13.0 HYDROLOGY AND WATER QUALITY

13.1 Regulatory Setting

PWP Volume 1 Chapter 4, "Consistency with Local Coastal Plans and the Coastal Act" includes a discussion of federal, state, and regional and local plans, policies, regulations, and laws, along with PWP consistency, related to coastal plans and the Coastal Act that are applicable to hydrology and water quality.

13.2 Environmental Setting

13.2.1 Surface Waters

The PWP planning area comprises three major watersheds: the Meadow Creek Watershed in the northern portion of the PWP planning area, the Arroyo Grande Creek Watershed (including Pismo Creek) in the middle portion, and the Oso Flaco Creek Watershed in the southern portion. Additional information is provided in PWP Volume 2, Section 1.4.3, "Hydrology."

13.2.2 Flooding

Based on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, the Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, and Oceano Campground Campfire Center Replacement Project are within the 100-year floodplain of Pismo Creek or Meadow Creek (Zone AE) (FEMA 2017), and are subject to occasional seasonal flooding. Most of the Butterfly Grove Public Access Project is also within a 100-year flood zone (Zone AE), although the southern portion is within Zone X—areas subject to a 500-year flood or areas subject to a 100-year flood with an average depth of less than 1 foot (FEMA 2017). Properties that are located within Zone X are not required to obtain flood insurance.

The beach area adjacent to the ocean within Pismo State Beach, and the Pier and Grande Avenue Entrance and Lifeguard Towers Project, are within a 100-year flood zone that is subject to wave effects 3 feet or greater (Zone VE) (FEMA 2017). Most of the remainder of Pismo State Beach is in Zone X, including the southern half of the Pismo State Beach Boardwalk Project. The mouth of Arroyo Grande Creek where it drains into the Pacific Ocean is a 100-year flood zone (Zone AE).

The Oceano Dunes SVRA, and the Trash Enclosure Project, along the beach adjacent to the ocean, are classified as a 100-year flood zone (both Zone VE and Zone AE). The remainder of the Oceano Dunes SVRA area that is open to OHV riding, and the northern half of the Pismo State Beach Boardwalk Project, are not within a flood zone (FEMA 2017).

Oso Flaco Lake, the Oso Flaco Lake Boardwalk Replacement Project, Little Oso Flaco Lake, and Oso Flaco Creek are within a 100-year flood hazard zone (Zone A). However, the Oso Flaco Improvement Project site (aside from the proposed trail around Little Oso Flaco Lake) is not within a flood hazard zone (FEMA 2017).

The Safety and Education Center Replacement Project, 40 Acre Riding Trail Project, and the Phillips 66/Southern Entrance Project are not within a flood hazard zone (FEMA 2017).

13.2.3 Tsunami Inundation

The Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground, Butterfly Grove Public Access Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Pier and Grande Avenue Entrance and Lifeguard Towers Project, Pismo State Beach Boardwalk Project, Trash Enclosure Project, Safety and Education Center Replacement Project, as well as the entirety of Pismo State Beach, are all within a tsunami inundation zone as designated by the California Geological Survey (CGS 2020). The beach area adjacent to the ocean within the Oceano Dunes SVRA, as well as Oso Flaco Lake, the Oso Flaco Lake Boardwalk Replacement Project, Little Oso Flaco Lake, Oso Flaco Creek, and most of the Oso Flaco Improvement Project are also within a tsunami inundation zone (CGS 2020).

13.2.4 Surface Water Quality

Water quality in the PWP planning area is regulated primarily by the Central Coast Regional Water Quality Control Board (Central Coast RWQCB), which has established narrative and numeric standards for the various waterbodies in its *Water Quality Control Plan for the Central Coastal Basin* (Basin Plan) (Central Coast RWQCB 2019). The Basin Plan sets beneficial uses for certain specifically identified waterbodies. Section 303(d) of the federal Clean Water Act (CWA) requires states to maintain a list of impaired waterbodies, and to establish Total Maximum Daily Loads (TMDL) for each. A TMDL is the calculation of the maximum amount of a pollutant allowed to enter a waterbody, so that the waterbody will meet water quality standards for that particular pollutant and will not change the identified beneficial uses. Water quality in a stream is measured by determining the level of various parameters, through various chemical and physical analyses.

13.2.4.1 *Meadow Creek*

Meadow Creek flows south from the San Luis Range, then westward underneath U.S. 101 and into Pismo Lake, then southward along the west side of SR 1. Meadow Creek discharges into the Oceano Lagoon just south of the facility. The lagoon extends south approximately 0.7 miles and ultimately drains into Arroyo Grande Creek. Meadow Creek is adjacent to the North Beach Campground, Butterfly Grove Public Access Project, Park Corporation Yard Improvement Project, and Oceano Campground Infrastructure Improvement Project.

Meadow Creek is not listed on the CWA 303(d) list, which mean there are no substantial water quality impairments (SWRCB 2018).

13.2.4.2 *Arroyo Grande Creek/Pismo Creek*

Arroyo Grande Creek flows south from the San Luis Range, underneath U.S. 101, and after flowing underneath SR 1 it turns westward and flows into the Pacific Ocean, approximately 0.4 miles south of the Pier Avenue entrance to the Oceano Dunes SVRA. The Arroyo Grande Creek watershed historically also included the lower portion of Pismo Creek. Pismo Creek also flows south from the San Luis Range, underneath U.S. 101 and SR 1, where its channel/lagoon system trends southerly. A lagoon forms seasonally at the mouth of Pismo Creek, where the Pismo Creek Estuary Seasonal (Floating) Bridge Installation would be located.

Arroyo Grande Creek is on the 303(d) list for benthic community effects, fecal coliform, nickel, nitrate, and toxicity (SWRCB 2018). TMDLs have not yet been adopted. Pismo

Creek is on the 303(d) list for chloride, E. coli, fecal coliform, sodium, and turbidity. TMDLs have not yet been adopted (SWRCB 2018).

No camping or OHV use is permitted near Arroyo Grande Creek since it is outside of the open riding area, but motorized vehicles are allowed to cross the creek at its mouth when it is flowing into the ocean. The Oceano Dunes District has established specific guidelines via Superintendent's Order 554-005-2020 governing the creek's closure to vehicular crossings to protect human life, prevent property loss, and protect the waterway from pollution potentially caused by prolonged submersion of vehicles. Under Superintendent's Order 554-005-2020 (renewed in January 2020), State Parks prohibits street-legal vehicles from crossing Arroyo Grande Creek in any manner other than crossing the creek as close to the ocean waterline as possible and parallel to the ocean waterline. Driving upstream or downstream in the creek channel or any other manner in the creek channel is prohibited. The upper creek and lagoon are closed to vehicle use year-round to protect sensitive aquatic habitat. If the creek crossing has a "closed" sign, visitors may not cross the creek. Implementation of this order has avoided impacts on natural resources associated with the creek. The guidelines from the order have been incorporated into the Habitat Conservation Plan prepared for the park and are part of the park's HCP permit condition CA-40: Motorized vehicle crossing of Pismo/Carpenter Creek, Arroyo Grande Creek, and Oso Flaco Creek.

Environmental scientists monitor the Arroyo Grande Creek and Lagoon seasonally. State Parks publishes an annual fisheries report to the U.S. Fish and Wildlife Services that includes Arroyo Grande Creek and Lagoon. State Parks continues to collaborate with CDFW to devise and implement structural and management measures to protect lower Arroyo Grande Creek from damage caused by vehicle crossings.

13.2.4.3 *Oso Flaco*

Oso Flaco Creek flows westward and discharges into the Pacific Ocean; most of the creek has been channelized until it reaches State Parks property. Oso Flaco Lake is the site of the Oso Flaco Lake Boardwalk Replacement Project and is approximately 900 feet west of the Oso Flaco Improvement Project site.

Oso Flaco Lake is on the 303(d) list for dichlorodiphenyltrichloroethane (DDT) impairment (SWRCB 2018), and TMDLs for toxicity and pesticides in the Santa Maria River watershed including Oso Flaco Lake were adopted in January 30, 2014, under Central Coast RWQCB Resolution No. R3-2014-0009. Oso Flaco Lake is also listed for chlorophyll-a, dieldrin (TMDL adopted 2015), endrin (TMDL adopted 2015), E. coli (TMDL adopted 2013), fecal coliform (TMDL adopted 2013), mercury, nitrate (TMDL adopted 2016), and dissolved oxygen (SWRCB 2018). Past monitoring and management activities include nitrate and sediment assessment, Oso Flaco Creek Non-Point Source Pollution Assessment, and grower-initiated management strategies as part of the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands issued by the Central Coast RWQCB (Agricultural Order No. R3-2012-0011). Current monitoring activities include water quality monitoring by the Central Coast Ambient Monitoring Program and the Coastal San Luis Resource Conservation District.

Oso Flaco Creek (west of Oso Flaco Lake to the Pacific Ocean) is on the 303(d) list for ammonia (TMDL adopted in 2016), chloride, chlorpyrifos (TMDL adopted in 2015), sodium, toxicity (TMDL approved in 2015), and turbidity (SWRCB 2018).

13.2.4.4 *Groundwater Basin Sustainability*

The PWP planning area is located within the Santa Maria River Valley Groundwater Basin (Santa Maria Basin) (California Department of Water Resources [DWR] Basin ID No. 3-12). The basin encompasses approximately 184,000 acres (288 square miles), of which approximately 61,220 acres (95.7 square miles) are within San Luis Obispo County. Groundwater is found in alluvium, dune sands, and the Orcutt, Paso Robles, Pismo, and Careaga Formations (San Luis Obispo County 2020). Groundwater is unconfined throughout most of the basin except in the coastal portion, where it is confined. The total estimated annual groundwater usage in 2019 was 97,982 acre-feet per year (DWR 2019).

In 2014, the California Legislature enacted the Sustainable Groundwater Management Act (SGMA). The SGMA was created to provide a framework for the sustainable management of groundwater supplies, and to strengthen local control and management of groundwater basins. The SGMA requires local agencies to adopt groundwater sustainability plans that are tailored to the resources and needs of their communities, such that sustainable management would provide a buffer against drought and climate change, and ensure reliable water supplies regardless of weather patterns. The SGMA and corresponding regulations require that each high and medium priority groundwater basin is operated to a sustainable yield, balancing natural and artificial groundwater recharge with groundwater use to ensure that undesirable results—such as chronic lowering of groundwater levels, loss of storage, water quality impacts, land subsidence, and impacts to hydraulically connected streams—do not occur.

California's 515 groundwater basins are classified into one of four categories; high-, medium-, low-, or very low priority based on components identified in the California Water Code Section 10933(b). Basin priority determines which provisions of California Statewide Groundwater Elevation Monitoring (CASGEM) and the SGMA apply in a basin. The SGMA requires that local agencies form one or more groundwater sustainability agencies (GSAs) within 2 years (i.e., by June 30, 2017). Agencies located within high- or medium-priority basins must adopt groundwater sustainability plans (GSP) by January 31, 2020 or January 31, 2022. The time frame for basins determined by DWR to be in a condition of "critical overdraft" was January 31, 2020, all other high and medium priority basin have until January 31, 2022. Local agencies will have 20 years to fully implement GSPs after the plans have been adopted. GSPs may be adopted, but are not required, for low and very low priority basins.

DWR originally designated the Santa Maria Basin as a high priority basin. In late 2019, DWR released its final basin prioritizations and determined that Santa Maria Basin should be classified as very low priority (DWR 2019). Because of the very low priority basin designation, a GSP is not required and has not been prepared. The Santa Maria Basin is in "adjudicated" status due to litigation over water rights. The adjudicated areas cover a majority of the basin, and are managed by the Northern Cities Management Area, Nipomo Mesa Management Area, and the Santa Maria Valley Management Area, as described below (San Luis Obispo County 2020). Each of the groundwater management areas are charged by the Court with developing the technical bases for sustainable management of the surface and groundwater supplies, as part of the Stipulation and Judgment for the Santa Maria Groundwater Litigation (Santa Maria Valley Water Conservation District v. City of Santa Maria et al., Lead Case No. 1-97-CV-770214) (Santa Clara County Superior Court 2005, as amended 2014).

- **Northern Cities Management Area**—includes Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Pismo State Beach, the northern portion of the Oceano Dunes SVRA, the Trash Enclosure Project, and the Safety and Education Center Replacement Project. In 2019, the total amount of groundwater extraction in the Northern Cities Management Area was 3,344 acre-feet per year (afy), of which 2,506 afy was used for irrigation, 708 afy was for urban use, and 82 afy was for rural water purveyors (DWR 2020b).

- **Nipomo Mesa Management Area**—includes the middle portion of the Oceano Dunes SVRA, the 40 Acre Riding Trail Project, and all of the Phillips 66/Southern Entrance Project. The Nipomo Mesa Management Area (NMMA) covers approximately 33 square miles or 21,590 acres, which accounts for approximately 13 percent of the overall Santa Maria Groundwater Basin. Approximately 13,500 acres of the NMMA, or 64 percent, is developed land requiring water pumped from the underlying aquifers to sustain the agricultural and urban/industrial development. The NMMA is largely a mesa area that is north of the Santa Maria River, west of the San Luis Range, and south of Arroyo Grande Creek, with a lower-lying coastal environment to the west. In 2019, the total amount of groundwater extracted from the NMMA was 11,397 afy, of which 5,027 afy was for agricultural use and 6,370 afy was for urban/industrial use (DWR 2020b). As described in detail in the 12th Annual Report submitted to DWR (NMMA Technical Group 2020), the NMMA continues to experience a severe water shortage as evidenced by declining well levels. Furthermore, a persistent cone of depression from groundwater pumping is present in the central portion of the management area. In order to reduce dependence on groundwater and allow aquifer levels to recover, the water purveyors have pursued an increased reliance on surface water supplies (rather than groundwater). As part of this effort, the Nipomo Community Services District (NCSD) implemented the Nipomo Supplemental Water Project. NCSD completed the initial phase (500 afy) of the planned 3,000 afy Nipomo Supplemental Water Project in 2015 and began delivering water to the NMMA on July 2, 2015. Currently, NCSD is purchasing 800 afy. With the initiation of supplemental water deliveries, a minimum purchase schedule "time clock" was triggered in accordance with the NCSD/City of Santa Maria Wholesale Agreement. Commencing no later than delivery year eleven (i.e., 2026), NCSD is required to purchase from the City of Santa Maria (and import to the NMMA) a minimum of an additional 2,500 afy (for a total of 3,000 afy). In addition, the water purveyors have implemented a coordinated effort throughout the management area to reduce the amount of groundwater used each year.

- **Santa Maria Valley Management Area**—includes Oso Flaco Lake, Little Oso Flaco Lake, Oso Flaco Creek, the Oso Flaco Lake Boardwalk Replacement Project, and the Oso Flaco Improvement Project. The Santa Maria Valley Management Area (SMVMA) encompasses approximately 175 square miles (112,000 acres), which accounts for approximately 61 percent of the overall Santa Maria Groundwater Basin. The SMVMA encompasses the contiguous area of the Santa Maria Valley, Sisquoc plain, and Orcutt upland, in southern San Luis Obispo and northern Santa Barbara counties. In 2019, the total amount of groundwater extracted from the SMVMA was 109,937 afy, of which 100,391 afy was for agricultural use and 9,546 afy was for urban use (DWR 2020b). As described in detail in the 2018 Annual Report submitted to DWR (Luhdorff and Scalmanini Consulting Engineers

2019), since the late 1960s, the SMVMA has alternately experienced substantial recharge (recovery) and decline which, collectively, reflect a general long-term stability as groundwater levels in both aquifer zones have fluctuated between historical-low and near historical-high levels over alternating 5- to 15-year periods. Groundwater levels throughout the SMVMA have shown this trend, but with different ranges of fluctuation, and groundwater levels have repeatedly recovered to near or above previous historical-high levels. The periodic groundwater level fluctuation since the late 1960s (with long-term stability) is attributed to intermittent wet and dry climatic conditions. Long-term stability is partially attributable to a general "leveling off" of agricultural land and water use in the basin since the early to mid-1970s. Groundwater conditions in the SMVMA are not in a condition of severe water shortage as defined in the Stipulation and Judgment.

The total annual groundwater extraction for the adjudicated portion of the Santa Maria Basin (which encompasses nearly the entire basin) is approximately 124,678 afy (DWR 2019).

For groundwater basins that are adjudicated, the SGMA requires that by April 1st of each year, the watermaster or local agency must submit to DWR a report containing the following information to the extent available for the portion of the basin subject to the adjudication (DWR 2020):

a Groundwater elevation data unless otherwise submitted pursuant to Section 10932 (DWR's CASGEM Program);

b Annual aggregated data identifying groundwater extraction for the preceding water year;

c Surface water supply used for or available for use for groundwater recharge or in-lieu use;

d Total water use;

e Change in groundwater storage;

f The annual report submitted to the court.

13.2.5 Groundwater Quality

Groundwater quality issues in the Santa Maria Valley Groundwater Basin include hardness, nitrates, salinity, sulfate and volatile organic. Total dissolved solids (TDS) concentrations are moderate to high. Higher salinity levels occur in the shallow aquifer near the coast than within the inland areas or in the deep aquifer. The importation of State Water, which is generally of better quality than the local sources, provides for higher quality “return flows” and thus improves the basin water quality. In addition to improvements provided by the operations of Twitchell Reservoir and State Water importation, the Laguna Sanitation District helps to improve water quality in the basin by utilizing a reverse osmosis process to remove, and a deep injection well to dispose of, approximately 8,000 pounds of salts per day, which would otherwise accumulate in the basin system. With the deep injection system these salts stay far below the aquifer and are not a threat to return to the aquifer. Coastal monitoring wells are measured biannually for any indication of seawater intrusion; to date there has been no evidence of such. (DWR 2019.)

13.3 Project Impacts

Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the PWP would result in a potentially significant impact related to hydrology and water quality if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that there the project may impede sustainable groundwater management of the basin?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

   i) Result in substantial erosion or siltation on- or off-site;

   ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

   iii) 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

   iv) Impede or redirect flood flows?

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

13.3.1 Impacts and Mitigation

13.3.1.1 Impacts from PWP Implementation

State Parks implements a Storm Water Pollution Prevention Plan (SWPPP) that is specific to the Corporation Yard (California State Parks 2017). As part of the SWPPP, operations and maintenance (O&M) activities are evaluated for their potential to discharge pollutants into stormwater and all corresponding BMPs are inspected on a quarterly basis. Such activities at Oceano Dunes District include, but are not limited to, vehicle and equipment maintenance, vehicle and equipment fueling, vehicle and equipment washing, material handling and storage, spill prevention and control, waste storage and litter control, and sanitary/septic waste management. Most of these activities occur at the Corporation Yard, but some, such as waste storage and litter control, occur throughout Oceano Dunes District. These activities and their standard operational practices are evaluated annually and enhanced, as needed, to prevent impacts to stormwater. Quarterly O&M Activity and BMP Assessment Forms are prepared by the Oceano Dunes District (California State Parks 2019). Proper implementation of BMPs for O&M activities is described in the *Operations and Maintenance Activity BMP*

Manual (California State Parks 2016). To minimize the discharge of pesticides, herbicides, and fertilizers, State Parks follows the approach recommended by the California Stormwater Quality Association (CASQA) in its *Municipal Stormwater BMP Handbook* (CASQA 2004), which provides guidance to municipal stormwater programs on selecting and implementing BMPs to reduce pollutants in runoff from municipal operations, including recommendations for "Fertilizer and Pesticide Management." Operation and maintenance activities associated with the PWP may include grading of areas larger than 50 cubic yards (the standard amount typically considered routine maintenance in the coastal zone). Grading of amounts larger than 50 cubic yards is subject to all resource management guidelines and would be conducted in full compliance with all applicable permits such as the National Pollutant Discharge Elimination System (NPDES) permits issued by SWRCB. Furthermore, construction ground disturbance of areas larger than 1 acre requires a site-specific SWPPP with associated BMPs specifically designed to control stormwater discharges and prevent pollutant transport into downstream receiving waters. Therefore, ongoing operation of the PWP would not violate water quality standards or WDRs, or conflict with implementation of the Basin Plan (which is intended to protect designated beneficial uses). This impact would be **less than significant**.

Implementation of the PWP would not require new sources of groundwater and therefore would result in **no impact** related to groundwater supplies or recharge, and would have no effect on and would not conflict with groundwater sustainability.

Because PWP implementation would not involve substantial new construction, there would be **no impact** from substantial alteration of drainages resulting in erosion, flooding, exceedance of stormwater drainage systems, or impedance of flood flows.

Similarly, because PWP implementation would only involve O&M activities at existing facilities, which are already located in flood hazard and tsunami inundation zones, PWP implementation would not increase the hazards from risk of release of pollutants in these hazard zones as compared to existing conditions, and there would be **no impact**.

13.3.1.2 Impacts from PWP Proposed Development Projects

Impact 13-1 Violate Water Quality Standards or Waste Discharge Requirements or Conflict with a Water Quality Control Plan

Arroyo Grande Creek, Oso Flaco Lake, and Oso Flaco Creek (west of Oso Flaco Lake to the Pacific Ocean) within and downstream of the PWP planning area are included on the SWRCB's 303(d) list of impaired water bodies for a variety of pollutants such as pesticides, toxicity, nitrates, dissolved oxygen, and fecal coliform bacteria (SWRCB 2018).

Buildout of the Oso Flaco Improvement Project and Phillips 66/Southern Entrance Project would affect long-term water quality by adding impervious surfaces (in the form of pavement and buildings) and thereby increasing urban stormwater runoff. These projects include intensification of development on both existing sites, demolition of existing structures with replacement land uses at the Phillips 66/Southern Entrance Project, and changes from undeveloped agricultural and open spaces lands to developed uses on both sites. New development activity has the potential to alter the types, quantities, and timing of contaminant discharges in stormwater runoff. Changes to a more developed state, if not properly managed, can adversely affect water quality because additional urban runoff pollutants such as sediment, trash, organic contaminants, nutrients, trace metals,

pathogens (e.g., bacteria and viruses), and oil and grease compounds can degrade receiving water quality.

In addition, construction activities at all of the PWP proposed development project sites would result in soil disturbance and use and staging of equipment, which can result in sediment and other pollutant transport during the winter rainy season in stormwater runoff. However, based on a review of NRCS (2020) soil data, the soil types where site-specific improvement projects would occur have a low water erosion hazard.

The Pismo Creek Estuary Seasonal (Floating) Bridge Installation and the Oso Flaco Lake Boardwalk Replacement Project would require some in-water work. The floating bridge across Pismo Creek would be installed seasonally. The bridge, abutments, and anchors would be installed and removed each year by a licensed contractor or parks staff employing hand crews and/or small excavator-type equipment. For the Oso Flaco Lake Boardwalk Replacement Project, wooden and/or plastic pilings supporting the structure would need to be removed, with replacement piers potentially installed via a pile driver. Equipment and materials may traverse wetlands at Oso Flaco Lake or need to be ferried to the worksite via a boat or barge. Some of the disturbed sediments from in-water work at both site-specific projects could become temporarily suspended in the water column, thereby increasing turbidity and releasing nutrients into the water. In addition, the presence of construction equipment and materials in the lake would present a risk for accidental spills of fuel or other petroleum products that could affect water quality. Based on the results of sediment testing obtained from Oso Flaco Lake, constituents of concern that are present in sediment would not exceed human health or environmental threshold levels (Padre Associates 2017) (see Chapter 12, “Hazards and Hazardous Materials” for additional details). State Parks would obtain a CWA Section 404 permit from the U.S. Army Corps of Engineers (USACE), CWA Section 401 Clean water certification from the Central Coast RWQCB, and a Fish & Game Code Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) for repeated installation and removal of the Pismo Creek Estuary Seasonal (Floating) Bridge Installation and for work associated Oso Flaco Lake Boardwalk Replacement Project. These permits would contain site-specific provisions to protect water quality, such as requiring the use of a turbidity curtain, minimizing the disturbance area, staging construction equipment and materials away from water in upland areas, and implementing the required BMPs and Spill Prevention Plan associated with the SWPPP (discussed further below).

Several existing regulations would apply to development within the PWP planning area that would reduce or avoid impacts related to short-term and long-term erosion, sedimentation, and water quality degradation. The SWRCB requires implementation of BMPs where a discharge has the potential to cause or contribute to pollution or contamination of stormwater, an existing storm drainage system, or receiving waters. Receiving waters include both groundwater and surface water. Groundwater quality can be affected either by direct contact during construction-related earthmoving activities, or by indirect contact as a result of percolation of stormwater. Earthmoving activities that could encounter groundwater are issued WDRs by the Central Coast RWQCB through the project-specific permitting process; the WDRs contain provisions that are specifically intended to protect groundwater quality. Protection of surface water and groundwater quality from stormwater runoff and percolation is accomplished through compliance with the SWRCB’s *Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems* (Phase II Small MS4 General Permit), Water Quality Order No. 2013-0001-DWQ,

NPDES General Permit No. CAS000004 (SWRCB 2013). Under the MS4 Phase II General Permit for stormwater discharge, State Parks is required to develop, administer, implement, and enforce a Storm Water Management Plan (discussed below) to protect and improve stormwater quality.

The *Stormwater Management Plan for Oceano Dunes State Vehicular Recreation Area and Pismo State Beach* (California State Parks 2019) includes provisions related to the following components as required by SWRCB:

- Pollution Prevention of Stormwater and Non-Stormwater Runoff
- Education and Outreach Program
- Public Involvement and Participation Program
- Illicit Discharge Detection and Elimination Program
- Construction Site Runoff Control Program
- Pollution Prevention/Good Housekeeping Program
- Post-Construction Stormwater Management Program
- TMDL Compliance Requirements
- Annual Reporting Requirements

The Stormwater Management Plan requires implementation of Best Management Practices (BMPs) to protect water quality and beneficial uses of receiving waters as designated in the Basin Plan. It should be noted that the Oceano Dunes District (which includes both Pismo State Beach and the Oceano Dunes SVRA) is not currently named as a pollutant source in existing TMDLs for the Basin Plan (California State Parks 2019).

On April 7, 2015, the SWRCB adopted an amendment to the *Water Quality Control Plan for the Ocean Waters of California to Control Trash and Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (together, referred to as the Trash Amendments) (SWRCB 2015). The Trash Amendments apply to all Phase I and II permittees that are subject to the NPDES MS4 permits, including California State Parks in the PWP planning area.

All regulated State Parks projects that create and/or replace 5,000 square feet or more of impervious surface are required to implement site design, source control, runoff reduction, stormwater treatment, and baseline hydromodification management to the extent feasible. The implementation of Low Impact Development (LID) measures will also be evaluated for feasibility. Specific details related to required design, stormwater runoff calculation and storage/detention, treatment methods, and LID features are contained in the Stormwater Management Plan. Written conditions or other legally enforceable agreements or mechanisms are also required to ensure that post-construction BMPs are operated and maintained to function as designed (California State Parks 2019).

Municipal facilities such as the Corporation Yard require appropriate NPDES permits/WDRs, and implementation of BMPs consistent with the CASQA *Municipal Stormwater BMP Handbook* (CASQA 2004) or its equivalent, including annual reporting of any structural control measures and treatment systems.

Construction projects that disturb more than 1 acre of land must comply with the requirements in the National Pollutant Discharge Elimination System (NPDES) *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) [Construction General Permit]. Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality. The Construction General Permit contains a numeric, two-part, risk-based analysis process. It also identifies the need to address changes in the hydrograph, defined as hydrograph modification or hydromodification, which could result from urbanization of a watershed, and requires LID controls to more closely mimic the pre-developed hydrologic condition. The Construction General Permit requires preparation of a SWPPP and implementation of associated BMPs that are specifically designed to reduce construction-related erosion. The Construction General Plan also requires preparation of a Spill Prevention Plan designed to minimize the potential for spills of hazardous materials, and including procedures for prompt cleanup if spills do occur. Construction techniques that could be implemented to reduce the potential for stormwater runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. BMPs that could be implemented to reduce erosion may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers, and re-seeding and mulching to revegetate disturbed areas.

State Parks staff, along with outside contractors and subcontractors, are required to comply with the Construction General Permit and implement appropriate BMPs as required by the SWPPP prepared for site-specific projects. In addition, State Parks developed and implements a program to prevent construction site discharges. An inspection program is also implemented by Oceano Dunes District staff using a Construction Site Management Program Checklist (California State Parks 2019).

The BMP Manual (California State Parks 2007) provides the methods necessary for Oceano Dunes District staff to minimize the impacts of erosion, sedimentation and other non-stormwater pollutants related to OHV trails and other improvements. The BMP Manual includes measures that minimize or eliminate the effects of soil erosion and sedimentation due to stormwater and non-stormwater discharges. The BMP Manual includes a variety of site-specific practices including measures that are designed to prevent erosion; provide surface stabilization; control dust track out, runoff, and sediment; ensure proper design of roads and trails; provide for restoration and rehabilitation; along with measures developed specifically for park operations and maintenance.

All of the site-specific projects within the PWP planning area are required to adhere to the SWRCB's NDPES Construction General Permit requirements and the Phase II MS4 Permit requirement, along with the State Parks Storm Water Management Plan and BMP Manual requirements related to stormwater management and discharge and control. Compliance with these existing laws, regulations, and plans would serve to minimize both short-

term water quality impacts from construction (at all of the Proposed Development Projects and Small Development Projects) and long-term water quality impacts associated with new development (at the Oso Flaco Improvement Project and Phillips 66/Southern Entrance Project) in order to protect beneficial uses of receiving waters as designated in the Basin Plan and comply with WDRs issued to meet TMDLs established by the Central Coast RWQCB. Therefore, this impact is considered **less than significant**.

Mitigation Measure: No mitigation is required.

Impact 13-2 Substantially Deplete Groundwater Supplies or Substantially Interfere with Groundwater Recharge such that Sustainable Groundwater Management of the Basin would be Impeded

Groundwater Recharge

The Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Pismo State Beach Boardwalk Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Trash Enclosure Project, Safety and Education Center Replacement Project, 40 Acre Riding Trail Project, and Oso Flaco Lake Boardwalk Replacement Project consist primarily of improvements and upgrades to existing facilities. Furthermore, rainfall would still percolate through the cracks between the boards in the boardwalks, as well as through the soil at the 40 Acre Riding Trail Project. Therefore, these site-specific projects would have a **no impact** related to interference with groundwater recharge.

As discussed in Chapter 10, "Geology, Soils, and Paleontological Resources," NRCS soil survey data indicate that soils at the Oso Flaco Improvement Project consist primarily of sandy loam, and soils at the Phillips 66/Southern Entrance Project consist of Dune land and Oceano sand. All of these soils have a moderately high to high permeability rate, which means that rainwater and landscape irrigation water can easily penetrate through the soil to recharge the groundwater aquifer. Most of the land surface at the Oso Flaco Improvement Project and Phillips 66/Southern Entrance Project sites would not be covered with impervious surfaces; therefore, most of these 215-acre and 890-acre sites, respectively, would continue to be available for rainfall to percolate through the soil and recharge the groundwater aquifer. In addition, some of the landscape irrigation water would also likely percolate through the soil for recharge. Because most of the Oso Flaco Improvement Project and the Phillips 66/Southern Entrance Project sites would still be available for rainfall to recharge the aquifer, these projects would not interfere substantially with groundwater recharge such that sustainable groundwater management of the basin would be impeded. Therefore, impacts related to groundwater recharge would be **less than significant.**

Groundwater Supplies

The Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Pismo State Beach Boardwalk Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Trash Enclosure Project, Safety and Education Center Replacement Project, 40 Acre Riding Trail Project, and Oso Flaco Lake Boardwalk Replacement Project would result in either no increases in water use

or only very minor increases. No new groundwater wells would be necessary for these projects, and therefore these site-specific projects would have **no impact** related to depletion of groundwater supplies or potential conflicts with or obstruction of sustainable groundwater management of the basin.

Oso Flaco and Phillips 66

The PWP planning area is located in the Santa Maria Groundwater Basin, which has been designated by DWR as a very low priority groundwater basin (DWR 2019). Therefore, a GSP is not required and has not been prepared. However, the groundwater basin management areas are required by the court as part of the Stipulation and Judgment to develop the technical bases for sustainable management of the surface and groundwater supplies, and to provide yearly reports to DWR.

A new groundwater well would be required at both the Oso Flaco Improvement Project site and the Phillips 66/Southern Entrance Project site to supply potable water and non-potable irrigation water. (Although Phillips 66 currently has a groundwater well that supplies water for use at the Santa Maria Refinery, there is a contaminated groundwater plume at the site. In order to avoid potential impacts, a new groundwater well to serve the proposed project may be required be required in a different location on the Phillips 66/Southern Entrance Project site, as discussed in detail in Section 12, "Hazards and Hazardous Materials," Impact 12-2.)

Groundwater management in the adjudicated portion of the Santa Maria Basin, where the PWP planning area is located, is split into three areas. The Oso Flaco Improvement Project is in the SMVMA, where the total amount of groundwater extracted in 2019 was 109,937 afy; nearly all of this groundwater was for agricultural use (DWR 2020b). The Phillips 66/Southern Entrance Project is in the NMMA, where the total amount of groundwater extracted in 2019 was 11,397 afy, of which 5,027 afy was for agricultural use and 6,370 afy was for urban/industrial use (NMMA Technical Group 2020).

The Oso Flaco Improvement Project (at full buildout) would have 200 full hookup RV sites, 100 tent sites, 20 rental cabins, campground restroom/shower buildings, plus additional facilities that would require water consisting of a lifeguard tower, concession, park general purpose building, facilities and maintenance building, office for lifeguards and rangers, staff residences, entrance kiosk, environmental education center, and wash water for a park maintenance area, along with landscape irrigation. The Oso Flaco Improvement Project is estimated to require approximately 233.6 afy of groundwater. The Oso Flaco Improvement Project site is currently leased by State Parks for agricultural use (i.e., row crops grown on 166 acres). Actual groundwater usage data for the agricultural field at the Oso Flaco Improvement Project site is not available; however, implementing the Oso Flaco Improvement Project would likely result in a net reduction in groundwater use as compared to the existing agricultural use for irrigation of row crops (i.e., using a water demand factor of 2.5 afy per acre of rotational vegetables [Luhdorff and Scalmanini 2019], the existing agricultural water usage at the project site likely averages approximately 415 afy). The groundwater used to support the Oso Flaco Improvement Project (233.6 afy) would represent approximately 0.21% of the total groundwater extracted in the SMVMA. Therefore, the impact of the Oso Flaco Improvement Project related to increased need for groundwater supplies and potential conflicts with groundwater sustainability is considered **less than significant.**

The Phillips 66/Southern Entrance Project (at full buildout) would have 225 full hookup RV sites, 50 tent sites, 20 cabins, campground restroom/shower buildings staff residences, environmental training center, concession, visitor center, ranger station, and entrance kiosk. The Phillips 66/Southern Entrance Project is estimated to require a similar amount of water as the Oso Flaco Improvement Project, including landscape irrigation (233.6 afy). However, the existing Phillips 66 Santa Maria Refinery is already using 1,100 afy for its facility (NMMA Technical Group 2020), and this water would transfer over to State Parks for use at the Phillips 66/Southern Entrance Project. Therefore, no additional groundwater supplies from the NMMA would be required to serve the Phillips 66/Southern Entrance Project, and the current groundwater usage at this site would be reduced by 866.4 afy.

The total annual groundwater extracted from the adjudicated portion of the Santa Maria Basin (which comprises nearly the entire basin) is approximately 124,678 afy (DWR 2019). The amount of new groundwater extraction necessary to serve the Oso Flaco Improvement Project and the Phillips 66/Southern Entrance Project (467.2 afy combined) would represent an annual reduction in groundwater usage as compared to current conditions (approximately 1,515 afy)..

As noted above in the Environmental Setting, the NMMA (which includes the Phillips 66/Southern Entrance Project site) continues to experience a severe water shortage as evidenced by declining well levels. The Stipulation and Judgment for the Santa Maria Groundwater Litigation (Lead Case No. 1-97-CV-770214), Section VI.E.5, states that all new urban uses shall provide a source of supplemental water to offset the water demand associated with the development. Currently, the only source of supplemental water dedicated to new urban uses is the 800 afy of capacity that NCSD added via the Nipomo Supplemental Water Project, which is scheduled to increase to 3,000 afy by 2026. In September 2015, San Luis Obispo County adopted Ordinance 3307 which allows new urban development within the NMMA without imposing a requirement that the development project offset its water demand with a source of supplemental water. Instead, Ordinance 3307 requires the project proponent to offset the estimated new water demand of the project through a form of demand offset approved by the County (e.g., plumbing retrofit or participation in a County approved conservation program) (NMMA Technical Group 2020). However, as discussed above, the Phillips 66/Southern Entrance Project could require up to 233.6 afy of groundwater, which would substantially reduce the yearly amount of groundwater extracted in the NMMA by 866.4 afy as compared to 2019 conditions. Therefore, the Phillips 66/Southern Entrance Project would not substantially deplete groundwater supplies such that sustainable groundwater management of the basin would be impeded. This impact is considered **less than significant.**

Mitigation Measure: No mitigation is required.

Impact 13-3 Substantial Alteration of Drainage Patterns Resulting in Substantially Increased Erosion, Siltation, Downstream Flooding, or Increased Stormwater Runoff Volumes that would Exceed Stormwater Drainage Capacity

The North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, and Safety and Education Center Replacement Project involve improvements to existing facilities. These site-specific projects, along with the Trash Enclosure Project and the 40 Acre Riding Trail Project, would not result in

substantial alteration of existing drainage patterns; and would not result in a substantial increase in impervious surfaces that would increase stormwater runoff, which could in turn result in increased flooding or exceed existing stormwater drainage capacity. Furthermore, all site-specific projects that disturb more than 1 acre of land are required by law to prepare and implement a SWPPP with associated BMPs that are specifically designed to prevent erosion and siltation. Finally, all site-specific projects are required by law to be designed and operated according to the specific requirements contained in the *Stormwater Management Plan for Oceano Dunes State Vehicular Recreation Area and Pismo State Beach* (California State Parks 2019), as discussed in detail in Impact 13-1.

The Pismo State Beach Boardwalk Project would result in development of new visitor amenity—a boardwalk through the sand dunes with viewing platforms. The boardwalk and viewing platforms would be situated slightly above the sand, with anchors to hold them place, and bridge structures would be constructed across low-lying riding areas to allow the passage of Park maintenance vehicles, pedestrians and horseback riders underneath. The boardwalk would be installed between Grand Avenue and Pier Avenue. The Pismo Creek Estuary Seasonal (Floating) Bridge Installation would result in a seasonal floating bridge installed across the mouth of Pismo Creek to reduce bank erosion from visitors walking to the beach. The Oso Flaco Lake Boardwalk Replacement Project would replace the existing aging boardwalk over the lake with a structure of a similar size. As described in detail in Impact 13-1, all site-specific projects that disturb more than 1 acre of land are required by law to prepare and implement a SWPPP with associated BMPs that are specifically designed to prevent erosion and siltation. Furthermore, all site-specific projects are required by law to be designed and operated according to the specific requirements contained in the *Stormwater Management Plan for Oceano Dunes State Vehicular Recreation Area and Pismo State Beach* (California State Parks 2019). Construction and operation of the boardwalks and floating bridge would not increase the amount of impervious surfaces, because rainwater would continue to flow through to the sand via cracks between the boards. The Pismo Creek Estuary Seasonal (Floating) Bridge Installation would be removed seasonally to ensure that flooding does not occur. Thus, there would be no increase in the amount of stormwater runoff, and there would be no related increase in flooding or exceedance in existing stormwater drainage capacity.

The Oso Flaco Improvement Project and the Phillips 66/Southern Entrance Project would require grading, excavation, and earthmoving activities associated with construction of new campgrounds, buildings, other park facilities, and underground utilities over a large area. Earthmoving activities could alter existing drainage patterns and would result in an increase in impervious surfaces as compared to existing undeveloped conditions. The increased impervious surfaces would result in additional stormwater runoff, that could contribute to increased pollutant transport to downstream waterbodies, increased erosion, as well as downstream flooding conditions in Oso Flaco Lake and/or Oso Flaco Creek. Project designs are conceptual at this stage, and therefore the final calculations related to stormwater volume, rate, and design of on-site stormwater infrastructure, any necessary site-specific detention facilities and stormwater pre-treatment features have not been performed. However, as described in detail in Impact 13-1, all facilities in the PWP planning area must be designed according to the requirements in the *Stormwater Management Plan for Oceano Dunes State Vehicular Recreation Area and Pismo State Beach* (California State Parks 2019). The Stormwater Management Plan contains the specific formulas for calculating stormwater runoff volumes and rates, along with the types of facilities that can be designed and installed to appropriately detain and meter flows prior to discharge. The Stormwater

Management Plan also requires implementation of site-specific BMPs to protect water quality and beneficial uses of receiving waters as designated in the Basin Plan. The Stormwater Management Plan includes the required use of State Parks' BMP Manual (California State Parks 2007), which provides the methods necessary for Oceano Dunes District staff to minimize the impacts of erosion, sedimentation, and other non-stormwater pollutants. The BMP Manual, which applies primarily to OHV trails, includes measures that minimize or eliminate the effects of soil erosion and sedimentation due to stormwater and non-stormwater discharges. The BMP Manual, which applies primarily to OHV trails, includes a variety of site-specific practices including measures that are designed to prevent erosion; provide surface stabilization; control dust trackout, runoff, and sediment; and ensure proper design of trails. Compliance with SWRCB's NDPES Construction General Permit requirements and the Phase II MS4 Permit requirement, along with the State Parks Storm Water Management Plan and BMP Manual requirements related to stormwater management and discharge and control, would minimize both short-term impacts from construction and long-term impacts associated with new development. Any necessary basins for control of stormwater volume, rate, and pre-treatment would be designed for short-term detention rather than long-term retention (to ensure that new habitat for waterfowl that could result in birdstrike hazards at the Oceano County Airport would not occur); please see also Impact 12-3 in Chapter 12, "Hazards and Hazardous Materials"). Therefore, the Oso Flaco Improvement Project and Phillips 66/Southern Entrance Project would not result in substantially increased erosion, siltation, or exceedance of stormwater drainage capacity, and would not create new flood conditions as a result of stormwater runoff, and this impact is considered **less than significant**.

Mitigation Measure: No mitigation is required.

Impact 13-4 Impede Flood Flows or Risk Release of Pollutants from Inundation in a Flood or Tsunami Hazard Zone

The Phillips 66/Southern Entrance Project and the 40 Acre Trail Riding Project are not located in a flood hazard zone or a tsunami inundation zone. Thus, there is no potential for these two site-specific projects to impede flood flows or result in the release of pollutants stored on site from flooding during the construction or operational phase. Therefore, there would be **no impact** from implementation of the Phillips 66/Southern Entrance Project or the 40 Acre Trail Riding Project.

The Oso Flaco Improvement Project (aside from the proposed trail around Little Oso Flaco Lake) is not located in a flood hazard zone, but most of the project site, along with the Oso Flaco Lake Boardwalk Replacement Project, is located in a tsunami inundation zone (CGS 2020). All of the other site-specific projects (Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Pismo State Beach Boardwalk Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Trash Enclosure Project, and Safety and Education Center Replacement Project) are located in both a flood hazard zone and a tsunami inundation zone (FEMA 2017, CGS 2020).

As discussed in the Environmental Setting, all of Pismo State Beach, along with those portions of the Oceano Dunes SVRA that are along the beach adjacent to the ocean, are already within flood hazard and tsunami inundation zones. Therefore, implementation of the

North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Trash Enclosure Project, and Safety and Education Center Replacement Project—which consist of improvements at existing facilities—would not subject additional people or the environment to new or substantially greater impacts from inundation or impede flood flows as compared to existing conditions. Similarly, beach and dune use is already occurring within Pismo State Beach, and therefore implementation of the Pismo State Beach Boardwalk Project would also not subject additional people or the environment to new or substantially greater impacts from inundation as compared to existing conditions. The Pismo Creek Estuary Seasonal (Floating) Bridge Installation would be removed seasonally to ensure that additional flooding hazards do not occur from reducing the size of the flood flow channel.

Most of the Oso Flaco Improvement Project site campgrounds and facilities, and the Oso Flaco Lake Boardwalk Replacement Project, would be developed in a tsunami inundation zone, which is common in low-lying areas along the Pacific Ocean. The National Oceanic and Atmospheric Administration (NOAA) operates warning centers that track earthquakes or landslides that have the potential to trigger a tsunami in the Pacific Ocean. Tsunami-generating incidents can be detected, pinpointed, and the magnitude computed within 2–12 minutes depending on the distance from the warning center. The Governor's Office of Emergency Services (OES) and the National Weather Service, in cooperation with the West Coast/Alaska Tsunami Warning Center operated by NOAA, distribute tsunami information to law enforcement, public safety organizations, and the media. San Luis Obispo County also distributes tsunami information to local law enforcement, public safety organizations, and the media. Additionally, the County can activate strategic coastal warning sirens to alert the public to tune in to local radio and television stations for emergency information. The County can also provide tsunami warnings by activating the Emergency Alert System (San Luis Obispo County Office of Emergency Services 2016). In the event of a tsunami hazard, State Parks would coordinate with the State OES, the County OES, and local law enforcement to provide notification to park staff and visitors, and to provide for orderly evacuation out of the park eastward along Oso Flaco Lake Road, and thence to SR 1.

During construction activities, construction materials and equipment would be staged within each site-specific project site. Small quantities of hazardous materials such as fuels, oils, lubricants, and paint would be temporarily stored within each staging area. Most project-related work would occur during the spring, summer, and fall. If construction work is necessary during the winter rainy season, State Parks would require construction contractors to remove any hazardous materials from staging areas if flood warnings are issued.

For the reasons described above, the Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Trash Enclosure Project, Safety and Education Center Replacement Project, Oso Flaco Lake Boardwalk Replacement Project, and Oso Flaco Improvement Project would result in **less-than-significant** impacts related to inundation and release of pollutants or impedance of flood flows.

Mitigation Measure: No mitigation is required.

Impact 13-5 Conflict with or Obstruct Implementation of a Water Quality Control Plan or Sustainable Groundwater Management Plan

Surface Water

As discussed in detail in Impact 13-1, all of the site-specific projects within the PWP planning area are required to implement the SWRCB's NDPES Construction General Permit requirements and the Phase II MS4 Permit requirement, and the State Parks Storm Water Management Plan and BMP Manual requirements, related to stormwater management and discharge and control. In addition, State Parks is required to obtain CWA Section 404 permit from the USACE, CWA Section 401 Clean water certification from the Central Coast RWQCB, and a Fish & Game Code Section 1602 Streambed Alteration Agreement from CDFW for repeated installation and removal of the Pismo Creek Estuary Seasonal (Floating) Bridge Installation and for work associated Oso Flaco Lake Boardwalk Replacement Project. These permits would contain site-specific provisions to protect water quality, such as requiring the use of a turbidity curtain, minimizing the disturbance area, staging construction equipment and materials away from water in upland areas, and implementing the required BMPs and Spill Prevention Plan associated with the SWPPP. Compliance with these existing laws, regulations, and plans would serve to minimize both short-term water quality impacts from construction (at all of the site-specific projects) and long-term water quality impacts associated with new development (at the Oso Flaco Improvement Project and Phillips 66/Southern Entrance Project) in order to protect beneficial uses of receiving waters as designated in the Basin Plan and comply with WDRs issued to meet TMDLs established by the Central Coast RWQCB. Therefore, the site-specific projects within the PWP planning area would not conflict with or obstruct implementation of the Basin Plan, and this impact is considered **less than significant**.

Groundwater

The Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Pismo State Beach Boardwalk Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Trash Enclosure Project, Safety and Education Center Replacement Project, 40 Acre Riding Trail Project, and Oso Flaco Lake Boardwalk Replacement Project, would result in either no increases in water use or only very minor increases. No new groundwater wells would be necessary for these projects, and therefore these site-specific projects would have **no impact** related to potential conflicts with or obstruction of implementation of sustainable groundwater planning.

The PWP planning area is located with the Santa Maria Groundwater Basin, which has been designated by DWR as a very low priority groundwater basin. Therefore, a GSP is not required and has not been prepared. However, the groundwater basin management areas are required by the court as part of the Stipulation and Judgment to develop the technical bases for sustainable management of the surface and groundwater supplies, and to provide yearly reports to DWR. As discussed in detail in Impact 13-2, the extraction of additional groundwater that would be necessary to support the Oso Flaco Improvement Project (233.6 afy) would result in a net decrease of groundwater extraction in the SMVMA as compared to existing (2019) conditions,since approximately 166 acres of agricultural irrigation for row crops (estimated annual groundwater use of 415 afy) would no longer occur. Annual

extraction of groundwater in the NMMA to support the Phillips 66/Southern Entrance Project (233.6 afy) would also be reduced as compared to 2019 conditions, since the Santa Maria refinery currently extracts substantially more water than would be needed for the proposed project. Therefore, the groundwater required to supply the Oso Flaco Improvement Project and the Phillips 66/Southern Entrance Project would not substantially decrease groundwater supplies in the basin and would not interfere with sustainable groundwater basin management. This impact is considered **less than significant.**

Mitigation Measure: No mitigation is required.

13.4 Cumulative Impacts

13.4.1 Water Quality, Erosion, and Conflicts with Water Quality Planning

Earthmoving activities associated with the projects considered in this cumulative analysis, as well as the PWP, have the potential to increase erosion and for accidental spills of hazardous materials during construction. During winter storm events, disturbed soils and hazardous materials could be transported to downstream receiving water bodies, resulting in degradation of water quality from sedimentation and materials such as fuels, lubricants, and paints. This could degrade water quality due to an increase in impervious surfaces from new development (which would increase the amount of stormwater runoff) and handling of hazardous materials (which could contaminate the stormwater runoff). Increases in stormwater runoff could cause downstream erosion, sedimentation, and increase turbidity in receiving waters, depending on waterway conditions. Contaminated stormwater runoff would result in increased pollutant loading due to contact with petroleum and other contaminants deposited on impervious surfaces. Construction activities would involve grading and movement of earth, as well as a limited amount of in-water work, which could result in soil erosion and stormwater discharges of suspended solids, increased turbidity, and potential mobilization of other pollutants from project-related construction sites. Project applicants that disturb more than 1 acre of land must prepare SWPPPs and implement BMPs that are consistent with Central Coast RWQCB requirements as part of the NPDES Construction General Permit. In addition, all State Parks projects must be implemented in compliance with the Stormwater Management Plan (California State Parks 2020), which contains specific requirements for design and construction of construction and operational stormwater control and quality facilities. State Parks is required to obtain CWA permits for in-water work that would contain site-specific measures to protect water quality. Other private development and City and County agency projects must comply with local agency Stormwater Management Plans, and may also be required to obtain CWA permits, that also contain contains specific requirements for design and implementation of construction and operational stormwater control and quality facilities. Implementation of these regulatory requirements would substantially reduce construction and operational erosion and water quality impacts in compliance with the *Water Quality Control Plan for the Central Coastal Basin* (Central Coast RWQCB 2019). Therefore, construction and operation-related impacts from erosion and water quality and potential conflicts with a water quality control plan from implementation of the PWP and the other projects considered in this cumulative analysis would be cumulatively **less than significant.**

13.4.2 Stormwater Drainage Systems, Pollutant Transport, and Flooding

The projects considered in this cumulative analysis, along with the PWP, could substantially alter drainage courses and runoff patterns from existing conditions. Compacting soils and constructing impervious surfaces can reduce the net amount of

infiltration of rainwater into the soil, thereby increasing runoff rates and volumes, which can result in exceedance of stormwater drainage facilities and localized or downstream flooding. Increased impervious surfaces can also result in additional transport of urban pollutants in stormwater runoff. Furthermore, the PWP, and some of the projects considered in this cumulative analysis, would be located in flood hazard zones and tsunami inundation zones, which could also result in pollutant transport. All PWP projects are required to comply with the State Parks Stormwater Management Plan (California State Parks 2020), to reduce the rate of post-construction runoff and control urban runoff pollution in compliance with the statewide Phase II MS4 General Permit (SWRCB 2013) through the incorporation of BMPs, LID, and hydromodification management techniques. Other private development and City and County agency projects must also comply with local agency Stormwater Management Plans that also contain specific requirements for design and implementation of construction and operational stormwater control and quality facilities in compliance with regional and statewide MS4 permits. Therefore, the impacts of PWP implementation related to alteration of drainages such that stormwater drainage system capacity would be exceeded, increased pollutant transport, and downstream flooding, when considered in combination with the projects considered in this cumulative analysis, would be cumulatively **less-than-significant**.

13.4.3 Groundwater Recharge, Groundwater Supplies, and Conflicts with Groundwater Sustainability Plans

The Pismo Creek Estuary Seasonal (Floating) Bridge Installation, North Beach Campground Facility Improvements Project, Butterfly Grove Public Access Project, Pier and Grand Avenue Entrances and Lifeguard Towers Project, Pismo State Beach Boardwalk Project, Park Corporation Yard Improvement Project, Oceano Campground Infrastructure Improvement Project, Oceano Campground Campfire Replacement Project, Trash Enclosure Project, Safety and Education Center Replacement Project, 40 Acre Riding Trail Project, and Oso Flaco Lake Boardwalk Replacement Project, would result in either no increases in water use or only very minor increases. Furthermore, these projects generally involve replacement of existing facilities, and therefore do not include new impervious surfaces that could impede groundwater recharge. No new groundwater wells would be necessary for these projects. Therefore, these site-specific projects would have **no impact** related to substantial loss of groundwater recharge, substantial new groundwater supplies, or potential conflicts with or obstruction of implementation of sustainable groundwater planning.

The cumulative development projects, such as Nipomo Woodlands, have and will continue to reduce groundwater recharge in the basin because these sites are almost entirely covered with pavement and buildings as a result of proposed development. Therefore, the cumulative projects could result in a significant impact. The new PWP development at Oso Flaco and Phillips 66 would not substantially reduce groundwater recharge because most of the Oso Flaco Improvement Project and the Phillips 66/Southern Entrance Project sites would not be covered with impervious surfaces, and therefore most of these 215-acre and 890-acre sites would still be available for rainfall to recharge the aquifer. Therefore, implementation of the Oso Flaco Improvement Project and the Phillips 66/Southern Entrance Project would result in a **less-than-significant** cumulative impact from reduction in groundwater recharge.

Water supply for the PWP and the projects considered in this cumulative analysis would be provided through a combination of surface water and groundwater. A new groundwater well would be required for both the Oso Flaco Improvement Project and the Phillips 66/Southern Entrance Project. The Santa Maria Groundwater Basin has been

designated as a very low priority basin and therefore is not required to adopt a GSP, and no GSP has been prepared or is planned. However, the groundwater basin management areas are required by the court as part of the Stipulation and Judgment to develop the technical bases for sustainable management of the surface and groundwater supplies, and to provide yearly reports to DWR. The cumulative development projects, such as Nipomo Woodlands, have and will continue to reduce groundwater supplies in the Santa Maria Basin. Therefore, the cumulative development projects could result in a significant impact. As discussed in detail in Impact 13-2, the extraction of groundwater that would be necessary to support the Oso Flaco Improvement Project and/or the Phillips 66/Southern Entrance Project would result in a reduction of groundwater usage as compared to current conditions, and therefore would not substantially decrease groundwater supplies in the basin and would not interfere with sustainable groundwater basin management. Therefore, the cumulative contribution of the Oso Flaco Improvement Project and/or the Phillips 66/Southern Entrance Project to a decrease in regional groundwater supplies and conflicts with sustainable groundwater management is considered **cumulatively less than significant**.

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