4.11 Hydrology and Water Quality

This section describes the known hydrology and water quality conditions in the project area, including at the Diablo Canyon Power Plant (DCPP) site, the Pismo Beach Railyard (PBR), and the Santa Maria Valley Railyard Facility (SMVR) in Santa Barbara County at Betteravia Industrial Park (SMVR-SB). This section also describes applicable rules and regulations pertaining to water resources that could affect the Proposed Project, identifies applicable significance thresholds, analyzes how the Proposed Project may impact existing conditions, and recommends measures to avoid or substantially reduce any effects found to be potentially significant.

Scoping Comments Received. During the scoping comment period for the Environmental Impact Report (EIR), written and verbal comments were received from agencies, organizations, and the public. These comments identified various substantive issues and concerns relevant to the EIR analysis. Appendix B includes all comments received during the scoping comment period. The following list provides a summary of scoping comments applicable to this issue area and considered in preparing this section:

- Assess the impacts of wastewater treatment and ocean effluent discharges in absence of the current high volume water discharge and address impacts of continued discharge of hot water released into the marine ecosystems.
- Analyze water runoff impacts to ocean water quality during decommissioning and conduct regular water sampling in the waters off Diablo Canyon for the duration of the decommissioning project.
- Address the potential for toxins in groundwater and if the groundwater aquifer can produce required water supplies during peak decommissioning activities.

4.11.1 Environmental Setting

The Proposed Project includes the DCPP, PBR, and SMVR-SB sites, all located on the Central Coast of California. The DCPP site is located within unincorporated San Luis Obispo County adjacent to the Pacific Ocean. Approximately two-thirds of the DCPP site is within the coastal zone and approximately one-third is outside the coastal zone (see Figure 1-3). The PBR site is located within the City of Pismo Beach, with the very southern portion of the PBR site within the coastal zone. The SMVR-SB site is located within unincorporated Santa Barbara County and is not within the coastal zone. Generally, the climate on the Central Coast is mild year-round, with temperature highs averaging 80 degrees Fahrenheit (°F) in the summer months and 60°F in the winter months. Rainfall is highly seasonal, with 80 percent of the average annual 17 inches of precipitation near the DCPP site falling between December and April (San Luis Obispo, 2011; San Luis Obispo, 2020).

4.11.1.1 Diablo Canyon Power Plant Site

Surface Water Hydrology

The DCPP site is approximately 7 miles northwest of Avila Beach, with the Pacific Ocean to the west and southwest. Elevations range from sea level to approximately 1,115 feet. The site comprises a 750-acre high security zone within PG&E's approximately 12,000-acre owner-controlled land.

The DCPP site is located within the Irish Hills Coastal Watershed (SLO Watershed Project, 2021). The Irish Hills Coastal Watershed drains 27,922 acres or approximately 44 square miles. The Irish Hills Coastal Watershed is in the San Luis Range, along the remote San Luis Obispo County coastline between the communities of Los Osos and Avila Beach. The drainages rise to a maximum elevation of 1,819 feet above sea level at Saddle Peak. The major creeks with the headwaters in the Coastal Range Mountains that flow to the Pacific Ocean are Hazard Canyon Creek, Islay Creek, Coon Creek, Diablo Creek, Irish Creek, Rattlesnake Creek, Hanford Creek, and Wild Cherry Canyon Creek. The watershed is dominated by grazing lands, some of which are in conservation or agricultural easements, and public lands. In addition to DCPP, other land uses within the watershed include passive recreation, natural resource preservation, and limited oil drilling. The Central Coast Regional Water Quality Control Board (CCRWQCB) uses a watershed classification system that divides surface waters into hydrologic units (HUs). The DCPP site is in the Estero Bay HU 10.

Diablo Canyon Creek flows west out of the Irish Hills and passes through the DCPP site along the northern edge of the developed industrial areas. At one point, it enters an underground culvert (for approximately 2,714 linear feet) that passes beneath the 230 kilovolts (kV) and 500 kV switchyards northeast of Units 1 and 2 before daylighting to an open channel that extends along the western edge of the developed area of the DCPP site (i.e., western edge of Parcel P, see Figure 2-2) and drains directly into the Pacific Ocean (PG&E, 2021a). Stormwater runoff within the developed portions of the DCPP site flow to Diablo Creek or directly to the Pacific Ocean. The DCPP utilizes a once-through cooling (OTC) water system for DCPP operations whereby seawater is drawn from the Pacific Ocean through the shoreline Intake Structure located south of the main power plant and used to cool plant components. Seawater is then discharged back to the Pacific Ocean at the Discharge Structure located along the shoreline of Diablo Cove. Total OTC flow of seawater during routine full power operations is 1,772,000 gallons per minute (gpm), equivalent to 2.55 billion gallons of seawater circulated per day.

A seawater reverse osmosis (SWRO) treatment system provides the majority of freshwater for DCPP's primary and secondary systems makeup, fire protection system supply water, and source water for the DCPP drinking water system supply. The SWRO is supplied with raw seawater drawn from the OTC system intake and has the capacity to produce 450 gpm of freshwater, equivalent to 648,000 gallons of water per day.

Groundwater Hydrology

According to information provided by the California Department of Water Resources (CDWR), the DCPP site is not located in an area with a designated groundwater basin (CDWR, 2021a). Furthermore, according to the US Geological Survey (USGS, 1995), no significant aquifers exist in the area. The nearest groundwater basin is Los Osos Valley, located several miles north of the DCPP site. The primary aquifer supplying groundwater to the DCPP site is the fractured sandstone of the Obispo Formation (ENTRIX, Inc. [ENTRIX], 2008). This unit also contains siltstones and finer grained beds that are less productive. The brittle sandstones have discrete water-bearing fractures. Because the bedrock aquifer is relatively hard and locally brittle, essentially all groundwater production is supplied from fractures, not from pore spaces between sand grains as occurs in unconsolidated aquifers.

The DCPP site has several on-site wells that are used for monitoring purposes, but only one active permitted water supply well (Well #2) is in Diablo Canyon. This well supplements the site's freshwater source (the previously discussed SWRO system), which supplies water to the raw water storage reservoirs used primarily for fire water and drinking water. This well is permitted through the San Luis Obispo County Health Department. The well is only used as needed, which equates to approximately 2 weeks (or approximately 350 hours) per year on average with a pumping rate of approximately 150 gpm. When pumping, the well draws from an isolated source specific to DCPP. The topography of the location limits any potential connection between the well source water and off-site water resources. There are no neighboring wells (outside of the DCPP site and adjacent owner-controlled property) that could be adversely affected or rendered unusable due to operation of the on-site well.

Based on a review of existing groundwater level data for the DCPP site, groundwater flows generally to the southwest towards the Pacific Ocean (ENTRIX, 2010). In 2021, transducers were deployed at Well #2, Well #4, and three locations within Diablo Creek to monitor water levels (PG&E, 2021a). Based on this study, pumping water from Well #2 did not affect water levels at Diablo Creek, indicating no adverse effect at the creek due to groundwater withdrawal from Well #2. These results are consistent with previous studies (ENTRIX, 2008).

For current DCPP operations, freshwater demand is met from SWRO and groundwater from Well #2. Over the past 5 years, the average annual freshwater demand at DCPP has been approximately 101 million gallons, of which 90 million gallons have been for power production and the remaining 11 million gallons have been for domestic water supply. The demand has been met primarily through SWRO with some blending via groundwater from Well #2.

As described in Section 2.3.20, *Water Management, including Management of the Seawater Reverse Osmosis Facility and Liquid Radioactive Waste*, water demand from 2024 to 2039 (covering Phase 1 and Phase 2) would be met using existing plant equipment (i.e., SWRO through 2034 and Well #2 throughout decommissioning) and then on-site groundwater post-2034, when mostly all demolition activities are complete. As shown in Figure 2-34, DCPP water needs are expected to increase from about 5.5 million gallons annually in 2028 to approximately 32 million gallons annually from 2030 to 2034. At the end of 2034, the SWRO would shut down, and on-site water needs for decommissioning would be met via groundwater extraction. Starting in 2035 and through post-restoration performance monitoring (2039), water use is projected to decrease and level out at 764,000 gallons per year for completion of the remaining decommissioning activities and vegetation watering. Well #2 has been shown to have adequate capacity to meet this water need; however, additional on-site wells such as Well #5 may be used. Post-decommissioning (after 2039), annual water demand for ISFSI and GTCC Waste Storage Facility operations would level out at approximately 215,000 gallons per year and met through groundwater extraction. Bottled water (i.e., Culligan Water) would continue to be trucked in for drinking purposes as is currently done at the DCPP site.

Surface Water and Groundwater Quality

Surface water quality is monitored according to conditions specified in the National Pollution Discharge Elimination System (NPDES) Permit No. CA0003751, Order 90-09 for the DCPP (CCRWQCB, 1990). This NPDES Permit and Order authorizes discharge of brine and treated waste-

water through dilution into the auxiliary cooling water system, which discharges approximately 2.55 billion gallons of water per day to the Pacific Ocean. Smaller amounts of in-plant chemical wastes, low-level radioactive waste, and stormwater runoff are also discharged. These discharges are tested for pollutants and other water quality parameters to achieve compliance with the regulations, and all discharges are logged and reported to the CCRWQCB. Discharges not authorized by this permit are considered a violation of the NPDES Permit and the Clean Water Act and are subject to penalties by the CCRWQCB.

DCPP also has an active Stormwater Industrial General Permit (IGP), Waste Discharge Identification Number (WDID) 3 40I018248, issued by the State Water Resources Control Board (SWRCB), which authorizes discharges of industrial stormwater to waters of the United States. The IGP requires periodic sampling of industrial stormwater discharges and visual monitoring throughout the year. Results of these monitoring efforts are reported annually to the CCRWQCB and SWRCB.

Temperature data reported in the 2019 NPDES Permit receiving water monitoring annual report show that seawater temperatures in the nearshore areas around the DCPP site are generally coolest from February through May and warmest from August through November (PG&E, 2022a). During this year, monthly average ambient seawater temperatures at a monitoring station downcoast from the Intake Cove at a depth of -10 feet mean lower low water ranged from 53.2°F in April to 58.5°F in November. Daily average temperatures of seawater from the Intake Cove in 2019 ranged from 49.5°F to 60.5°F, with an average of 58.5°F.

In addition to water quality monitoring, an industrial stormwater pollution prevention plan (SWPPP) is implemented at the DCPP site. This plan identifies and assesses potential sources for pollutants at the DCPP site that may affect water quality and applies site-specific best management practices (BMPs) to reduce or prevent pollutants in industrial stormwater discharges and authorized non-stormwater discharges (PG&E, 2015).

In accordance with the Nuclear Energy Institute 07-07 Groundwater Protection Initiative, tritium monitoring in groundwater at the DCPP site began in 2006 as part of the Radiological Environmental Monitoring Program (PG&E, 2020a). Groundwater is sampled at several on-site wells, including Well #2, to monitor tritium. Results of the Radiological Environmental Monitoring Program are submitted to local, state, and federal agencies on an annual basis via the Annual Radiological Environmental Operating Report.

From 2006 through 2008, tritium was found to "wash-out" during rain events due to gaseous releases from the plant vents (direct rain collection and building downspouts). Tritium was found to concentrate in stagnant water due to diffusion in air from the plant vents and in condensation of air moisture in proximity to the DCPP site vents. Subsequent monitoring consistently measured tritium levels in excess of the Lower Limit of Detection (400 picocuries per liter) within French drains beneath the DCPP site's powerblock (PG&E, 2020a). The low levels and the location of the tritium found in groundwater at DCPP do not indicate a leak from the spent fuel pool or any other plant equipment source of tritium. Instead, the low levels are consistent with minor tritium "wash-out" during rain events.

The DCPP site's Radiation Protection personnel undertook a review of the hydrogeologic environment and the potential threat to drinking water supplies. The only groundwater that is used for drinking water at the DCPP site is pumped from Well #2, located east of the DCPP site at a

ground elevation of 333 feet mean sea level (MSL). This is considerably higher than the ground elevation of the Power Block at 85 feet MSL. Well #2 draws from an isolated source specific to Diablo Canyon that is replenished by flows through the alluvium. Potential releases of tritiated water from the DCPP site cannot lead to any drinking water source due to overall site hydrogeological characteristics, and the higher elevation of the aquifer replenishing the location tapped by the deep water well. A comparison of the static water level and the pumping water level of Well #2 and the Power Block wells showed that Well #2 could not draw water from the Power Block area, even during intensive pumping during drought conditions (ENTRIX, 2010). Thus, the DCPP site's Radiation Protection analysis concluded that the DCPP site releases of tritiated water, should they occur, would not affect drinking water sources because there is no groundwater under the DCPP site that would lead to sources of drinking water. No plant-related tritium has been detected in drinking water.

Based on the aforementioned assessments and environmental staff evaluation, it was concluded that there is no potential for waters originating at the DCPP site to contaminate domestic water supplies regulated, owned, managed, or certified by state and local governmental bodies.

Flooding

The DCPP site has no history of flooding. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06079C1303H, the DCPP site is not located within a special flood hazard area (FEMA, 2017a). Other than the shoreline, the DCPP site is in Zone X, which is composed of areas with minimal flood hazards that are above the elevation of the 0.2 percent annual chance (or 500-year) flood. Along the shoreline, the coastal flood elevation ranges from 22 to 39 feet MSL, which is below the elevation of DCPP Units 1 and 2 (85 feet MSL). Based on a regional regression analysis (Waananen and Crippen, 1977), the 100-year discharge of Diablo Creek is approximately 1,000 cubic feet per second (cfs). Dry season flows occur as a result of groundwater seepage. Flows tend to be on the order of 0.3 cfs.

4.11.1.2 Pismo Beach Railyard

Surface Water Hydrology

The PBR site is located within the Pismo Creek Watershed (SLO Watershed Project, 2021), which drains 26,030 acres or approximately 41 square miles. The Pismo Creek Watershed is a coastal basin located in southern San Luis Obispo County, with a maximum elevation of 2,865 feet above sea level.

The PBR site slopes west to east and drains into a man-made canal along the eastern boundary of the site, ultimately draining into the Pismo Creek channel and finally to the Pacific Ocean approximately 1 mile west of the PBR site. The Pismo Creek Watershed has three major tributary basins with their headwaters in the Santa Lucia Mountains: West Corral de Piedra, East Corral de Piedra, and Cañada Verde. A fourth significant tributary, Cuevitas Creek, enters Pismo Creek from the west in lower Price Canyon. The mouth of Pismo Creek enters the Pacific Ocean in the dune region of Pismo Beach. The watershed is dominated by agricultural land uses in its upper reaches, including vineyards, ranches, and row crops. The urban core of the City of Pismo Beach is adjacent to the Pismo Creek Estuary. Other land uses within the Pismo Creek Watershed include the Cold

Canyon Landfill, Price Canyon Oilfield, and the City of Pismo Beach's wastewater treatment plant. The PBR site is in the Estero Bay HU 10, which is the same as the DCPP site.

Groundwater Hydrology

According to information provided by the CDWR, the PBR site is not located in a designated groundwater basin (CDWR, 2021a). Groundwater in the Pismo Creek Valley occurs primarily within the shallow alluvium and the underlying Paso Robles Formation. Aquifers in the shallow alluvium are unconfined and are underlain by one or more confined aquifers. Depth to groundwater beneath the PBR site is unknown, and the groundwater flow direction is assumed to be to the west toward the Pacific Ocean and/or southwest toward the Pismo Creek treatment plant.

Surface Water and Groundwater Quality

As previously described, the Pismo Creek Watershed where the PBR site is located includes a number of land uses, including a regional landfill, oil drilling, and a wastewater treatment plant. Oil drilling and landfill land uses are located upgradient from the PBR site, and the wastewater treatment facility is located downgradient. Groundwater sampling has not been conducted at the PBR site. The site is currently utilized as a laydown and staging area for local electrical service and vegetation management operations. The PBR site does not have a history of significant spills that would affect local groundwater quality. Previous groundwater monitoring within the Pismo Creek Valley indicated high total dissolved solids, sulfate, iron, and/or manganese above drinking water standards (San Luis Obispo, 2014).

Flooding

The majority of the PBR site is in a Special Flood Hazard Area Zone AE with a Base Flood Elevation that ranges from 35.9 to 39.6 feet MSL according to the FEMA FIRM No. 06079C1344H (FEMA, 2017b). Zone AE is an area with one percent annual chance (or 100-year) flood. The PBR site is adjacent to the floodway of the Pismo Creek channel. The western portion of the site, adjacent to Price Canyon Road, is not subject to flooding.

4.11.1.3 Santa Maria Valley Railyard Facility

Surface Water Hydrology

The SMVR-SB site is located within the Santa Maria Watershed (Conservation Biology Institute, 2021). The Santa Maria Watershed is in southern San Luis Obispo County and northern Santa Barbara County and drains approximately 33,205 acres or approximately 52 square miles (Santa Maria, 2020; SLO Watershed Project, 2021). The Santa Maria Watershed, which includes all tributaries of the Cuyama River, Sisquoc River, and Santa Maria River, rises to a maximum elevation of approximately 390 feet. The watershed generally drains to the west where it meets the Pacific Ocean by the City of Guadalupe. The watershed is dominated by residential and agricultural land uses, including ranches, row crops, greenhouses, and orchards. Other land uses within the watershed include recreation and oil production.

Groundwater Hydrology

The SMVR-SB site is located within the Santa Maria Valley Groundwater Basin (CDWR, 2021a). The basin has a surface area of approximately 184,000 acres, or 287.5 square miles, and is bounded on the north by the San Luis and Santa Lucia Ranges, on the east by the San Rafael Mountains, on the south by the Solomon Hills and the San Antonio Creek Valley Groundwater Basin, on the southwest by the Casmalia Hills, and on the west by the Pacific Ocean (CDWR, 2004). Groundwater is in alluvium, dune sands, and the Orcutt, Paso Robles, Pismo, and Careaga Formations. The basin is supplied with groundwater through infiltration of precipitation, inflow from adjacent areas, return flows from applied water (irrigation), and percolation of water from streams flowing across the Santa Maria Valley Groundwater Basin, particularly, the Arroyo Grande Creek to the north and the Santa Maria and Sisquoc Rivers in the south. Also, the Lopez Reservoir and the Twitchell Reservoir provide storage of stormwater for recharge of the basin. The total groundwater storage capacity of the basin is approximately 2,300,000 acre-feet (Santa Maria, 2020). Under the Sustainable Groundwater Management Act (SGMA), the basin is identified by the CDWR as a very-low priority basin (CDWR, 2021a).

Surface Water and Groundwater Quality

Pollutants of known concern in the Santa Maria Watershed include fecal coliform, nitrates, sediments, and ammonia in surface water; organochlorine pesticides in the Santa Maria River Estuary (located approximately 10 miles west of the City of Santa Maria); and petroleum production by-product (diluent) in ground and surface water of the Guadalupe Dunes (located directly north and south of the Santa Maria River mouth and estuary) and nearby areas (Santa Maria, 2020). The Santa Maria River is included on the Section 303(d) list for nitrate pollutants from agriculture, domestic animals/livestock, natural sources, and urban runoff/storm sewers. In addition, chloride, chlorpyrifos, cypermethrin, dichlorodiphenyldichloroethane (DDD), dichlorodiphenyldichloroethylene (DDE), dichlorodiphenyltrichloroethane (DDT), diazinon, dieldrin, endrin, Escherichia coli (E. coli), fecal coliform, malathion, sodium, toxaphene, toxicity, and turbidity are listed pollutants for the Santa Maria River.

Groundwater quality varies throughout the Santa Maria Valley Groundwater Basin. Historically, the basin has had high nitrate concentrations, particularly near the City of Santa Maria and in the City of Guadalupe. High total dissolved solids, sulfate, or chloride content also affects groundwater quality in some parts of the basin (CDWR, 2004).

Flooding

The SMVR-SB site is not subject to flooding. According to the FEMA FIRM No. 06083C0170G, the SMVR-SB site is located within Zone X, which comprises areas with minimal flood hazard that are above the elevation of the 0.2 percent annual chance (or 500-year) flood (FEMA, 2012).

4.11.2 Regulatory Setting

The primary federal and state laws, regulations, and policies that are applicable to the Proposed Project are summarized in Appendix C. Local and regional laws, regulations, and policies are presented in this section.

San Luis Obispo County General Plan. The Conservation and Open Space Element of the San Luis Obispo County General Plan was adopted in May 2010 and amended in March 2015 (San Luis Obispo, 2010). Chapter 10, Water Resources, of the Conservation and Open Space Element outlines the goals, policies, and implementation strategies intended to recognize water as a valuable and scarce resource, take early actions to avoid critical situations, achieve a sustainable water supply, protect water quality and natural communities, and control flooding. Policies relevant to the Proposed Project are as follows:

> Policy WR 3.1 Prevent water pollution. Take actions to prevent water pollution, consistent with federal and state water policies and standards, including but not limited to the federal Clean Water Act, Safe Drinking Water Act, and NPDES (San Luis Obispo, 2010, p. 10.16).
>
> Policy WR 3.2 Protect watersheds. Protect watersheds, groundwater and aquifer recharge areas, and natural drainage systems from potential adverse impacts of development projects (San Luis Obispo, 2010, p. 10.17).
>
> Policy WR 3.3 Improve groundwater quality. Protect and improve groundwater quality from point and non-point source pollution, including nitrate contamination; methyl tertiary-butyl ether and other industrial, agricultural, and commercial sources of contamination; naturally occurring mineralization, boron, radionuclides, geothermal contamination; and seawater intrusion and salts (San Luis Obispo, 2010, p. 10.17).
>
> Policy WR 3.4 Water quality restoration**.** Pursue opportunities to participate in programs or projects for water quality restoration and remediation with agencies and organizations such as the RWQCB, California Department of Fish and Wildlife, National Marine Fisheries Service, and Resource Conservation Districts in areas where water quality is impaired (San Luis Obispo, 2010, p. 10.18).
>
> Policy WR 6.4 Integrated drainage approach**.** Assure that proposed development integrates ecosystem enhancement, drainage control, and natural recharge as applicable (San Luis Obispo, 2010, p. 10.27).

San Luis Obispo County Municipal Code. The Coastal Zone Land Use Ordinance, Title 23 of the San Luis Obispo County Code, was established to protect and promote public health, manage future growth of the County, and to protect and enhance the natural, historic, archeological, and scenic resources within the County (San Luis Obispo, 2021). The title applies to all land use and development activities within the unincorporated areas of San Luis Obispo County that are located within the coastal zone established by the California Coastal Act of 1976. Land use outside the coastal zone is regulated by standards provided in the Land Use Ordinance, Title 22 of the San Luis Obispo County Code.

Chapter 23.05, Site Development Standards, establishes standards for the preparation of sites for development and construction activities. This includes standards for grading and excavation activities to minimize hazards to life and property; protect against erosion and the sedimentation of water courses; and protect the safety, use and stability of public rights-of-way and drainage channels. Chapter 23.07, Combining Designations Standards, establishes construction standards for new structures or repairs to existing structures within the coastal zone. The DCPP site coastal bluff, including the Discharge Structure and Intake Cove areas, are within Flood Hazard Combining Designation (CD-FH) area covered by sections 23.07.060-23.07.066. Requirements of

section 23.07.065, General Hazard Avoidance, specifically apply to new structures and repairs in flood hazard areas. Section 23.05.042 requires that a drainage plan be approved by the County Department of Public Works prior to issuance of any construction permit.

City of Pismo Beach General Plan and Local Coastal Program. The City of Pismo Beach General Plan and Local Coastal Program was adopted in November 1992 and most recently amended in April 2014 (Pismo Beach, 2014). The Conservation and Open Space Element focuses on the natural resources of Pismo Beach and includes policies intended to guide the management of these resources to enhance the quality of life of residents and visitors and to prevent waste, destruction, haphazard exploitation, or neglect. Policies relevant to the Proposed Project include those regarding site design and source control BMPs, erosion, and watershed protection.

City of Pismo Beach Municipal Code. Chapter 13.28, Stormwater Quality Ordinance (Ord. O-2013-009 §1, 2013), of the City of Pismo Beach Municipal Code establishes regulations to protect and enhance the quality of watercourses and waterbodies by reducing pollutants in stormwater, prohibiting non-stormwater discharges to the storm drain system, and improving stormwater management (Pismo Beach, 2021). This chapter was developed to ensure consistency with the Clean Water Act and Porter-Cologne Act.

Santa Barbara County Comprehensive Plan. The Conservation Element of the Santa Barbara County Comprehensive Plan includes a Groundwater Resources Section, which provides background information and policy direction for the conservation, development, and utilization of groundwater resources in Santa Barbara County (Santa Barbara, 2009). The Groundwater Resources Section presents goals, policies, actions, and development standards intended to improve groundwater supply. Policies relevant to the Proposed Project are as follows:

> Policy 2.1. Where feasible, in cooperation with local purveyors and other groundwater users, the County shall act to protect groundwater quality where quality is acceptable, improve quality where degraded, and discourage degradation of quality below acceptable levels (Santa Barbara, 2009, p. 63).
>
> Policy 3.6. The County shall not make land use decisions which would lead to substantial overcommitment of any groundwater basin (Santa Barbara, 2009).

As described in Section 1.3.3.2, *Surface Transportation Board*, railroads are under the jurisdiction of the federal government such that local agencies are preempted from exercising jurisdiction.

Santa Barbara County Municipal Code. Chapter 29, Article IV (Stormwater Management and Discharge Control) of the Santa Barbara County Municipal Code establishes regulations for controlling pollutants discharged to the storm drain system to comply with the NPDES permit process (Santa Barbara, 2021). The objectives of this article are to regulate pollutants discharged to the storm drain system, prohibit illicit connections and discharges to the storm drain system, and establish legal authority for inspection, monitoring, and enforcement procedures. As described in Section 1.3.3.2, *Surface Transportation Board*, railroads are under the jurisdiction of the federal government such that local agencies are preempted from exercising jurisdiction.

4.11.3 Significance Criteria

For purposes of this EIR, the following thresholds, which are based on Appendix G of the California Environmental Quality Act Guidelines (Environmental Checklist) and Proposed Project conditions, were used to determine if the Proposed Project would result in impacts related to hydrology and water quality. The Proposed Project would have a significant impact if it would:

- Violate any water quality standards or waste discharge requirements, create substantial additional sources of polluted runoff, or require significant additional treatment of dewatered structures, systems, and components (SSCs).
- Otherwise substantially degrade surface or groundwater quality, for example, if activities result in increased turbidity in the marine environment; result in significant spills or other releases of oil, chemicals, and other toxic materials; or the deposition of marine debris from the demolition and removal of structures.
- Substantially decrease groundwater supplies or interfere with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.
- Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river or through the addition of impervious services, in a manner which would:
  - Result in substantial erosion or siltation on site or off site;
  - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site;
  - 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; or
  - Impede or redirect flood flows.
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation.
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.11.4 Environmental Impact Analysis and Mitigation

Impact HWQ-1: Violate any water quality standards or waste discharge requirements, create substantial additional sources of polluted runoff, or require significant additional treatment of dewatered structures, systems, and components (Class II: Less than Significant with Mitigation).

Phase 1

DCPP Project Site

General Construction Activities

Soils in the Project area are known to be contaminated with radioactive materials. Soil excavation and remedial activities increase the potential for soil erosion which may result in polluted runoff

to local waterbodies through stormwater or through wind borne dust if not adequately controlled. In addition, construction activities associated with decontamination and dismantlement of SSCs have the potential for releasing additional radioactive materials and contaminants into the soil, which could also produce additional sources of polluted runoff and dust if not adequately controlled. Chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste generated from the DCPP site and/or used by construction equipment may also spill or leak during decommissioning. If not adequately controlled, these pollutants have the potential to be transported via storm runoff into receiving waters.

PG&E would be required to implement several plans during construction to control sources of contaminants, limit erosion and dust, and prevent discharge of stormwater. At the time of application for construction permits, PG&E would be required to submit construction phasing plan(s), as applicable, for review and approval by County of San Luis Obispo Department of Planning and Building, in consultation with the Department of Public Works, to identify all plans required. Required plans include a site-specific SWPPP; Erosion and Sediment Control Plan; Spill Prevention, Control, and Countermeasure (SPCC) Plan; Grading Plan; and a Construction Drainage Plan (see MM HWQ-1, *Prepare and Implement Drainage Plans*).

*Site-Specific SWPPP and Erosion Control Plan***.** Because the Proposed Project would disturb greater than 1 acre of soil during construction, PG&E must comply with the requirements of the Construction General Permit (CGP; see Appendix C; AC WQ-1, *Construction General Permit*). The CGP requires development and implementation of a SWPPP. The SWPPP would be developed prior to the start of decommissioning activities and contain BMPs designed to minimize erosion during construction; control sediment and pollutants from construction materials; and prevent spills, leaks, and discharge to receiving waters. The SWPPP would define requirements for monitoring and inspections.

As discussed in Section 4.11.1, *Environmental Setting*, the DCPP currently operates under IGP WDID 3 40I018248 issued by the SWRCB, which authorizes discharges of industrial stormwater to waters of the United States. PG&E would maintain the existing IGP until cessation of power generation operations, at such time the IGP would transition to the CGP for decommissioning activities.

In addition, PG&E maintains NPDES Permit CA0003751, Order 90-09 for the DCPP (CCRWQCB, 1990), which addresses effluent discharged from plant operations to ensure there are no water quality impacts to receiving waters. PG&E would continue to monitor effluents during decommissioning activities in accordance with this NPDES permit. Under the permit, DCPP must meet effluent and receiving water limitations, develop and implement a SWPPP, and develop and implement a monitoring program to demonstrate compliance. PG&E has committed to developing a SWPPP for construction (AC BIO-3, *Site-Specific Stormwater Pollution Prevention Plan*). The SWPPP identifies potential stormwater pollutants and site-specific BMPs to reduce or prevent pollutants in industrial stormwater and authorized non-stormwater discharge. Example BMPs in the SWPPP may include the following:

- Designating areas for staging, refueling, maintenance, or washing equipment
- Use of secondary containment (i.e., drip pans)
- Daily inspections
- Ensuring availability of spill control kits, absorbent pads, and sandbags in case of spill

As part of the SWPPP, the Applicant would be required to submit complete erosion and sedimentation control plan(s) for review and approval in accordance with section 23.05.036 of the Land Use Ordinance. PG&E developed a Preliminary Erosion and Sediment Control Plan (PG&E, 2020b). This plan identifies BMPs to control erosion of soil and sedimentation from the site during grading and site restoration activities, including the following:

- Hydroseeding
- Tree protection
- Soil preparation/roughening
- Earth dikes, drainage swales, and slope drains
- Silt fence for perimeter control
- Fiber rolls along slopes and perimeter control
- Sediment traps, basins, and drainage inlet protection for treatment of runoff
- Stabilized construction entrance to work areas
- Tire washes at active work zones to remove sediment from construction vehicles

PG&E also developed a Draft Site Drainage Plan Drainage Report (PG&E, 2023b) and Preliminary Grading Plan (PG&E, 2023a), which provide detailed information on the existing site drainage. In addition, as part of the Proposed Project PG&E would implement several measures that directly reduce dust and limit the amount of disturbed area, where possible (AC AQ-1, *Minimize Fugitive Dust*), which in turn would also help reduce erosion from ground disturbance and limit the potential for stormwater contamination.

*Spill Prevention, Control, and Countermeasure (SPCC) Plan***.** In addition to the SWPPP, a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by 40 CFR 112 for facilities maintaining an inventory of more than 1,320 gallons of oil or oil-based products, which would apply to the DCPP site and therefore the DCPP Decommissioning Project. Therefore, PG&E would be required to develop a Project-specific Decommissioning SPCC Plan. The SPCC Plan would address oil spill prevention, control measures to ensure water quality standards would not be violated, and countermeasures to contain, cleanup, and mitigate the effects of a spill.

*Grading and Drainage Plans***.** A Preliminary Grading Plan for the DCPP site has been prepared to estimate the required amount of fill material needed on site through areas of cut (i.e., areas where the finished grade is lower than the existing grade) and re-use of clean, crushed on-site concrete derived through the demolition of structures (see Site Grading and Concrete Re-use Strategy Plan in Table 2-2). The Grading Plan would also address DCPP site drainage. As stipulated in MM HWQ-1, PG&E would also be required to develop a Construction Drainage Plan to San Luis Obispo County standards and address County Department of Public Works conditions of approval (San Luis Obispo, 2023), and that would need County Department of Public Works approval prior to construction. The Construction Drainage Plan would identify potential drainage issues and proposed methods for safely conveying containing storm runoff and preventing impacts to coastal water quality throughout construction. The Construction Drainage Plan must be prepared by a licensed civil engineer for review and approval in accordance with section 23.05.040 of the Land Use Ordinance. Also, the final site grading must meet Title 23 standards requiring all surface drainage to be retained on site via swales, retention basins, wetlands, etc.

PG&E must also adhere to the Nuclear Energy Institute Industry Ground Water Protection Initiative (Nuclear Energy Institute, 2007), which is applicable to decommissioning of a nuclear power plant. Compliance includes groundwater monitoring in accordance with the groundwater protection program to assure timely and effective management of situations involving inadvertent releases of licensed radioactive materials. As discussed in Section 4.11.2, *Regulatory Setting*, groundwater is currently sampled at several on-site wells to monitor tritium. Sampling results are submitted to local, state, and federal agencies on an annual basis via the Annual Radiological Environmental Operating Reports. Low levels and the location of the tritium found in groundwater at the DCPP site do not indicate a leak from the spent fuel pool or any other plant equipment source of tritium. Instead, the low levels are consistent with minor tritium "wash-out" during rain events, and activities during Phase 1 are not expected to contribute to groundwater tritium levels.

To ensure that the Construction Drainage Plan and Site Grading and Concrete Re-use Strategy Plan are implemented and adhered to throughout the duration of the Project, MM EM-2 (*Project Plan Updating, Tracking, and Reporting*) is required to reduce impacts to a less-than-significant level. MM EM-2 would require PG&E to identify the applicable plans, record applicable specific recommendations during Project activities, and provide proof of implementation to the County.

With implementation of MM HWQ-1 and MM EM-2, and development and implementation of the SWPPP and SPCC Plan, construction activities during Phase 1 at the DCPP site would not directly violate any water quality standards or waste discharge requirements and impacts would be reduced to less than significant (Class II).

Dewatering

Dewatering would be required if groundwater is encountered during the removal of existing in-ground structures and involves removing water from excavations, trenches, foundations, and surface water impoundments to enable the construction activity. Because the water removed as part of construction is often sediment laden, dewatering during Phase 1 could introduce pollutants to surface or ground waters if the water is discharged without treatment. If dewatering is required during decommissioning activities, the Proposed Project would be required to comply with the requirements of the Waste Discharge Requirements NPDES General Permit for Discharges with Low Threat to Water Quality (Order No. R3-2017-0042, NPDES No. CAG993001) which covers dewatering. The NPDES General Permit mandates compliance with receiving water limitations and establishes numeric action levels for pH and turbidity testing prior to discharge to protect surface water quality. If water removed via dewatering was found to exceed standards, the water would be treated prior to discharge using a groundwater collection and treatment system (GWTS) developed in the early stages of decommissioning. The GWTS would collect and process water from groundwater intrusion utilizing a combination of settling ponds and tanks or filtration equipment.

Compliance with the NPDES Permit and use of GWTS would ensure that construction activities during Phase 1 at the DCPP site would not require significant additional treatment of dewatered SSCs and impacts would be less than significant (Class III).

Railyards

Pismo Beach Railyard. The PBR site is a developed site that currently supports PG&E operations and has been used in the past for equipment storage and transport needs for the DCPP. Modifications to the PBR site would be limited to refurbishing approximately 1,100 feet of existing track. The majority of the PBR site is covered by impervious surfaces and this would not change during decommissioning activities; therefore, stormwater runoff would continue to be managed as it is under existing conditions. No below ground structures would be removed; therefore, dewatering would not occur. As such, use of the PBR site for decommissioning activities would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The impact would be less than significant (Class III).

SMVR-SB. The SMVR-SB site is an existing industrial facility with storage and transportation infrastructure in place and no new development is anticipated; therefore, the Proposed Project would not alter drainage patterns. Modifications to the site are limited in scope (e.g., refurbishment of existing rail spurs, use of steel road plates or installation of engineered fill where existing base is degraded). Site modifications would not need to disturb more than 1 acre of soil; therefore, the SMVR-SB site would not likely be subject to the CGP. No below ground structures would be removed; therefore, dewatering would not occur. As such, use of the SMVR-SB site for decommissioning activities would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. The impact would be less than significant (Class III).

Phase 2

General Construction Activities

Similar to Phase 1, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste generated from the DCPP site may be spilled or leaked during Phase 2 activities and have the potential to be transported via storm runoff into receiving waters. Impacts would be reduced through implementation of the construction Erosion and Sediment Control Plan for the DCPP site, SPCC Plan, and the SWPPP (see Table 2-2); as well as with designation of defined staging areas and access points for heavy equipment, secondary containment, and daily inspections (AC BIO-4, *Site Maintenance and General Operations*); the existing IGP; CGP (AC WQ-1, *Construction General Permit*); NPDES permits; and Nuclear Energy Institute Industry Ground Water Protection Initiative.

As part of final site restoration activities, PG&E would prepare a Stormwater Management Plan (SWMP) in accordance with the Low Impact Development requirements of the CCRWQCB, and any additional conditions as part of the 401 Water Quality Certification (see Table 2-2). The purpose of the SWMP is to implement long-term management of stormwater drainage from the site over the period of time required for revegetation to establish, and to minimize any sediment impacts from the site to Diablo Creek and the Pacific Ocean. The SWMP would further ensure that stormwater is controlled and would not result in excess erosion and runoff. To further ensure the Proposed Project would not violate any water quality standards or waste discharge requirements or create substantial additional sources of polluted runoff during and after Phase 2, MM

HWQ-1 and MM HWQ-2 are recommended, which require a Post-Decommissioning Drainage Plan and a Long-Term Erosion and Sediment Control Plan for the final surface conditions following demolition of all decommissioned structures. The Long-Term Erosion and Sediment Control Plan would be included in the SWMP. With implementation of the required plans, permits, and MMs (MM HWQ-1 and MM HWQ-2), impacts would be reduced to a less-than-significant level (Class II).

Leachate from Crushed Concrete Reuse

As described in Section 2.3.16.3, *Recycled Concrete*, demolition of structures, roads, and parking areas is expected to generate on the order of 225,000 cubic yards of clean concrete. Clean concrete would be reused on site as fill material. Clean concrete from demolition activities would be crushed into smaller sizes and then reused either directly or in various blended engineered fills to achieve a cut/fill balance with on-site materials. A Site Grading and Concrete Re-use Strategy Plan, listed in Table 2-2, was developed by PG&E to assess the different methods and locations where on-site recycled concrete could be used (PG&E, 2022c). MM EM-2 (*Project Plan Updating, Tracking, and Reporting*) would be required to ensure that this plan is updated and implemented.

Direct reuse of clean concrete without soil blending would only occur where the crushed concrete is isolated from stormwater and groundwater, specifically the water circulation tunnels associated with the Intake Structure and Discharge Structure. In these instances, the crushed concrete would be used as an aggregate and blended with cement to create a controlled low strength material to fill the water circulation tunnels. Because the crushed concrete is completely isolated from stormwater and groundwater, there is no potential risk due to leaching.

Crushed concrete would also be blended with soil into an engineered fill. The ratio of soil to concrete within the engineered fill would depend on its intended application, with greater concrete content used for building voids and for grading fill deeper than 2 feet below final grade. For grading fill within the top 2 feet from final grade, a ratio of 5 soil:1 part concrete would be utilized to alleviate potential stormwater and groundwater quality impacts. However, leachate from crushed concrete could result in a potentially significant impact to surface or groundwater.

A study was conducted in 2018 that evaluated the leaching properties of recycled concrete debris (Gluchowski et al., 2018). As part of this study, leachate was analyzed for heavy metals. Lead and zinc were not detected. Other concentrations were less than California Maximum Contaminant Levels (MCLs) for drinking water, except nickel (0.127 milligrams per liter [mg/L]), which slightly exceeded the MCL (0.1 mg/L). Although nickel slightly exceeded the MCL, this concentration is not expected to result in detrimental impacts to water quality due to attenuation and dilution, which would reduce nickel concentrations to an acceptable level.

As previously described, the only groundwater used for drinking water at the DCPP site is pumped from Well #2, located east of the DCPP site at a ground elevation of 333 feet MSL. This is considerably higher than the ground elevation where the majority of fill would be used (85 feet MSL). Well #2 draws from an isolated source specific to Diablo Canyon that is replenished by flows through the alluvium. Potential leaching from crushed concrete at this lower elevation cannot lead to any drinking water source due to overall site hydrogeological characteristics and the higher elevation of the aquifer replenishing the location tapped by the deep water well. A comparison of the static water level and the pumping water level of Well #2 and the Power Block

wells show that Well #2 could not draw water from the Power Block area, even during intensive pumping during drought conditions (ENTRIX, 2010). As such, leachate from crushed concrete reuse at the DCPP site would not violate any water quality standards or waste discharge requirements or create substantial additional sources of polluted runoff. With implementation of MM EM-2, which includes updating and tracking the Site Grading and Concrete Re-use Strategy Plan (see Table 2-2), impacts from leachate would be reduced to less than significant (Class II).

Post-Decommissioning Operations

New Facility Operations. Following Phase 2, operational activities at the DCPP site would include long-term management of the GTCC Waste Storage Facility and operation of the Security Building, indoor Firing Range, and Storage Buildings. No additional construction would occur such that no new structures or impervious surface areas would be created and there would be no new sources of additional runoff. No impact would occur.

Future Actions. Marina operations would be limited to car parking, restrooms, and use of boats and non-motorized vessels, such as kayaks and stand-up paddleboards. While limited, because use of the Marina would increase over existing conditions, operations have the potential to introduce new sources of pollution into marine waters. MM HWQ-2 (*Long-Term Erosion and Sediment Control Plan*) ensures any runoff from the new parking lots or restroom facilities would be controlled and treated. Additionally, as required by MM HWQ-3 (*Clean Marina Lease Provisions*), PG&E would be required to include clean marina provisions in any future lease for the Marina's use. As such, impacts would be reduced to a less-than-significant level (Class II).

Mitigation Measures for Impact HWQ-1.

EM-2 **Project Plan Updating, Tracking, and Reporting.** See Section 3. For Impact HWQ-1, MM EM-2 will be implemented to track the compliance activities and reporting of the Construction Drainage Plan required under MM HWQ-1, the Long-Term Erosion and Sediment Control Plan required under MM HWQ-2, and the Site Grading and Concrete Re-use Strategy Plan listed in Table 2-2.

HWQ-1 **Prepare and Implement Drainage Plans.**

1.1: Construction Drainage Plan. Prior to or concurrent with County issuance of grading, demolition, or other construction permits for Phase 1, the Applicant or its designee shall prepare a Construction Drainage Plan for the work activity area and adjacent drainage systems that may affect the work activity area, consistent with County Public Works drainage requirements. The Construction Drainage Plan must be prepared by a licensed civil engineer for review and approval in accordance with section 23.05.040 of the San Luis Obispo County Land Use Ordinance. Construction Drainage Plan requirements throughout Phase 1 shall include:

- A topographic survey with all existing drainage features (such as basins, inlets, pipes, culverts, swales, and other related appurtenances) that are to remain or to be demolished, within each work activity area, or work proposed under each permit.

- Calculations, exhibits, and narrative that evaluate the existing site drainage pattern including all existing drainage features in the area affected by the permit(s) and demonstrate how drainage will be managed within each work activity area and to/from adjacent drainage areas, throughout construction.
- Calculations, exhibits, and narrative that clearly identify and evaluate the proposed permit area drainage and how it affects the overall site drainage, as modified by other work in surrounding areas. Any phased submittals must be consistent with or include appropriate revisions to the proposed overall Existing Site Drainage Plan (see below).
- For any phased construction submittal, drainage calculations, exhibits, and narrative that demonstrate any proposed changes to the drainage system provide safe, non-erosive conveyance of runoff through the DCPP site and will not impair any receiving facilities during phased construction.
- For any proposed or existing stormwater discharge to the bluff, beach, intertidal, or marine area, evidence of compliance with section 23.05.050.d of the Land Use Ordinance.
- Calculations and mapping of flood extents for Diablo Creek in a 100-year 24-hour storm.
- Geotechnical and drainage evaluations of existing facilities, including the structural embankment and appurtenant culverts, at the Diablo Creek embankment crossing, located near the northwest project boundary, and the ancillary crossing located approximately 550 feet upstream of the Diablo Creek embankment crossing. The evaluations must assess stability and performance of the facilities in a 100-year flood event.

The Construction Drainage Plan shall be consistent with County Department of Public Works conditions of approval and Title 23 requirements, and submitted to the County for review by the Department of Planning and Building, and Department of Public Works. The Construction Drainage Plan for each permit or work area during Phase 1 construction must be approved concurrent with construction plans for permit applications, prior to permit issuance.

1.2: Post-Decommissioning Drainage Plan. Prior to County issuance of any construction permits related to starting Phase 2 construction, the Applicant or its designee shall prepare a Post-Decommissioning Drainage Plan for the final surface conditions at the DCPP site after demolition of all commissioned structures. The Post-Decommissioning Drainage Plan must be prepared by a licensed civil engineer for review and approval in accordance with section 23.05.040 of the Land Use Ordinance. The Post-Decommissioning Drainage Plan shall be consistent with County Department of Public Works conditions of approval and Title 23 requirements and submitted to the County for review by the Department of Planning and Building and Department of Public Works. The Post-Decommissioning Drainage Plan must be approved and incorporated to grading and construction plans prior to commencing Phase 2 work.

Prior to final inspection, all work required by the approved drainage plan(s) must be constructed or reconstructed to the satisfaction of the Departments of Public Works and in accordance with the County Public Improvement Standards, the Project conditions of approval, and approved development plan(s).

HWQ-2 **Long-Term Erosion and Sediment Control Plan.** Prior to submittal of Final Grading and Drainage Plans for Phase 2, the Applicant or its designee shall develop a final Long-Term Erosion and Sediment Control Plan for the final surface conditions at the DCPP site after demolition of all decommissioned structures. This plan shall be included in the Stormwater Management Plan (SWMP). The preliminary plan would be updated based on the final Grading and Drainage Plans, site conditions, drainage infrastructure, general site drainage patterns, and stabilization measures remaining after demolition and submitted with Phase 2 grading permit application(s). The plan shall identify BMPs to control erosion of soil and sedimentation from the site during grading and final site restoration activities, and shall address requirements such as:

- Hydroseeding
- Tree protection
- Soil preparation/roughening
- Earth dikes, drainage swales, and slope drains
- Silt fence for perimeter control
- Fiber rolls along slopes and perimeter control
- Sediment traps, basins, and drainage inlet protection for treatment of runoff
- Stabilized construction entrance to work areas
- Tire washes at active work zones to remove sediment from construction vehicles
- Additional erosion and sediment control BMPs or new BMPs would also be added to improve sediment control in specific areas of the site and target specific issues identified later in the design.

The final Long-Term Erosion and Sediment Control Plan shall be consistent with County Department of Public Works conditions of approval and Title 23 requirements and submitted for review to the Central Coast Regional Water Quality Control Board (CCRWQCB) and San Luis Obispo County Department of Planning and Building and Department of Public Works. The final Long-Term Erosion and Sediment Control Plan must be approved prior to the Applicant or its designee commencing Phase 2 work. Proof of CCRWQCB approval of the plan shall be submitted to the County before issuance of permits related to Phase 2 work to document compliance.

HWQ-3 **Clean Marina Lease Provisions.** As part of the Marina lease for third party permitting and reuse, the Applicant or its designee shall require that California Coastal Commission's California Clean Marinas Toolkit or similar program be incorporated into the third-party operational plan with annual compliance updates. The operational plan documenting the clean Marina provisions shall be submitted to the County by the designated lessee in conjunction with submittal of a Land Use Permit/Coastal Development Permit for Marina operations and shall be approved for implementation prior to commencing Marina operations. Annual compliance updates shall be submitted to the County by January 30 of each year of the lease.

Impact HWQ-2: Degrade surface water quality as a result of chemical spills during decontamination and dismantlement activities or introduce contaminants to surface water as a result of groundwater dewatering during decontamination and dismantlement activities or at the off-site materials handling facilities (Class II: Less than Significant with Mitigation).

Phase 1

DCPP Project Site

Decontamination and dismantlement of the DCPP site has the potential to degrade surface water quality through accidental spills, structure dismantlement, and through the dewatering process if not adequately planned for and controlled.

Heavy construction equipment would be used for decommissioning activities at the DCPP site. Accidental spills or leaks of gasoline, diesel fuel, oil, hydraulic fluid, lubricants, transmission fluid, and other fluids from construction equipment used during construction activities could contaminate surface water or groundwater. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste generated from the DCPP site may spill or leak during decommissioning and have the potential to be transported via storm runoff into receiving waters.

As previously discussed in Impact HWQ-1, the DCPP currently operates under an existing IGP. PG&E would maintain the existing IGP until cessation of power generation operations, at such time the IGP would transition to the CGP during decommissioning activities. Because decontamination and dismantlement activities (i.e., construction activities) would disturb greater than 1 acre of soil, the Proposed Project is subject to the requirements of the CGP (AC WQ-1, *Construction General Permit*), which would be implemented by PG&E as part of the Proposed Project. The permit requires development and implementation of a SWPPP and implementation of BMPs to control pollutants from construction materials and to prevent spills, leaks, and discharge to receiving waters. PG&E has committed to developing a SWPPP (AC BIO-3, *Site-Specific Stormwater Pollution Prevention Plan*) as part of the Proposed Project. Example BMPs in the SWPPP may include the following:

- Designating areas for staging, refueling, maintenance, or washing equipment
- Use of secondary containment (i.e., drip pans)
- Daily inspections
- Ensuring availability of spill control kits, absorbent pads, and sandbags in case of spill

In addition to the SWPPP, an SPCC Plan would be developed for the DCPP site. The SPCC Plan would address oil spill prevention, control measures to ensure water quality standards would not be violated, and countermeasures to contain, cleanup, and mitigate the effects of a spill. To minimize any potential impacts due to spills or leaks, PG&E would define staging areas and access points for heavy equipment, secondary containment, and daily inspections (AC BIO-4, *Site Maintenance and General Operations*).

As stipulated in MM HWQ-1, PG&E would also be required to develop a Construction Drainage Plan to San Luis Obispo County standards that would need County Department of Public Works approval prior to construction. The Construction Drainage Plan would identify potential drainage

issues and proposed methods for safely conveying and containing stormwater runoff and preventing impacts to coastal water quality.

Phase 1 also includes the demolition and removal of the Discharge Structure which is located partially in the marine environment. Prior to demolition, a containment structure (i.e., cofferdam) would be installed around the Discharge Structure to isolate the work area from the Pacific Ocean. Construction of the cofferdam requires use of barges, tugboats, and other ocean equipment. In addition, waste materials from decommissioning activities would be transferred off site by barge and tugboat. During in-water activities, there is the potential for chemical leaks and spills into the marine environment. PG&E has developed an Oil Spill Response Plan (see Table 2-2) that outlines notification and initial response procedures in the event of a nearshore oil spill during construction and demolition activities and operational activities, including vessel fueling, vessel operations, and fuel storage (PG&E, 2022b). The plan focuses on two scenarios that present the greatest risk, including diesel fuel spills from a tugboat within the Intake Cove and Diablo Cove. The Oil Spill Response Plan includes measures to prevent a spill from occurring or contain and cleanup a spill if it does occur. The Oil Spill Response Plan includes detailed planning of the following elements:

- Definition of the authorities, responsibilities, and duties of all entities involved in oil removal operations
- Procedures for early detection and timely notification of an oil discharges
- Assurance that full resource capability is known and can be committed following a discharge
- Actions for after discovery and notification of a discharge
- Procedures to facilitate recovery of damages and enforcement measures (PG&E, 2022b).

MM MBIO-8 (*Oil Spill Response Plan*) requires updating PG&E's Oil Spill Response Plan (PG&E, 2022b) to include at a minimum, a description of the Project scope-of-work and geographic area, pre-work planning needed to prepare for a possible nearshore oil spill, initial response procedures including agency notifications and on-site team communications, how waste from an oil spill would be handled and disposed of, and a description of how the area would be decontaminated and how any contaminated materials handled. Compliance and implementation of the SWPPP, SPCC Plan, and updated Oil Spill Response Plan would reduce the risk of a spill occurring and minimize impacts from spills on water quality if they were to occur. Therefore, impacts would be reduced to a less-than-significant level (Class II).

Dewatering

Groundwater dewatering may be required during construction activities if groundwater is encountered during the removal of existing infrastructure. If encountered, dewatering could result in the accidental release of chemicals, including radioactive materials, to surface waters which would result in a potentially significant impact. As discussed in Impact HWQ-1, the Proposed Project would be required to comply with the requirements of the Waste Discharge Requirements NPDES General Permit for Discharges with Low Threat to Water Quality (Order No. R3-2017-0042, NPDES No. CAG993001). The NPDES General Permit would require testing and treatment of groundwater prior to discharge to protect surface water quality. Compliance and implementation of the NPDES General Permit would reduce the risk of introducing contaminants

to surface waters if groundwater dewatering were required and impacts would be less than significant (Class III).

Railyards

Similar to impacts described above, accidental spills or leaks of gasoline, diesel fuel, oil, hydraulic fluid, lubricants, transmission fluid, solvents, and other fluids used during transport activities at the railyards could contaminate surface water or groundwater.

Pismo Beach Railyard. Shipments to the PBR site would be non-radiological and non-hazardous waste subject to the same handling and transport requirements that currently exist. Modifications to the PBR site would be limited to refurbishing approximately 1,100 feet of existing track. No below ground structures would be removed; therefore, dewatering would not be required. Therefore, there is no increased risk of degrading surface water quality from a spill or dewatering. The impact would be less than significant (Class III).

SMVR-SB. Low-level radioactive waste (LLRW) may be hauled to SMVR-SB for transport out of state via rail for disposal. Transport of waste is highly regulated, and shipments would be packaged at the DCPP site. Waste would be loaded into sealed 20-foot intermodal containers, transported to the SMVR-SB site, and then loaded directly onto rail cars for transport to the disposal facility. PG&E would comply with all transport regulations.

This site is an existing industrial facility with storage and transportation infrastructure in place. Modifications to the site for the Proposed Project are limited in scope. No below ground structures would be removed; therefore, dewatering would not be required. Therefore, there is no increased risk to degrade surface water quality from a spill or dewatering. The impact would be less than significant (Class III).

Phase 2

Similar to Phase 1, heavy equipment would also be used during Phase 2 with the potential for accidental spills or leaks to contaminate surface water or groundwater. Removal of the Discharge Structure would leave a gap within the existing cliff area and expose a portion of the cliff that was previously protected by a concrete wall. As designed, removing the structure would leave a large void, which would be filled with quarry rock. The placed rock would provide bluff erosion protection. Spills to the marine environment may also occur during transfer of waste materials off site by barge and tugboat or during the transfer of quarry rocks to the site by barge and tugboat. As previously discussed, compliance and implementation of the SWPPP, SPCC Plan, and updating the Oil Spill Response Plan (MM MBIO-8) would reduce the risk of a spill occurring and minimize impacts to less than significant (Class II).

Post-Decommissioning Operations

New Facility Operations. Following Phase 2, operational activities at the DCPP site would include long-term management of the GTCC Waste Storage Facility and operation of the Security Building, indoor Firing Range, and Storage Buildings. No new construction, use of heavy construction equipment, or groundwater dewatering would be required; therefore, no impact would occur.

Future Actions. As described, following full closure of the DCPP site, the site and facilities would undergo Final Status Surveys (FSS) to confirm that any residual levels of radionuclides have been removed and or decreased to levels below site-specific levels that equate to the NRC-approved site release criteria. At that time, the Marina could be released for recreational, education, or commercial purposes. PG&E would lease the Marina to a third party, which would perform limited site improvements and operate the facility upon approval of a County land use and Coastal Development permit.

Marina operations would be limited to car parking, restrooms, and use of boats and non-motorized vessels, such as kayaks and stand-up paddleboards. Any construction at the site following decommissioning would be required to comply with standard regulatory controls such as a SWPPP to ensure stormwater is managed, and BMPs are instituted to control spills and leaks. Use of the new parking lots and restroom facilities could introduce new sources of pollution thereby potentially degrading surface water quality. MM HWQ-2 (*Long-Term Erosion and Sediment Control Plan*) ensures any runoff from the new parking lots or restroom facilities would be controlled and treated. Additionally, as required by MM HWQ-3 (*Clean Marina Lease Provisions*), PG&E would be required to include clean marina provisions in any future lease for the Marina's use. As such, impacts would be reduced to a less-than-significant level (Class II).

Mitigation Measures for Impact HWQ-2.

MBIO-8 Oil Spill Response Plan. See Section 4.4.

HWQ-1 Prepare and Implement Drainage Plans

HWQ-2 Long-Term Erosion and Sediment Control Plan

HWQ-3 Clean Marina Lease Provisions

Impact HWQ-3: Substantially degrade marine water quality, including increasing turbidity and debris in the marine environment during decontamination and dismantlement activities, or potentially exceed California Ocean Plan salinity requirements or reducing dissolved oxygen concentrations upon cessation of power generation activities (Class II: Less than Significant with Mitigation).

Phase 1

DCPP Project Site

Phase 1 has the potential for significant impacts related to substantial degradation of marine water quality from the discharge of debris, increased turbidity, and increased salinity.

Debris

Phase 1 would generate construction debris through dismantlement of structures. Most of Phase 1 construction would occur on land and debris would be contained on site. However, Phase 1 also includes the demolition and removal of the Discharge Structure which is located partially in the marine environment. Prior to demolition, a cofferdam would be installed around the Discharge Structure to isolate the work area from the Pacific Ocean. The cofferdam would allow for dewatering of the work area so that demolition can be conducted under dry conditions. Place-

ment of the cofferdam around the existing Discharge Structure would minimize the distribution of debris beyond the containment area and impacts would be less than significant (Class III).

Turbidity:

A cofferdam and dewatering system would be used for removal of the Discharge Structure to allow work to be conducted under dry conditions. Prior to shutdown of the Discharge Structure, a temporary pipe would be installed aboveground from the SWRO to Diablo Cove (over or adjacent to the cofferdam) to redirect brine discharges from the SWRO starting in 2029 and continuing until the end of 2034, when the SWRO is no longer in operation. Discharge from the brine line has the potential to cause turbidity; however, it is expected to be substantially less than existing conditions where the Discharge Structure is operational. In addition, the temporary pipe would include diffusers to reduce velocity of the discharge and limit the potential for increased turbidity. To support the period of redirected flow, PG&E would obtain an amendment to the existing NPDES Permit No. CA0003751 or would obtain a new NPDES permit. Effluent limitations for turbidity are outlined in the California Ocean Plan.

Placement of the cofferdam and removal when restoration activities are complete would result in the disturbance and resuspension of sediment adjacent to the Discharge Structure. In addition, there is expected to be some discharge of water from inside the cofferdam during demolition, such as through seams between the sheet piles or seepage captured on the inside of the cofferdam. PG&E developed a Turbidity Monitoring Plan for decommissioning activities associated with the demolition and removal of the Discharge Structure and restoration activities, including placement and removal of the cofferdam (PG&E, 2022a). The Turbidity Monitoring Plan includes BMPs to reduce turbidity, including the following:

- Sediment removal prior to placement of cofferdam should utilize a water lift to remove any sand or sediment and reduce air entrainment and sediment dispersion.
- Any discharge of excavated material should occur within 10 feet of the terminus of the discharge pipe location and within 3 feet of the seafloor.
- The discharge hose may need to be periodically repositioned to avoid accumulation of excavated material.
- A shroud should be fabricated to fit on the end of the discharge pipe to reduce sediment plume dispersion during disposal.

Additionally, the Turbidity Monitoring Plan calls for receiving water turbidity monitoring to ensure turbidity levels are acceptable based on permit requirements. MM HWQ-4 (*Turbidity Monitoring Plan*) is recommended, which would require PG&E to update the Turbidity Monitoring Plan to include monitoring and additional BMPs associated with the temporary brine line. Additionally, MM MBIO-3 (*Water Quality Monitoring Plan*) also requires updates to the Turbidity Monitoring Plan to provide protection to receiving waters, adjacent sensitive habitats, and protected species primarily from turbidity during activities associated with any in-water construction activities.

Activities at the DCPP have the potential for a significant impact related to substantial degradation of marine water quality through increased turbidity levels during decommissioning activities. Compliance with California Ocean Plan and NPDES permit requirements, and development and

implementation of the updated Turbidity Monitoring Plan per MM HWQ-4 and MM MBIO-3, would ensure that impacts would be less than significant (Class II).

Salinity

Brine and wastewater discharges associated with the current operating plant are diluted in the OTC water system, which has flows of approximately 2.55 billion gallons of water per day. Following shutdown of DCPP, only the auxiliary saltwater system and SWRO supply would be in operation, which results in a 90 percent reduction in ocean flow. The water management approach for decommissioning is based on the existing NPDES Permit No. CA0003751. As previously described, prior to demolition of the Discharge Structure, a temporary brine line would be installed to redirect flow from the SWRO into Diablo Cove. Flow from the SWRO would be redirected until the end of 2034, when the SWRO is no longer in operation. PG&E would obtain an amendment to the existing NPDES Permit No. CA0003751 or would obtain a new NPDES permit to cover the redirected flow. As OTC flows decrease during decommissioning, salinity levels within Diablo Cove could exceed California Ocean Plan salinity requirements or dissolved oxygen concentrations could decrease, resulting in areas of hypoxia that may impact marine organisms. Additionally, the brine could contain increased concentrations of constituents that originated in seawater that are regulated under the California Ocean Plan.

A dilution study was conducted to evaluate the potential impacts from brine and wastewater discharges during the stepped shut down of the OTC (a.k.a. period of redirected flow) (PG&E, 2021b). Based on results of the discharge model, no adverse effects would be expected at the minimum dilution rate of 7,000 gpm for the SWRO facility. Discharge of excess brine from the SWRO facility is predicted to increase background salinity by less than 0.5 parts per thousand at the point of discharge in Diablo Cove. Salinity is further diluted with increased distance from the outfall and quickly drops to background conditions. Specific contaminants were not considered in the modeling study; however, the relative dilution results can be applied to other constituents of concern. Based on results of this study, shutting down the OTC is not expected to degrade marine water quality or result in an exceedance of the California Ocean Plan salinity requirements and impacts would be less than significant (Class III).

Railyards

The PBR site is partially within the coastal zone but is located approximately 0.6 miles from the existing shoreline and would not impact marine waters. The SMVR-SB site is located outside of the coastal zone and therefore would not impact coastal processes. Therefore, no impact would occur.

Phase 2

In Phase 2, continuation of the Discharge Structure removal and restoration activities have the potential to increase turbidity in the marine environment. Similar to Phase 1, compliance with the California Ocean Plan and NPDES permit requirements, and implementation of the updated Turbidity Monitoring Plan per MM HWQ-4 and MM MBIO-3, would ensure that impacts would be less than significant (Class II).

Following reduction and eventual elimination of intake water, circulation in the Intake Cove would be reduced, resulting in potential water quality impacts. Current velocities within the Entrance Channel to the Intake Cove were considered to evaluate the potential for impact. This evaluation suggests that loss of the Intake flow could reduce the average current velocity in the Entrance Channel to the Intake Cove. Although there is a potential for reduced circulation within the Intake Cove due to the reduced current velocities, tidal currents through the Entrance Channel would still provide adequate circulation to not cause water quality impairments; therefore, impacts related to elimination of intake water at the Intake Structure would be less than significant (Class III).

The openings of the Intake Structure would be sealed in Phase 2 and equipment removed from the deck. The openings of the Intake Structure would be sealed with concrete bulkheads, which would be located entirely within the water. Work to install the bulkheads could result in short term turbidity. Compliance with California Ocean Plan and NPDES permit requirements, and development and implementation of the updated turbidity Monitoring Plan as required per MM HWQ-4 and MM MBIO-3, would ensure that impacts related to sealing of the Intake Structure would be less than significant (Class II).

Post-Decommissioning Operations

New Facility Operations. Following Phase 2, operational activities at the DCPP site would include long-term management of the GTCC Waste Storage Facility and operation of the Security Building, indoor Firing Range, and Storage Buildings. All three sites are located just outside the coastal zone and there are no activities that would impact marine water quality. Therefore, no impact would occur.

Future Actions. Following full closure of the DCPP site, the site and facilities would undergo FSS to confirm that any residual levels of radionuclides have been removed and or decreased to the NRC-approved site release criteria. At that time, the Marina could be released for recreational, education, or commercial purposes. PG&E would lease the Marina to a third party, which would perform limited site improvements and operate the facility. No in-water improvements are proposed; therefore, there is no potential for significant impacts due to increased turbidity (Class III).

Long-term operation of the Marina, however, could result in increased debris in the marine environment. As required by MM HWQ-3, PG&E would be required to include clean Marina provisions in any future lease for the Marina's use. The clean Marina program includes BMPs for debris; therefore, impacts would be less than significant (Class II).

Mitigation Measures for Impact HWQ-3.

MBIO-3 Water Quality Monitoring Plan. See Section 4.4.

HWQ-3 Clean Marina Lease Provisions

HWQ-4 Turbidity Monitoring Plan. At least 30 days prior to submittal of permits related to installation of the cofferdam around the Discharge Structure, use of the temporary brine line from the SWRO, and closure of the Intake Structure, the Applicant or its designee shall update the existing Turbidity Monitoring Plan. The updated plan shall address elevated turbidity associated with removal of the Discharge Structure, use of

the temporary brine line, and closure of the Intake Structure. The plan shall describe receiving water turbidity monitoring procedures to ensure compliance and identify BMPs to reduce turbidity, including, but not limited to the following:

- Sediment removal prior to placement of cofferdam shall utilize a water lift to remove any sand or sediment and reduce air entrainment and sediment dispersion.
- Any discharge of excavated material should occur within 10 feet of the terminus of the discharge pipe location and within 3 feet of the seafloor.
- The discharge hose may need to be periodically repositioned to avoid accumulation of excavated material.
- A shroud should be fabricated to fit on the end of the discharge pipe to reduce sediment plume dispersion during disposal.

The Applicant or its designee shall submit a copy of the revised Turbidity Monitoring Plan to the San Luis Obispo County Planning and Building for review and approval, and shall incorporate the final, approved Plan into any applications for permits related to the cofferdam around the Discharge Structure, use of the temporary brine line from the SWRO, and closure of the Intake Structure, before commencing in-water work. To document compliance with this measure in the event that permits for a cofferdam around the Discharge Structure, use of the temporary brine line from the SWRO, and closure of the Intake Structure are issued by a Responsible Agency (US Army Corps of Engineers, Central Coast Regional Water Quality Control Board, California State Lands Commission), a copy of these permit applications shall be submitted to the County. Once the permits are issued, copies of the permits shall also be submitted to the County.

Impact HWQ-4: Adversely affect the availability of groundwater due to increased water use or excavation dewatering (Class III: Less than Significant).

Freshwater is needed from the start of decommissioning through site restoration for domestic water, makeup water, dust suppression, and soil compaction. For current DCPP operations, freshwater demand is met from SWRO supplemented with local groundwater. Water demand estimates during decommissioning and restoration include a 16-year period from 2024 to 2039 (covering Phases 1 and 2) that depicts using existing plant equipment (i.e., SWRO and Well #2) and then on-site groundwater and/or trucking water into the site when mostly all demolition activities are complete (see Section 2.3.20, *Water Management, including Management of the Seawater Reverse Osmosis Facility and Liquid Radioactive Waste*). PG&E conducted a resource assessment to determine whether future water needs could be met during decommissioning using SWRO, Diablo Creek, and groundwater (PG&E, 2021a). Based on the results of this assessment, future source water could be supplied from SWRO, groundwater, or a combination of the two (PG&E, 2021a). Diablo Creek was excluded as a potential source due to potential negative riparian environment and habitat impacts from reductions in surface water levels. At the end of 2034, the SWRO would shut down, and on-site water needs for decommissioning would be met via groundwater extraction. Post-decommissioning (after 2039), annual water demand would be

met through groundwater. Bottled water (i.e., Culligan Water) would continue to be trucked in for drinking purposes as is currently done at the DCPP site.

Phase 1

DCPP Project Site

During Phase 1 decommissioning activities, water needs are expected to increase from about 5.5 million gallons annually in 2028 to approximately 32 million gallons annually in 2030. The DCPP currently utilizes SWRO for the majority of its domestic water requirements with some blending via groundwater from Well #2 and this would continue throughout Phase 1.

The DCPP site is not located in an area with a designated groundwater basin (CDWR, 2021a). Furthermore, according to the US Geological Survey (USGS, 1995), no significant aquifers exist in the area. As discussed in Impact HWQ-2, dewatering would be necessary for some below ground structures. At the DCPP site, impacts would be less than significant during Phase 1 decommissioning activities as the amount of dewatering would be limited, and the local groundwater is not part of any groundwater basin. Based on pumping test results at Well #2, decommissioning activities at the DCPP site would not be expected to adversely affect the availability or usability of groundwater as a water resource. The impact would be less than significant (Class III).

Railyards

Pismo Beach Railyard. The PBR site may be used during DCPP decommissioning as a location for accepting and transporting non-radiological and non-hazardous materials out of state via rail for disposal. Modifications to the PBR site would be limited to refurbishing approximately 1,100 feet of existing track. Modifications would not involve ground disturbing activities (e.g., grading), such that water would not be used. Water would continue to be used for portable toilets and bottled water service for existing on-site staff. Decommissioning activities at the PBR would not increase water use within the City of Pismo Beach as no additional employees are anticipated to be required at the PBR facility; therefore, no impact would occur.

SMVR-SB. The SMVR-SB site would be used during DCPP decommissioning for accepting and transporting materials out of state via rail for disposal. This site is an existing industrial facility that is not connected to a wastewater service or water supplier. Modifications to the site for the Proposed Project would be limited in scope and would not require additional water supply, as grading would not occur. Water would be used for portable toilets and bottled water service for the approximately two dozen temporary employees that would support Proposed Project rail operations. The Proposed Project would not cause a substantial increase in water use, and once Phase 1 is complete, waste transport would cease, and additional water would no longer be needed. Therefore, the impact would be less than significant (Class III).

Phase 2

Phase 2 includes final site restoration, including backfilling, grading, landscaping to restore disturbed features, closure of the Intake Structure, and continued Discharge Structure removal and restoration. As previously described, water demands are expected to increase to approximately 32 million gallons annually in 2030 and remain at this level through 2034. During this time,

water demands would be met primarily via SWRO and augmented via on-site groundwater pumping. Starting in 2035, when SWRO is no longer in operation, water use is projected to decrease and level out at 764,000 gallons per year for completion of the remaining decommissioning activities and vegetation watering. During this time, on-site water needs for decommissioning would be met via groundwater extraction. Well #2 has been shown to have adequate capacity to meet this water need; however, additional on-site wells such as Well #5 may be used.

Based on pumping test results at Well #2, decommissioning activities at the DCPP site would not be expected to adversely affect the availability or usability of groundwater as a water resource. The impact would be less than significant (Class III).

Post-Decommissioning Operations

New Facility Operations. Following Phase 2, operational activities at the DCPP site would include long-term management of the GTCC Waste Storage Facility and operation of the Security Building, indoor Firing Range, and Storage Buildings. Groundwater dewatering would not be required as part of new facility operations. Operation of the DCPP site would include up to 50 workers (during peak periods) in the revised OCA. As previously described, post-decommissioning (after 2039), annual water demand for GTCC Waste Storage Facility operations would level out at approximately 215,000 gallons per year. This would be met via groundwater extraction; however, Well #2 would have adequate capacity to meet these water needs. Therefore, the availability of groundwater would not be adversely impacted due to increased water use and this impact is less than significant (Class III).

Future Actions. The Marina is anticipated to have up to 200 visitors per day. Water use would be limited to the public restrooms; no water would be available for boat washdown or engine clearance. As noted above, Well #2 would have adequate capacity to meet these water needs. Therefore, the availability of groundwater would not be adversely impacted due to increased water use and this impact is less than significant (Class III).

Mitigation Measures for Impact HWQ-4. No mitigation measures are required.

Impact HWQ-5: Increase soil erosion and sedimentation due to removing structures and/or impervious surface areas, altering drainage patterns, or exceeding the capacity of stormwater conveyance structures (Class II: Less than Significant with Mitigation).

Phase 1

DCPP Project Site

Soil Erosion and Sedimentation

During Phase 1, construction activities associated with decommissioning would directly disturb soils within the DCPP site, including excavation or ground disturbance required for decontamination and removal of SSCs, and soil remediation. During grading, drainage patterns would be temporarily altered and there would be an increased potential for soil erosion and sedimentation. Conversion of hard surface to bare ground would increase erosion during rain events. In addition, removal of the Discharge Structure, which includes the tunnel extending 30 feet into the bluff, would leave a gap within the existing cliff area and expose a portion of the cliff that was

previously protected by a concrete wall. As designed, removing the structure would leave a large void, which would be restored through installation of layers of different rock materials that blend with the natural stratigraphy of the bluff (see Figures 2-30 and 2-31) and would provide bluff erosion protection. With implementation of MM GEO-5 (*Discharge Structure Backfill and Natural Bluff Site Inspection*), which include monitoring the area of the Discharge Structure to ensure stability and structural integrity to withstand natural bluff erosion and wave action, the effects of erosion associated with the Discharge Structure backfill would be less than significant (Class II).

As discussed above, the Proposed Project would be required to comply with the requirements of the CGP (AC WQ-1, *Construction General Permit*), which would be implemented by PG&E. The permit requires development and implementation of a SWPPP (AC BIO-3, *Site-Specific Storm-water Pollution Prevention Plan*). The SWPPP would be developed prior to the start of decommissioning activities and contain BMPs designed to minimize erosion during construction, control sediment and pollutants from construction materials, and stabilize construction areas. The SWPPP would define requirements for monitoring and inspections. PG&E also developed a Preliminary Erosion and Sediment Control Plan (see Table 2-2) that identifies BMPs to control erosion of soil and sedimentation from the site during grading (PG&E, 2020b). MM EM-2 (*Project Plan Updating, Tracking, and Reporting*) would be required to ensure that recommendations from plans and programs are implemented, tracked, and verified. Compliance with MM EM-2, which includes updating and tracking the Erosion and Sediment Control Plan, SWPPP, and associated BMPs, would reduce the risk of erosion and sedimentation to a less-than-significant level (Class II).

Alter On-Site Drainage Patterns and Exceed Capacity of Stormwater Conveyance Structures

Decontamination and dismantlement activities during Phase 1 would temporarily alter the on-site drainage patterns. As discussed above, the Proposed Project would be required to comply with the requirements of the CGP. The permit requires development of a SWPPP and use of BMPs to direct and control stormwater during construction activities.

The DCPP site has a robust existing stormwater conveyance system. During Phase 1 decommissioning activities, the existing stormwater conveyance structures would be utilized to remove stormwater from work areas. Interim culverts and/or swales may be required during phased construction activities to convey stormwater in a non-erosive manner to the ultimate point of discharge. The DCPP currently operates under IGP WDID 3 40I018248 and ultimately would operate under the CGP during decommissioning activities. The CGP requires development of a SWPPP and use of BMPs to direct and control stormwater. Compliance with the SWPPP and use of appropriate BMPs would help control runoff from work areas and reduce the risk of exceeding capacity of stormwater conveyance structures to less than significant (Class III).

Railyards

Pismo Beach Railyard. Use of the PBR site during decommissioning activities would be similar to its current use, and there would be no removal of structures or changes to impervious surfaces. As such, there would be no changes to existing drainage patterns, increase risk of soil erosion, or additional runoff that would exceed capacity of stormwater conveyance. The impact would be less than significant (Class III).

SMVR-SB. No new development is proposed at the SMVR-SB site, and only minor infrastructure modifications are anticipated. There would be no removal of structures or changes to impervious surfaces; therefore, there would be no changes to existing drainage patterns, increase risk of soil erosion, or additional runoff that would exceed capacity of stormwater conveyance. The impact would be less than significant (Class III).

Phase 2

DCPP Project Site

During Phase 2, soils would be directly disturbed within the DCPP site as part of soil remediation, demolition of remaining structures, continuation of Discharge Structure removal and restoration activities (see Phase 1 discussion), and final site restoration. Final site restoration would include backfilling and grading to restore excavated and disturbed features. If cut/fill volumes cannot achieve a zero-balance, soil may be cut from the SE Borrow Site for use as fill material. In addition, culverts would be removed and/or replaced, as necessary, for final site restoration and to ensure facilities remain capable of conveying stormwater in a non-erosive manner. Similar to Phase 1, the Proposed Project would comply with the requirements of the CGP (AC WQ-1, *Construction General Permit*), which would be implemented by PG&E. The permit includes implementation of the SWPPP (AC BIO-3, *Site-Specific Stormwater Pollution Prevention Plan*) and use of BMPs. PG&E also developed a Preliminary Erosion and Sediment Control Plan for the final surface conditions after demolition of all decommissioned structures (PG&E, 2020b), which identifies BMPs to control erosion of soil and sedimentation from the site during grading and site restoration activities. As with Phase 1, MM EM-2 (*Project Plan Updating, Tracking, and Reporting,* specifically for the Erosion and Sediment Control Plan listed in Table 2-2) would be required in Phase 2 to ensure that recommendations from plans and programs are implemented, tracked, and verified. MM GEO-5 (*Discharge Structure Backfill and Natural Bluff Site Inspection*) would also continue to apply following placement of Discharge Structure backfill.

A final Long-Term Erosion and Sediment Control Plan would be developed to address the final reuse and configuration of the site, as detailed in MM HWQ-2. The Long-Term Erosion and Sediment Control Plan would be included in the SWMP. The preliminary plan would be updated based on the final Grading Plan, site conditions, drainage infrastructure, general site drainage patterns, and stabilization measures remaining after demolition. Additional erosion and sediment control BMPs would be developed to improve sediment control in specific areas of the site and target specific issues identified later in the design.

Long-term stormwater management in Phase 2 includes installation of post-construction stormwater controls and development of a SWMP as discussed in Impact HWQ-4 to manage stormwater drainage from the site over the time required for revegetation to establish and to minimize sediment impacts to Diablo Creek and the Pacific Ocean. The SWMP and Post-Decommissioning Drainage Plan (MM HWQ-1) would be developed in accordance with Low Impact Development requirements and include an analysis of site hydrology and post-grading stormwater conveyance systems. Low Impact Development includes techniques to limit the amount of impervious surface, increase on-site filtration, and improve water quality by reducing runoff from developed site.

Phase 2 decommissioning activities would temporarily alter drainage patterns, which could result in increased soil erosion and contribute to additional runoff that would exceed capacity of stormwater conveyance, causing a potentially significant impact. Compliance with MM HWQ-1 (*Prepare and Implement Drainage Plans*), MM HWQ-2 (*Long-term Erosion and Sediment Control Plan*), SWMP, and associated tracking of these plans per MM EM-2 (*Project Plan Updating, Tracking, and Reporting*), the Proposed Project would not increase soil erosion and sedimentation, alter on-site drainage patterns, or contribute to additional runoff that would exceed capacity of stormwater conveyance, and the impact would be reduced to less than significant with mitigation (Class II).

Post-Decommissioning Operations

New Facility Operations. During operations, which include operation of the GTCC Waste Storage Facility, Security Building, indoor Firing Range, and Storage Buildings, no additional construction would occur such that no new structures or impervious surface areas would be created. Drainage patterns would not change and there would be no increase in soil erosion of sedimentation. No impact would occur.

Mitigation Measures for Impact HWQ-5.

EM-2 **Project Plan Updating, Tracking, and Reporting.** See Section 3. For Impact HWQ-5, MM EM-2 will be implemented to track the compliance activities and reporting of the Construction Drainage Plan required under MM HWQ-1, the Erosion and Sediment Control Plan listed in Table 2-2, and the Long-Term Erosion and Sediment Control Plan required under MM HWQ-2.

GEO-5 **Discharge Structure Backfill and Natural Bluff Site Inspection.** See Section 4.8.

HWQ-1 **Prepare and Implement Drainage Plans**

HWQ-2 **Long-Term Erosion and Sediment Control Plan**

Impact HWQ-6: In flood hazard, tsunami, or seiche zones, increase risk of pollutant release from Project activities or stored materials being inundated from flooding (Class II: Less than Significant with Mitigation).

Phase 1

DCPP Project Site

Based on dam breach inundation maps provided by the CDWR Division of Safety of Dams, the closest dam to the DCPP site is the Chorro Creek Dam, which is located approximately 12 miles to the northeast (CDWR, 2021b). The Chorro Creek Dam retains the Chorro Creek Reservoir, a relatively small waterbody. Based on the dam breach inundation map, flooding is limited to the areas along Chorro Creek, extending approximately 4.6 miles southwest of the dam. As such, the DCPP site is not located within a dam inundation area.

The DCPP site is located above the 500-year flood elevation, with the exception of the shoreline (FEMA, 2017a). The shoreline is subject to inundation by the 100-year flood with additional hazards due to storm-induced wave action and is within the Flood Hazard Area designated by the

San Luis Obispo County General Plan (San Luis Obispo, 2010). The shoreline Flood Hazard Area includes the Intake Structure and Intake Cove with a Base Flood Elevation of 22 feet MSL and the Discharge Structure with a Base Flood Elevation of 39 feet MSL (FEMA, 2017a). Of these existing structures, Phase 1 only includes the demolition and removal of the Discharge Structure. Prior to demolition, a cofferdam would be installed around the Discharge Structure to isolate the work area from the Pacific Ocean. Wind and wave data from a 50-year storm was used to model environmental criteria for construction of the cofferdam (Argonautics Marine Engineering, Inc., 2020). Based on these factors, the DCPP site with installation of the cofferdam would not be subject to inundation from flooding during Phase 1 and there is no increased risk of pollutant release due to inundation from flooding.

In addition to coastal flooding, the DCPP site may be subject to tsunamis and seiches. A tsunami is a series of waves caused by an underwater disturbance, such as an earthquake, volcano, or landslide. Based on California Geological Survey Tsunami Hazard Area Map, most of the DCPP site is outside the inundation zone except low-lying areas along the shoreline (California Department of Conservation [CDOC], 2022), including the Intake Structure, Discharge Structure and cofferdam, and the Intake Cove. However, the probability of a large tsunami is very low and not common on the Central Coast of California (San Luis Obispo, 2016). The County of San Luis Obispo maintains the Tsunami Emergency Response Plan, which defines emergency response management procedures, organization response, and coordination related to a potential tsunami (San Luis Obispo, 2016). The plan includes notification procedures for the DCPP such that impacts would be less than significant (Class III).

A seiche is a standing wave that develops in an enclosed or semi-enclosed body of water. The Breakwaters create a semi-enclosed harbor, which could be affected by small seiches; however, the seiche wave height would be likely limited due to the relatively small size of the harbor and influence of wave action from normal coastal processes. During Phase 1 there would be additional boating activities with barges and tugboats being loaded for waste transport out-of-state within the Intake Cove. As such, there could be an increased risk of pollutant release. In the event of a spill, MM MBIO-8 (*Oil Spill Response Plan*) would reduce potential impacts to a less-than-significant level (Class II). There are no other enclosed or semi-enclosed bodies of water adjacent to or above the DCPP site.

Railyards

Pismo Beach Railyard. Based on dam breach inundation maps provided by the CDWR Division of Safety of Dams, the closest dam to the PBR site is the Terminal Dam, approximately 6 miles to the east (CDWR, 2021b). The Terminal Dam retains the Lopez Reservoir, a relatively small waterbody. Based on the dam breach inundation map, flooding is limited to the areas along the Arroyo Grande Creek, which flows south and west of the dam to the Pacific Ocean. The PBR site is located approximately 4 miles north of Arroyo Grande Creek and is not within a dam inundation area. The PBR site is within an area with a one percent annual chance or (100-year) flood, with the exception of the area adjacent to Price Canyon Road. Therefore, this site could be subject to inundation from flooding, resulting in an increased risk of pollutant release, which would result in a potentially significant impact. However, as stated in the Project Description, *Modifications and Operations at Rail Facilities*, temporary storage of any non-radiological or non-hazardous waste at the PBR site would be kept at least one foot

above any existing FEMA 100-year floodplain elevation (AC BIO-4, *Site Maintenance and General Operations*); therefore, resulting in less than significant impacts (Class III).

Based on California Geological Survey Tsunami Hazard Area Map, the PBR site is outside the inundation zone (CDOC, 2022); therefore, there is no risk of pollutant release due to inundation from a tsunami. Likewise, there are no enclosed or semi-enclosed bodies of water adjacent to or above the PBR site; therefore, there is no risk of pollutant release due to inundation from a seiche. There would be no impact.

SMVR-SB. As previously discussed, the SMVR-SB site is not subject to flooding and is above the elevation of the 500-year flood (FEMA, 2012). Based on this, the SMVR-SB site is not subject to inundation from flooding and there is no increased risk of pollutant release due to inundation from flooding. The closest dam to the SMVR-SB site is the Twitchell Dam (Santa Maria, 2020). The Twitchell Dam retains the Twitchell Reservoir and is located approximately 12 miles to the northeast of the SMVR-SB site. As such, the SMVR-SB site is not located within a dam inundation area. There would be no impact.

Based on California Geological Survey Tsunami Hazard Area Map, the SMVR-SB site is outside the inundation zone (CDOC, 2022); such that there is no risk of pollutant release due to inundation from a tsunami. Likewise, there are no enclosed or semi-enclosed bodies of water adjacent to or above the SMVR-SB site. Therefore, there is no risk of pollutant release due to inundation from a seiche. There would be no impact.

Phase 2

Phase 2 work within the 500-year flood hazard, tsunami, and seiche zones includes continuation of the Discharge Structure removal and restoration, and closure of the Intake Structure. The blufftop road segment would be located above coastal water impact areas, including beyond the tsunami hazard level, and far enough back from the cliff edges to not be exposed to coastal flooding. As described in Phase 1, a cofferdam, designed based on wind and wave data from a 50-year storm, would be installed around the Discharge Structure to isolate the work area from the Pacific Ocean; therefore, no increased risk of pollutant release at the Discharge Structure due to inundation from flooding would occur. The openings of the Intake Structure would be sealed with concrete bulkheads, which would be located entirely within the water, below low tide. Construction in this area would be protected from coastal flooding by the Breakwaters, which provide protection from wave run up. In addition, any chemicals, liquid products, and petroleum products (e.g., paints, solvents, and fuels) used on site, and any construction waste generated would be controlled through implementation of the SPCC Plan and SWPPP (AC BIO-3, *Site-Specific Stormwater Pollution Prevention Plan*) (see Table 2-2). As discussed above, tsunamis and seiches are unlikely, and safety protocols and tsunami warning system would reduce the potential for impacts. Construction risk of pollutant release due to inundation from flooding, tsunamis, and seiches would be less than significant (Class III).

Post-Decommissioning Operations

New Facility Operations. Following Phase 2, operational activities at the DCPP site would include long-term management of the GTCC Waste Storage Facility and operation of the Security Building, indoor Firing Range, and Storage Buildings. These facilities would be supported by an

existing septic and dispersal system in the East Canyon Area. All are located above the 500-year flood elevation and outside the tsunami hazard area; therefore, no impact would occur.

Future Actions. The Marina is within the 500-year flood hazard area of the DCPP site. Marina improvements would include parking lots, public restrooms, and installation of a boat hoist and articulated stairs. The stairs would extend to the water and provide a small platform at the water level. Construction in this area would be protected from coastal flooding by the Breakwaters, which provide protection from wave run up. In addition, any chemicals, liquid products, and petroleum products (e.g., paints, solvents, and fuels) used on site, and any construction waste generated would be controlled through implementation of the SPCC Plan and SWPPP (AC BIO-3, *Site-Specific Stormwater Pollution Prevention Plan*) (see Table 2-2).

The parking, restrooms, septic and dispersal system, and roadways would be set back above coastal water impact areas, including beyond the tsunami hazard level, and far enough back from the cliff edges to not be exposed to coastal flooding (higher than the 500-year flood hazard zone). Operation of the boat hoist and dock, which are within the flood zone, would be protected against wave run up by the Breakwaters, which would provide a safe harbor during storms. As discussed above, tsunamis and seiches are unlikely, and safety protocols and the existing tsunami warning system would reduce the potential for impacts. Therefore, impacts would be less than significant (Class III).

Mitigation Measures for Impact HWQ-6.

MBIO-8 Oil Spill Response Plan. See Section 4.4.

Impact HWQ-7: Conflict with implementation of the Basin Plan, or sustainable groundwater management plan as a result of groundwater dewatering or increased water use (Class III: Less Than Significant).

Phase 1

DCPP Project Site

Basin Plan

The DCPP site is located within the jurisdiction of the CCRWQCB. The CCRWQCB Basin Plan designates beneficial uses for surface and groundwater, sets narrative and numeric water quality objectives, and establishes implementation programs for the Central Coast Region to protect those beneficial uses (CCRWQCB, 2019). The CCRWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including NPDES permits. The Proposed Project would comply with all NPDES permit requirements, including the CGP (AC WQ-1, *Construction General Permit*), which would be implemented by PG&E as part of the Proposed Project. The CGP includes implementation of a SWPPP (AC BIO-3, *Site-Specific Stormwater Pollution Prevention Plan*) and use of BMPs during decommissioning activities to reduce pollutants in stormwater runoff.

Groundwater dewatering may be required during removal of below ground structures. Disposal of groundwater can introduce total dissolved solids and other pollutants to surface waters. As discussed above, the Proposed Project would be required to comply with the requirements of the Waste Discharge Requirements NPDES General Permit for Discharges with Low Threat to

Water Quality (Order No. R3-2017-0042, NPDES No. CAG993001; CCRWQCB, 2017). The NPDES General Permit would require testing and treatment of groundwater prior to discharge to protect surface water quality and meet Basin Plan requirements (CCRWQCB, 2019).

Compliance with NPDES permits and ACs as part of the Proposed Project would eliminate conflicts with implementation of the Basin Plan and impacts would be less than significant (Class III).

Sustainable Groundwater Management Plan

The SGMA, passed in 2014, created a framework for sustainable, local groundwater management in California (CDWR, 2021c). High and medium priority basins are currently subject to SGMA requirements, including the requirement of Groundwater Sustainability Agencies to develop and implement Groundwater Sustainability Plans. According to information provided by the CDWR, the DCPP site is not located in an area with a designated groundwater basin (CDWR, 2021a). Because there is no Groundwater Sustainability Plan applicable to the DCPP site, the Proposed Project would not conflict with implementation of a sustainable groundwater management plan. No impact would occur.

Railyards

Pismo Beach Railyard. According to information provided by the CDWR, the PBR site is not located in a designated groundwater basin (CDWR, 2021a). In addition, the Proposed Project would not use any groundwater at the PBR. There would be no impact.

SMVR-SB. The SMVR-SB site is located within the Santa Maria Valley Groundwater Basin, which has been identified by CDWR as a very-low priority basin (CDWR, 2021a). The SGMA only requires high and medium priority basins to develop and implement a Groundwater Sustainability Plan; therefore, there is no Groundwater Sustainability Plan applicable to the SMVR-SB site. In addition, the Proposed Project would not require any use of water at the SMVR-SB site and therefore would not affect groundwater use. There would be no impact.

Phase 2

Phase 2 construction includes soil remediation, demolition of remaining structures, final site restoration (soil grading and landscaping), long-term stormwater management, and closure of the Intake Structure. Similar to Phase 1, the Proposed Project would comply with all NPDES permit requirements and would implement BMPs to reduce pollutants in stormwater runoff. In addition, the Proposed Project would continue to comply with NPDES Permit, including testing and treatment of groundwater prior to discharge to protect surface water quality. Long-term stormwater management in Phase 2 includes installation of post-construction stormwater controls, which would be operable during operations, and development of a SWMP in accordance with the Low Impact Development requirements of the CCRWQCB, and any additional conditions as part of a 401 Water Quality Certification. Compliance with NPDES permit requirements and implementation of the SWMP, the Proposed Project would not conflict with implementation of the Basin Plan (Class III).

As previously described, there is no Groundwater Sustainability Plan applicable to the DCPP site. The County's Coastal Zone Land Use Ordinance (CZLUO) requires project grading to maximize surface drainage to infiltrate and recharge to protect groundwater. The SWMP and Post-

Decommissioning Drainage Plan (MM HWQ-1) would be developed in accordance with Low Impact Development requirements, which includes techniques to limit the amount of impervious surface and increase on-site filtration. With compliance with the SWMP and Post-Decommissioning Drainage Plan (MM HWQ-1) and because there is no Groundwater Sustainability Plan applicable to the DCPP site, Phase 2 activities would not conflict with implementation of a sustainable groundwater management plan.

Post-Decommissioning Operations

New Facility Operations. Following Phase 2, operational activities at the DCPP site would include long-term management of the GTCC Waste Storage Facility and operation of the Security Building, indoor Firing Range, and Storage Buildings. Groundwater dewatering would not be required as part of new facility operations. As previously described, there is no Groundwater Sustainability Plan applicable to the DCPP site; therefore, new facility operations would not conflict with implementation of a sustainable groundwater management plan. No impact would occur.

Future Actions. Marina operations, which requires County approval of entitlement, would include a public restroom supported by a septic and dispersal system that would need to meet the County's Local Agency Management Program or Regional Board requirements. Water would not be made available for boat washdown or engine clearance, which would conform to the Basin Plan. Compliance with NPDES permit requirements and implementation of the SWMP would ensure the Proposed Project does not conflict with implementation of the Basin Plan (Class III).

Mitigation Measures for Impact HWQ-7. No mitigation measures are required.

4.11.5 Cumulative Impact Analysis

Geographic Extent Context

The geographic scope for cumulative effects on hydrology and water quality analysis is the area that could have effects overlapping with the Proposed Project, including watersheds of the DCPP and SMVR-SB sites, and the coastal marine system at the DCPP site. In the marine environment, water quality impacts would affect the immediate area and become more dispersed and less significant as distance increases. Therefore, the geographic scope for cumulative impacts in the marine environment could extend for several miles. Land based water quality and hydrology impacts would be limited to the local drainage basin, which extends only about 0.5 mile from the DCPP and SMVR-SB sites.

Several of the projects listed in Table 3-1, particularly the projects in close proximity to the Proposed Project and that involve construction, may entail an adverse impact to hydrology and water quality from their use of materials or the extent of proposed construction, if improperly managed. These projects could also have impacts related to stormwater contamination, runoff, or spills. The projects which are in close proximity to the Proposed Project, all of which involve some degree of construction, include:

Diablo Canyon Power Plant

- Orano System ISFISI Modifications (#1)
- Communications Facility (#2)

Pismo Beach Railyard

- Signal at Bello and Price Canyon Road (#7)
- Public Safety Center (#9)
- Bello Road Paving (#10)
- Price Street Sidewalk Pavers (#11)
- Realign Frady Lane (#12)
- Storm Drain on Wadsworth from Bello to Judkins Middle School (#13)

The Port San Luis Breakwater Repair (#25) is not in close proximity to the Proposed Project, but because it involves a breakwater repair in the same coastal area as the Proposed Project, it could contribute turbidity, which would be in addition to any turbidity increase related to Discharge Structure removal and restoration as part of the Proposed Project. However, because the Port San Luis Breakwater Repair is expected to be complete in 2023 and the Discharge Structure removal and restoration elements of the Proposed Project are scheduled for 2030 to 2033 (see Table 2-10), no overlap would be anticipated because any turbidity associated with the Port San Luis Breakwater Repair would have settled years prior to the Proposed Project.

Cumulative Impact Analysis

Phase 1

The projects which are in close proximity to the Proposed Project and involve some degree of construction could have impacts related to stormwater contamination, runoff, or spills. The impacts from these projects would take place in addition to the impacts from the Proposed Project, which could entail a cumulative impact to hydrology and water quality. Similar to the Proposed Project, each of these projects would adhere to NPDES permit requirements and other state and federal permitting requirements. Therefore, proposed Phase 1 activities, which have been mitigated to a less-than-significant level, would not have cumulatively considerable impacts in addition to other projects in proximity to the Proposed Project.

Phase 2

As discussed under Phase 1, the projects which are in close proximity to the Proposed Project and involve some degree of construction could also have impacts related to stormwater contamination, runoff, or spills, and because all of these projects would entail groundwork, improper management could impact water quality. The Communications Facility (#2), which would be located on a road near the DCPP site, would not be in proximity to Phase 2 work.

The impacts from these projects would take place in addition to the impacts from the Proposed Project, which could entail a cumulative impact to hydrology and water quality. Similar to the Proposed Project, each of these projects would adhere to NPDES permit requirements and other state and federal permitting requirements such that impacts would not be cumulatively considerable.

There are no activities at the PBR or SMVR-SB sites in Phase 2, such that there would be no cumulative impacts at these sites.

4.11.6 Summary of Significance Findings

Table 4.11-1 presents a summary of the environmental impacts, significance determinations, and mitigation measures for the Proposed Project related to hydrology and water quality.

Table 4.11-1 Summary of Impacts and Mitigation Measures – Hydrology and Water Quality

Impact Statement	Impact Significance Class				Mitigation Measures
	Phase 1		Phase 2	Post-Decom	
	DCPP	*PBR/SB*	*DCPP*	*Ops/Marina*	
HWQ-1: Violate any water quality standards or waste discharge requirements, create substantial additional sources of polluted runoff, or require significant additional treatment of dewatered structures, systems, and components	II	III/III	II	NI/II	**EM-2:** Project Plan Updating, Tracking, and Reporting **HWQ-1:** Prepare and Implement Drainage Plans **HWQ-2:** Long-Term Erosion and Sediment Control Plan **HWQ-3:** Clean Marina Lease Provisions
HWQ-2: Degrade surface water quality as a result of chemical spills during decontamination and dismantlement activities or introduce contaminants to surface water as a result of groundwater dewatering during decontamination and dismantlement activities or at the off-site materials handling facilities	II	III/III	II	NI/II	**MBIO-8:** Oil Spill Response Plan **HWQ-1:** Prepare and Implement Drainage Plans **HWQ-2:** Long-Term Erosion and Sediment Control Plan **HWQ-3:** Clean Marina Lease Provisions
HWQ-3: Substantially degrade marine water quality, including increasing turbidity and debris in the marine environment during decontamination and dismantlement activities, or potentially exceed California Ocean Plan salinity requirements or reducing dissolved oxygen concentrations upon cessation of power generation activities	II	NI/NI	II	NI/II	**MBIO-3:** Water Quality Monitoring Plan **HWQ-3:** Clean Marina Lease Provisions **HWQ-4:** Turbidity Monitoring Plan
HWQ-4: Adversely affect the availability of groundwater due to increased water use or excavation dewatering	III	NI/III	III	III/III	None required

Table 4.11-1 Summary of Impacts and Mitigation Measures – Hydrology and Water Quality

Impact Statement	Impact Significance Class				Mitigation Measures
	Phase 1		Phase 2	Post-Decom	
	DCPP	*PBR/SB*	*DCPP*	*Ops/Marina*	
HWQ-5: Increase soil erosion and sedimentation due to removing structures and/or impervious surface areas, altering drainage patterns, or exceeding the capacity of stormwater conveyance structures	II	III/III	II	NI/NI	**EM-2:** Project Plan Updating, Tracking, and Reporting **GEO-5:** Discharge Structure Backfill and Natural Bluff Site Inspection **HWQ-1:** Prepare and Implement Drainage Plans **HWQ-2:** Long-Term Erosion and Sediment Control Plan
HWQ-6: In flood hazard, tsunami, or seiche zones, increase risk of pollutant release from Project activities or stored materials being inundated from flooding	II	III/NI	III	NI/III	**MBIO-8:** Oil Spill Response Plan
HWQ-7: Conflict with implementation of the Basin Plan, or sustainable groundwater management plan as a result of groundwater dewatering or increased water use	III	NI/NI	III	NI/III	None required
Cumulative Impact	Not cumulatively considerable		Not cumulatively considerable		None required

Acronyms: PBR = Pismo Beach Railyard, SB = Betteravia Industrial Park (Santa Barbara County), Post-Decom = Post-Decommissioning, Ops = Long-Term Operations, Class I = Significant and Unavoidable, Class II = Less than Significant with Mitigation, Class III = Less than Significant, Class IV = Beneficial, NI = No Impact.