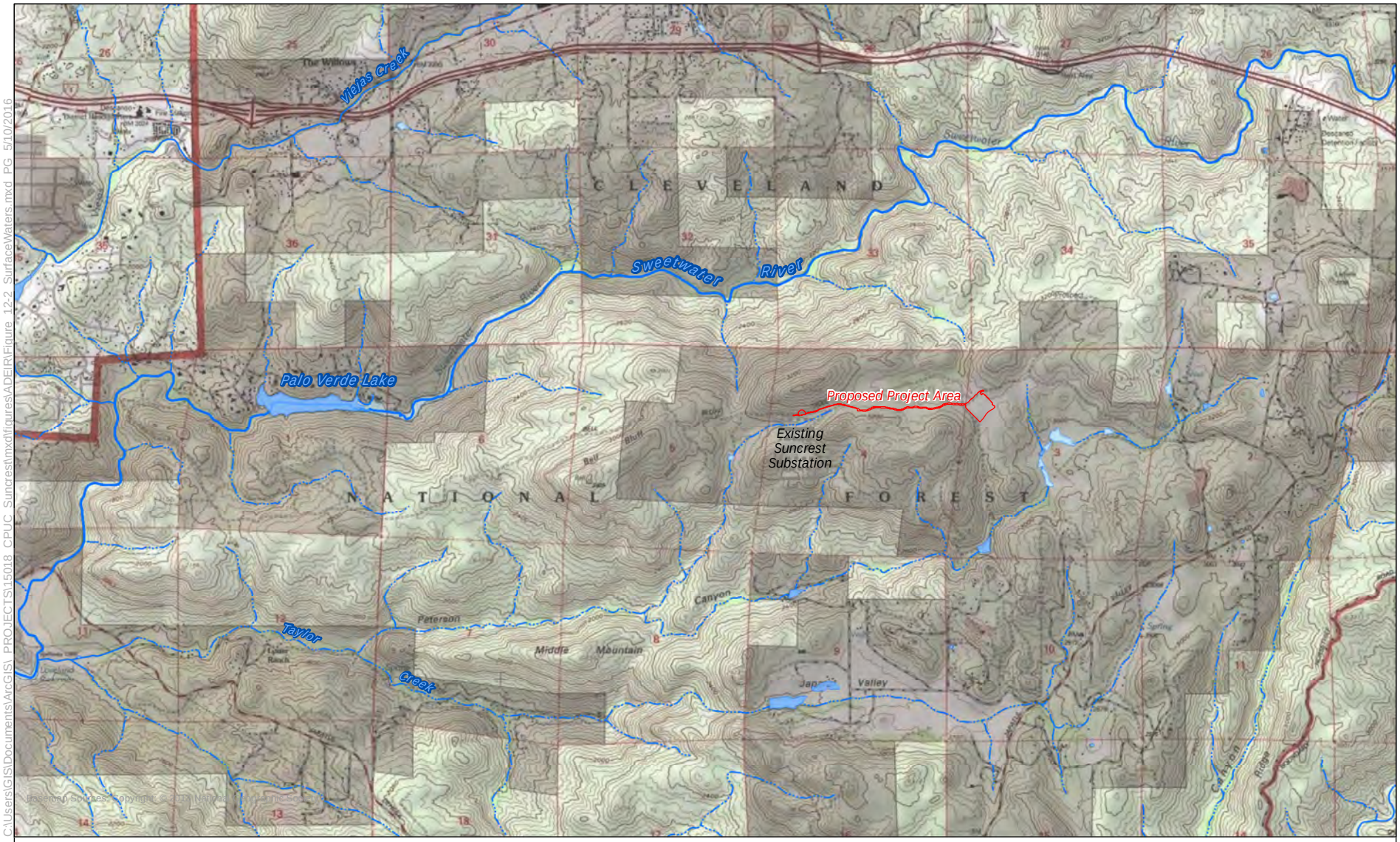

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Figure 12-2
Surface Waters in the Project Vicinity

Suncrest Dynamic Reactive Power Support Project

Research of the history of the SVC site indicates that the local topography of the site has been highly disturbed and altered in the recent past. As described in Chapter 2, *Project Description*, the SVC site, also known as the Wilson Construction Yard, was cleared and graded for its use as a construction materials storage and staging yard during construction of the existing SDG&E Suncrest Substation (SDG&E Undated). Rock and gravel was imported to the yard for soil stabilization and dust control during helicopter activities. In accordance with SDG&E's restoration plan for mitigation of temporary impacts caused by construction of the SDG&E Suncrest Substation, the Wilson Construction Yard was de-compacted by ripping and cross-ripping between 18-24 inches and then recontoured to a surface intended to match its original topography. Additionally, for construction of the SDG&E Suncrest Substation (completed in 2012), Bell Bluff Truck Trail, which runs immediately north of the proposed SVC site, was paved and widened, including raising the elevation of the road surface over the existing drainage feature to the north of the site and installing a culvert underneath the roadway.

All of these modifications to the SVC site topography may have affected the drainage patterns at the site, and also may explain the uncertainty regarding potential wetland features on the site. Research of the site discovered that the jurisdictional wetland delineation (JD) conducted for the Sunrise Powerlink identified a wetland within the proposed SVC site (SDG&E 2009). Recent communications with SDG&E have indicated that, based on the findings of the delineation, they avoided this area during construction of the substation, including using temporary fencing and establishing a buffer. However, subsequent wetlands testing conducted by SWCA Environmental Consultants, Inc. (SWCA) on behalf of NEET West in 2015 did not produce positive findings for wetland features in the same location. This may be in part due to the altered drainage patterns at the site caused by construction of the Suncrest Substation, but may also be due to the different methods used in the original JD conducted by SDG&E and the recent JD conducted by SWCA. SDG&E staff indicated that, due to restrictions on their ability to dig test pits caused by concerns over potential archaeological resources impacts, during their JD for the existing Suncrest Substation they assumed presence of hydric soils (one of the three "prongs" in a wetlands evaluation; see Chapter 7, *Biological Resources,* for additional information) and therefore may have over-included features as wetlands in their assessment. SWCA (2015) was able to follow U.S. Army Corps of Engineer's (USACE's) standard protocol and dig test pits to evaluate the presence of hydric soils as part of their evaluation; SWCA concluding that no hydric soils were present.

Beneficial Uses and Water Quality

Table 12-1 shows the designated beneficial uses, as identified in the San Diego Basin Plan, for the surface waters potentially affected by the Proposed Project (i.e., downstream and hydrologically connected). As shown in Table 12-1, the Sweetwater River in the vicinity of the Proposed Project (i.e., near Descanso and Viejas Creeks) provides for a number of beneficial uses, including municipal, agricultural, and industrial water supply; recreation; warm and cold water habitat, and spawning habitat for anadromous fishes (SDRWQCB 2011). Taylor Creek, Loveland Reservoir, and the Sweetwater Reservoir provide for similar uses with the exception that they do not provide for spawning habitat. The Sweetwater River downstream of the Sweetwater Reservoir, likely due to its noted water quality problems (discussed further below), does not provide for municipal water supply or contact recreation (SDRWQCB 2011). The San Diego Bay provides for a variety of uses, such as industrial water supply, navigation, commercial and sport fishing, estuarine habitat, and shellfish harvesting.

Because they are higher in the watershed and surrounded by less development, the streams and surface water features in the immediate vicinity of the Proposed Project generally have better water quality than features further down in the watershed and closer to the more urbanized portions of the San Diego Metropolitan Area. As evidence of this, the upper Sweetwater River and Taylor Creek are not listed on the CWA Section 303(d) list for any impairments requiring TMDLs whereas several downstream water body segments are listed for a number of impairments. Table 12-1 shows the 303(d) listed water body segments potentially affected by the Proposed Project.

Table 12-1. Clean Water Act Section 303(d) Listed Water Body Segments Potentially Affected by the Proposed Project

Water Body Name	Pollutant	Proposed TMDL Completion
Loveland Reservoir	Aluminum	2019
	Manganese	2019
	Oxygen, Dissolved	2019
	pH	2019
Sweetwater Reservoir	Oxygen, Dissolved	2019
Sweetwater River, Lower (Below Sweetwater Reservoir)	Total Dissolved Solids	2021
	Phosphorous	2021
	Selenium	2021
	Total Nitrogen as N	2021
	Toxicity	2021
	Enterococcus	2021
	Fecal Coliform	2021
San Diego Bay	PCBs (Polychlorinated biphenyls)	2019

Source: SDRWQCB 2007

As shown in Table 12-1, the Loveland Reservoir, Sweetwater Reservoir, Sweetwater River below the Sweetwater Reservoir, and the San Diego Bay all have at least one pollutant causing an impairment requiring a TMDL, with the Sweetwater River below the Sweetwater Reservoir being particularly polluted (SDRWQCB 2007). The sources of the pollutants identified in Table 12-2 were generally listed as unknown in the latest Section 303(d) report, but may be the result of any number of point and non-point sources.

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Table 12-2. Beneficial Uses of Surface Waters Potentially Affected by the Proposed Project

Water Body	Beneficial Use																				
	MUN	AGR	IND	PROC	GWR	NAV	FRSH	POW	REC1	REC2	COMM	BIOL	EST	WARM	COLD	WILD	RARE	MAR	AQUA	MIGR	SPWN	SHELL
Sweetwater River, Near Descanso Creek	●	●	●	●					●	●				●	●	●					●	
Sweetwater River, Near Viejas Creek	●	●	●	●					●	●				●	●	●					●	
Taylor Creek	●	●	●	●					●	●				●		●						
Loveland Reservoir	●	●	●	●					●	●				●	●	●						
Sweetwater Reservoir	●	●	●	●					●	●				●		●						
Sweetwater River, Downstream of Sweetwater Reservoir	+		●						◌	●				●		●						
San Diego Bay			●			●			●	●	●	●	●			●	●	●		●	●	●

● = Existing beneficial use; ◌ = Potential beneficial use; + = Excepted from MUN

MUN = Municipal and Domestic Supply; includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

AGR = Agricultural Supply; includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

IND = Industrial Service Supply; includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

PROC = Industrial Process Supply; includes uses of water for industrial activities that depend primarily on water quality.

GWR = Ground Water Recharge; includes uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

NAV = Navigation; includes uses of water for shipping, travel, or other transportation by private, military, or commercial vehicles.

FRSH = Freshwater Replenishment; includes use of water for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).

POW = Hydropower Generation; includes uses of water for hydropower generation.

REC1 = Contact Water Recreation; includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

REC2 = Non-contact Water Recreation; includes the uses of water recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picknicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

COMM = Commercial and Sport Fishing; includes the uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

BIOL = Preservation of Biological Habitats of Special Significance; includes uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources require protection.

EST = Estuarine Habitat; includes uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).

WARM = Warm Freshwater Habitat; includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

COLD = Cold Freshwater Habitat; includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

WILD = Wildlife Habitat; includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

RARE = Rare, Threatened, or Endangered Species; includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

MAR = Marine Habitat; includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).

AQUA = Aquaculture; includes the uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.
MIGR = Migration of Aquatic Organisms; includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
SPWN = Spawning, Reproduction, and/or Early Development; includes uses of water that support high quality habitats suitable for reproduction, early development and sustenance of marine fish and/or cold freshwater fish.
SHELL = Shellfish Harvesting; includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters and mussels) for human consumption, commercial, or sport purposes.

Source: SDRWQCB 2011

As part of their responsibilities under the Porter-Cologne Act, the RWQCBs set narrative and numerical water quality objectives for surface waters (and ground waters) for the protection of the designated beneficial uses. For reference, the water quality objectives for surface waters in the vicinity of the Proposed Project are shown in Table 12-3 below.

Table 12-3. Water Quality Objectives for Surface Waters in the Sweetwater Hydrologic Unit

Water Body	Constituent (mg/L or as noted)												
	TDS	Cl	SO_4	%Na	N&P	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F
Sweetwater Hydrologic Unit (HU #909.00)													
Lower Sweetwater	1,500	500	500	60	a	0.3	0.05	0.5	0.75	None	20	20	-
Middle Sweetwater	500	250	250	60	a	0.3	0.05	0.5	0.75	None	20	20	1.0
Upper Sweetwater	500	250	250	60	a	0.3	0.05	0.5	0.75	None	20	20	1.0

TDS = Total dissolved solids; Cl = Chloride; SO_4 = Sulphate; %Na = Percent sodium; N&P = Nitrates and phosphates; Fe = Iron; Mn = Manganese; MBAS = Methylene Blue Active Substances; B = Boron; Turb NTU = Turbidity Nephelometric Turbidity Units; F = Fluorine; Color = Color of water as determined by reference to the color of distilled water containing X milligrams of platinum as potassium chloroplatinate per liter.

Source: SDRWQCB 2012

12.3.4 Stormwater

As described in Chapter 2, *Project Description,* the Proposed Project would be located in a generally rural, undeveloped area in San Diego County. The only impervious surface within the Project area is Bell Bluff Truck Trail, which runs adjacent to the proposed SVC site and along the proposed transmission line (the transmission line would be installed underneath Bell Bluff Truck Trail). Bell Bluff Truck Trail was paved and widened as part of the Sunrise Powerlink project. This included adding a stormwater conveyance system along the length of the road, as well as several of culverts underneath the roadway to allow flows to pass under the road. The stormwater conveyance system consists of concrete "v-ditches" at the base of the slope on the south side of Bell Bluff Truck Trail in the area of the Proposed Project, which convey runoff from the roadway and the adjacent land to outlets and/or culverts.

12.3.5 Groundwater

The South Coast HR has 56 delineated groundwater basins, 27 of which are located within the San Diego subregion (DWR 2003). None of these basins, however, are within or near the Proposed Project. The Proposed Project is not within the planning area of any GSAs, pursuant to SGMA, at the time of writing. The nearest downstream basin, to which surface waters in the Project area generally flow, is the Sweetwater Valley Groundwater Basin (Groundwater Basin #9-17), which is located downstream of the Sweetwater Reservoir near the confluence with San Diego Bay (County of San Diego 2007). The Sweetwater Valley Groundwater Basin underlies an alluvial valley that empties into the San Diego Bay (DWR 2004). The basin is bounded on the east by impermeable Santiago Peak volcanic rocks; on the north and south by Pliocene to Pleistocene semi-permeable terrestrial deposits, and on the west by the San Diego Bay. The primary water-bearing deposit in the basin is Quaternary alluvium, which consists of unconsolidated stream deposits of sandy silt, sand, and cobbles, and has an

estimated average thickness of 80 to 100 feet (DWR 2004). Groundwater in these deposits is unconfined, and wells typically produce an average yield of about 300 gallons per minute (DWR 2004).

Designated beneficial uses for groundwater in the Sweetwater HU include Municipal and Domestic Supply (MUNI), Agricultural Supply (AGR) and Industrial Service Supply (IND) (only MUNI and AGR in the Upper Sweetwater HSA) (SDRWQCB 2012). Groundwater in the basins of the San Diego subregion of the South Coast HR has mainly calcium and sodium cations and bicarbonate and sulfate anions, with local impairments by nitrate, sulfate, and TDS found (DWR 2003). Generally, the groundwater in the alluvium of the Sweetwater Valley Groundwater Basin is of sodium chloride character, with a TDS concentration ranging from 300 to more than 50,000 parts per million (DWR 2004).

Groundwater was not encountered in any of the borings drilled during the geotechnical study conducted for the Proposed Project (Kleinfelder 2016). In addition, geologic observations of natural outcrops as well as graded slopes within the Project area did not identify any areas of obvious water seepage (though these observations were made in the summer months following several years of drought) (Kleinfelder 2016). The 2009 investigation conducted for the Suncrest Substation did encounter groundwater in some of the borings below the substation at depths from between 44 to 60 feet bgs, corresponding to elevations of between 3,036 to 3,049 feet msl. A water well at the toe of a steep hillside in the area of the existing access road to the Suncrest Substation identified in the 2009 investigation had water at 8 to 12 feet bgs, corresponding to elevations between 3,139 to 3,135 feet msl. However, it is not known whether the observed water represents a groundwater table, a perched condition, or seepage within fractured rock (Kleinfelder 2016). Water well data obtained from DWR's website from three residential well sites approximately 2 miles northeast of the proposed SVC substation had water at depths ranging from between 35 to 97 feet bgs.

12.3.6 Floodplains and Tsunamis

The Proposed Project is located high in the watershed, and at an elevated location relative to the nearby Sweetwater River and Taylor Creek. The Federal Emergency Management Agency (FEMA) designates the Project area as Zone X on its Federal Insurance Rate Map, indicating it is outside the 0.2 percent annual chance floodplain (FEMA 2002). No dams or impoundments exist upstream of the Proposed Project; therefore, the Proposed Project would not be located within any dam inundation area. The Project also is located approximately 30 miles inland from the coast, at an elevation of over 3,000 feet above msl. This is well outside of identified tsunami inundation areas (Cal EMA 2009).

12.4 Impact Analysis

12.4.1 Methodology

Potential impacts from the Proposed Project related to hydrology and water quality were evaluated qualitatively by considering aspects of the Proposed Project with respect to applicable State CEQA Guidelines Appendix G significance criteria (identified below) and in light of the existing regulatory and environmental settings. In general, the analysis relies on the description of the Project in Chapter 2, *Project Description,* and the existing regulations and physical environmental conditions described in earlier sections of this chapter. CPUC

assumes the Applicant (NEET West) would follow existing laws and regulations during construction and operation of the Proposed Project. Impacts that may occur from the Proposed Project are not necessarily considered significant unless they would result in changes to the physical environment, such as to trigger one of the Appendix G significance criteria. Discussion of impacts are separated into construction- and operation-related impacts where such separation is informative or where the two types of impacts differ substantially in nature or mechanism.

12.4.2 Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines, the Proposed Project would result in a significant impact on hydrology and water quality if it would:

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality;

B. Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level or result in any undesireable results pursuant to SGMA, as follows:

    a. Chronic lowering of groundwater levels (not including overdraft during a drought if a basin is otherwise managed).

    b. Significant and unreasonable reduction of groundwater storage.

    c. Significant and unreasonable seawater intrusion.

    d. Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.

    e. Significant and unreasonable land subsidence that substantially interferes with surface land uses.

    f. Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.;

C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;

D. Substantially alter the existing drainage pattern of the site or area, include through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

E. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

F. 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;

G. Place within a 100-year flood hazard area structures which would impede or redirect floodflows;

H. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;

I. Contribute to inundation by seiche, tsunami, or mudflow.

Criteria Dismissed From Further Analysis

The Proposed Project does not include the construction or modification of any homes, and is not located within a 100-year flood hazard area (FEMA 2002). For this reason, the sixth criterion (F) does not apply to the Proposed Project and is not evaluated further. Likewise, the seventh criterion (G) does not apply because the Project would not be located within a 100-year flood hazard area. This criterion is not evaluated further. Contribution to inundation by seiche or tsunami (under criterion I) also are not considered applicable because the Proposed Project is not located near any large water bodies or the coast. Potential contribution to inundation by mudflow, however, is considered in the impacts analysis below.

12.4.3 Environmental Impacts

Impact HYD/WQ-1: Potential Impacts to Surface or Ground Water Quality (Less than Significant with Mitigation)

Construction

Construction of the Proposed Project would involve site clearing, grading, and excavation, all of which could potentially result in erosion and adverse effects on downstream water bodies. Without adequate protections, loose dirt or sediment from Project ground disturbance activities could wash downstream in a rain event to Sweetwater River or Taylor Creek, and eventually make its way to Loveland Reservoir and Sweetwater Reservoir. Excess sediment in waterways can cloud the water reducing the amount of sunlight reaching aquatic plants, clog fish gills, and smother aquatic habitat and spawning areas (USEPA 2007). Project construction also would involve operation and storage of construction equipment, which typically contains hazardous materials, such as fuel, lubricant, oil, etc. If improperly handled or without adequate safeguards, use and storage of such materials could potentially contaminate surface or groundwaters from spills or leaking equipment. Many hazardous materials used in construction activities are toxic to aquatic organisms or humans and, if allowed to enter waterways, could adversely affect designated beneficial uses (see Table 12-1). While Project excavation activities could potentially create a pathway for groundwater contamination, it is not anticipated that groundwater will be encountered during Project construction due to the Project's location high in the watershed and the documented low water table in the area.

Existing regulations would require the Proposed Project to implement a number of measures to prevent possible adverse effects on water quality. Under CWA, Section 402, the Proposed

Project would be required (because it would disturb more than 1 acre of land) to obtain a General Construction Stormwater Permit from the SDRWQCB, which would require preparation and implementation of a SWPPP. As described in Section 12.2, "Federal Laws, Regulations, and Policies," the SWPPP must include a list of BMPs to prevent erosion and potential impacts to hydrology and water quality; however, there is some leeway as to which specific BMPs may be included in the SWPPP, as the SWPPP preparer would have some discretion in crafting the plan. Therefore, this draft EIR incorporates **Mitigation Measure HYD/WQ-1** to ensure that certain important BMPs for erosion prevention and protection of water quality are implemented during construction of the Proposed Project. Additionally, as described in Chapter 11, *Hazards and Hazardous Materials*, the Proposed Project would implement **Mitigation Measure HAZ-1**, which would require preparation and implementation of a Hazardous Materials and Waste Management Plan (HMWMP), which will describe hazardous materials storage, management, and disposal protocols during Project construction and operation. It is not anticipated that the Proposed Project would require a CWA, Section 401 Water Quality Certification (WQC) because it is not believed any wetlands or features subject to USACE jurisdiction exist on the proposed SVC site and transmission line installation would avoid existing jurisdictional features crossing Bell Bluff Truck Trail via culverts. It is possible, however, that the transmission line may not be able to avoid the culverts across Bell Bluff Truck Trail, and may therefore require CWA Section 401 and/or 404 permits. If required, a Section 401 WQC and/or Section 404 nationwide or individual permit also may require water quality protection measures and compensatory mitigation for any impacts to waters of the U.S. or State.

With implementation of Mitigation Measure HYD/WQ-1 and HAZ-1, and adherence to existing laws and regulations, the Proposed Project is not anticipated to have any significant impacts on water quality during construction. The Proposed Project would not be anticipated to violate any water quality standards or waste discharge requirements during construction. This impact would be less than significant with mitigation.

Mitigation Measure HYD/WQ-1: Implement Construction Best Management Practices for Erosion Control.

NEET West and/or its contractor(s) shall implement the following measures during Proposed Project construction, or shall implement alternative measures that are equally or more effective:

- Implement practices to reduce erosion of exposed soil and stockpiles, including watering for dust control, establishing perimeter silt fences, and/or placing fiber rolls.
- Minimize soil disturbance areas.
- Implement practices to maintain water quality, including silt fences, stabilized construction entrances, and storm-drain inlet protection.
- Where feasible, limit construction to dry periods.
- Revegetate disturbed areas.

The performance standard for these erosion control measures is to use the best available technology that is economically achievable. These measures may be included in SWPPP requirements, as appropriate.

Operation

Following construction, the Proposed Project may continue to generate stormwater discharges from its new impervious surface. The Proposed Project would include approximately 6 acres of developed area, approximately 2.6 acres of which would be impervious. Additionally, the Proposed Project would involve storage and use of hazardous materials, such as transformer oil, as well as solvents and paints potentially used during maintenance activities. If any of these hazardous materials associated with the SVC equipment were to spill or leak and/or be discharged downstream via stormwater flows, this could result in adverse effects on water quality and beneficial uses. As shown in Table 12-2, downstream water bodies include a number of designated beneficial uses, including municipal and agricultural water supply, recreation, and wildlife habitat. Transformer oil, solvents, paints, and other materials that may be used during Project operation could be toxic to aquatic life or humans, or otherwise impact beneficial uses. Additionally, stormwater discharges from the new impervious facility, to the extent they could carry sediment or accelerate downstream erosion due to increased runoff velocity or volumes, could result in sedimentation and associated adverse effects in Sweetwater River, Taylor Creek, or other downstream water bodies.

However, the Proposed Project would include a stormwater detention basin and stormwater drainage system, including earthen swales surrounding the facility. This system would be designed to capture stormwater that runs off from the facility and divert stormwater that may run-on to the site, thereby preventing high volume or velocity discharges that may affect downstream water quality. Additionally, the Proposed Project would be subject to the San Diego Regional Stormwater Permit and the County of San Diego's WPO, which require that projects do not discharge stormwater, such as to substantially impact water quality. Also, the Proposed Project would implement Mitigation Measure HAZ-1 to require development and implementation of a Hazardous Materials and Waste Management Plan. This plan would establish protocols for safe storage, management, and disposal of hazardous materials used for the Proposed Project. With adherence to these existing laws and regulations, and implementation of Mitigation Measure HAZ-1, the Proposed Project would not be anticipated to adversely affect water quality or violate water quality standards. This impact would be less than significant with mitigation.

Impact HYD/WQ- 2: Depletion of Groundwater Supplies or Interference with Groundwater Recharge (Less than Significant)

The Proposed Project would not use groundwater supplies during construction or operation. It is anticipated that approximately 2,600,000 gallons (approximately 8 acre-feet) of water will be required during project construction. This water would be used for cutting of asphalt pavement, dust control, fire suppression reserve, concrete washout, and other purposes. None of this water, however, would be obtained from groundwater sources. Rather, it would be obtained from either the Padre Dam Municipal Water District (PDMWD) or from storage ponds owned by an adjacent landowner. NEET West is currently negotiating a water services agreement with PDMWD for use of recycled water from their water recycling facility. NEET West also is coordinating with the owner of the property on which the proposed SVC would

be built for use of water from the property owner's ponds, which are supplied by local runoff and a contract with the Sweetwater Authority.

The Proposed Project would include approximately 2.6 acres of new impervious surface, which could interfere to some degree with groundwater recharge. Compared with existing conditions, the Proposed Project may reduce infiltration of precipitation or runoff water into the soil below, which may in turn decrease percolation of water into the groundwater below; however, the Proposed Project is not located on or near any designated groundwater basins or GSA planning areas, and is located relatively high in the watershed where substantial groundwater supplies would not be expected. Nor is the Proposed Project site a significant groundwater recharge location due to its relatively high position in the watershed, limited catchment areas contributing runoff, and soil type. Additionally, the geotechnical investigation conducted for the Proposed Project identified granitic bedrock below the surficial units underlying the entire proposed SVC site and transmission alignment (Kleinfelder 2016). This subsurface material would not be conducive to percolation of groundwater or storage of groundwater supplies.

Given the geologic and topographic conditions at the proposed SVC site, it is anticipated that most precipitation falling on or near the site would be transported via shallow subsurface flow or via overland sheetflow to drainages downgradient. Therefore, the addition of impervious surface in this area may not have a dramatic effect on groundwater recharge and would not be expected to cause any undesireable results, as defined under SGMA. This impact would be less than significant.

Impact HYD/WQ-3: Alteration of Existing Drainage Patterns (Less than Significant with Mitigation)

The Proposed Project would alter existing drainage patterns at the Project site by introducing a new impervious surface to the area. In general, impervious surfaces increase the volume and velocity of runoff from a site compared to natural ground surfaces where water may infiltrate slowly into the soil. Such increased runoff volume and velocity can potentially result in erosion or flooding downstream (e.g., if the impervious development is large enough and stormwater management features are not incorporated or are insufficient). Stormwater management features included as part of the Project, including a stormwater detention basin and earthen swales, would mitigate potential effects of increased runoff volume and velocity. These facilities would capture runoff and then release it slowly via shallow, overland flow.

The Project could temporarily affect existing culverts underneath Bell Bluff Truck Trail. Construction of the underground transmission line would encounter existing culverts underneath the roadway, which convey flows from either side of the road surface. While NEET West intends to avoid existing culverts, it may not be possible due to the type of subsurface material encountered and some culverts may need to be temporarily removed. Temporary removal of existing culverts would alter drainage patterns, potentially resulting in erosion or sedimentation. Additionally, while not anticipated, it is possible that installation of splice vaults could temporary impact the existing "v-ditch" along the base of the slope to the south of the roadway. To avoid and minimize these potential impacts, the Proposed Project would implement **Mitigation Measures HYD/WQ-2**. **Mitigation Measure GEO-1** also would help to ensure that any impacts associated with construction activities around culverts and other stormwater conveyance facilities are minimized. This impact would be less than significant with mitigation.

Mitigation Measure HYD/WQ-2: Avoidance and Minimization of Impacts to Existing Culverts and Stormwater Conveyance Features

The Proposed Project will be designed to avoid existing stormwater conveyance structures to the extent feasible. Specific avoidance strategies include:

- Siting splice vault structures and the riser pole structure within or immediately adjacent to Bell Bluff Truck Trail or in uplands outside of existing drainage features and the storm water conveyance system along Bell Bluff Truck Trail.

- Where feasible based on geotechnical investigation, avoiding culverts within Bell Bluff Truck Trail during construction of the underground transmission line by bracing or stabilizing culvert structures and excavating beneath the culvert structures to maintain culvert function.

Where it is infeasible to avoid impacts to existing culverts or other stormwater conveyance structures, work will not occur within 48 hours of a forecasted rain event of 0.5 inches or greater and temporary piping will be onsite to maintain any unexpected water flow. Prior to removing or impacting any existing culverts during construction, NEET West shall obtain all necessary regulatory approvals/permits from the appropriate agency (e.g., USACE, California Department of Fish and Wildlife, or RWQCB) with jurisdiction over the features.

Following construction, NEET West shall reinstall any temporarily removed culverts or other stormwater conveyance structures and restore work areas to preconstruction conditions.

Impact HYD/WQ-4: Effects on Existing Stormwater Facilities or Contribution of Polluted Runoff (Less than Significant with Mitigation)

The Project site is currently undeveloped and the only existing stormwater drainage facilities in the area are along and underneath Bell Bluff Truck Trail. The Proposed Project would not be anticipated to discharge substantial stormwater flows to these existing facilities because the Project features would be contained underground within Bell Bluff Truck Trail or would include their own stormwater management features that would not discharge to the existing road system. In this respect, the Proposed Project would not be anticipated to contribute substantial runoff that would exceed the capacity of the existing system.

The Proposed Project would have the potential to generate polluted runoff, primarily during Project construction. During construction, the Proposed Project would involve open trenching and excavation within Bell Bluff Truck Trail for installation of the underground transmission line. Project construction also would involve operation of construction equipment and, potentially, temporary storage of materials along Bell Bluff Truck Trail. These activities could generate polluted runoff (e.g., sediment-laden runoff from excavations or hazardous materials leaking from construction equipment) that may be discharged to the existing stormwater system along the road. Additionally, during Project operation, the Proposed Project may have the potential to generate polluted runoff from use of hazardous materials (e.g., transformer oil, solvents, paint) on the SVC site.

In accordance with the General Construction Stormwater Permit, the Proposed Project would be required to prepare and implement a SWPPP to minimize potential erosion and discharges of contaminated runoff to the existing system. Additionally, the Proposed Project would implement **Mitigation Measure GEO-1** to ensure the Project construction contractor implements adequate erosion-control measures and BMPs. The Proposed Project also would implement **Mitigation Measure HAZ-1** to require preparation and implementation of a Hazardous Materials and Waste Management Plan. The Proposed Project also would be subject to the San Diego Regional Stormwater Permit, which would limit potential discharges to existing stormwater systems. With implementation of these plans and measures, any potential impacts related to contribution of polluted runoff would be less than significant with mitigation.

Impact HYD/WQ-5: Potential to Expose Persons or Structures to Significant Risk of Loss Due to Flooding (Less than Significant)

The Proposed Project is located relatively high in the watershed in a mountainous area. The surrounding topography is steep and there are no defined river or stream systems in immediate proximity to the Project site. The nearest features are Sweetwater River and Taylor Creek, which are approximately 1 mile northwest and 0.55 mile south of the Project site, respectively. In addition to being relatively far away, these drainages are at lower elevations than the Proposed Project, which is relatively elevated on a ridge. The Project site is not located in a 100-year flood hazard zone as defined by FEMA. In this type of setting, flooding would not be anticipated and there would be little possibility of significant loss to people or structures from flooding. The proposed SVC would be an important, if not critical, component to the regional transmission system, as it would provide needed voltage support and regulation. As such, any damage to the facility from flooding could have impacts on the transmission system beyond those impacts to the facility; however, there is no reason to believe such an event is likely or possible. Therefore, this impact would be less than significant.

Impact HYD/WQ-6: Potential Contribution to Inundation by Mudflow (Less than Significant)

Due to the Proposed Project's location in a relatively steep and mountainous area, mudflow or landslide would be a potential hazard of concern. The proposed SVC site is surrounded by moderately sloped hills to the east and west, and steep slopes exist on either side of Bell Bluff Truck Trail along the proposed transmission line alignment. The Project geotechnical study, however, found that the natural slopes within the Project area are composed of granitic material that typically are not prone to landsliding on low to moderate slopes and in most cases even on steep slopes are not prone to deep-seated failures (Kleinfelder 2016). The study also found no signs of slope instability in slopes in the Project area. Overall, the geotechnical report concluded that the hazard with respect to landsliding at the proposed SVC site is low, and the hazard associated with the proposed transmission line along the steepest slope in the Project area above the Suncrest Substation is low to moderate (Kleinfelder 2016). Based on the findings of the geotechnical report, the potential contribution of the Project to inundation by mudflow would be less than significant.

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