

## 4.9 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Pacifica Project (project or proposed project) in the City of Oceanside (City). The following analysis is based on the Drainage Study and Storm Water Quality Management Plan (SWQMP) that were prepared for the project by Hunsaker and Associates in 2023. The Drainage Study is included as Appendix H to this environmental impact report (EIR), and the SWQMP is included as Appendix I to this EIR.

### 4.9.1 Existing Conditions

#### Hydrologic Setting

The project site is located within the San Luis Rey Hydrologic Unit (903), within the Lower San Luis Hydrologic Area (903.1) and the Mission Hydrologic Sub-Area (903.11) of the Water Quality Control Plan for the San Diego Basin (California Regional Water Quality Control Board 2021). The major surface waterbodies in the vicinity of the project are Libby Lake and the San Luis Rey River, which flows east to west. The portion of the San Luis Rey River southeast of the project site flows approximately 6 miles until its confluence with the Pacific Ocean. Within this Hydrologic Sub-Area, downstream impaired Section 303(d) listed water bodies include the Pacific Ocean Shoreline and San lower Luis Rey River. The technical analysis identifies potential groundwater at a depth greater than 20 feet below the ground surface. Based on the Geotechnical Investigation Report prepared for the project, groundwater was found at depths of 45 feet below ground surface (Appendix E).

In existing conditions, the project site is currently vacant and was previously the site of the former Pacifica Elementary School. On-site runoff from the northeastern portion of the site drains in a southwest direction and is then captured via existing grate inlets and routed to the existing 24-inch storm drain. The existing 24-inch storm drain runs across the site in a southwesterly direction carrying flows (along with bypassed off-site flows coming from Macario Drive) to a discharge location in an existing channel. Runoff from the rest of the site is conveyed via surface flow in a southwest direction toward the discharge point.

#### Surface Water Quality

The San Luis Rey River is listed on the State Water Resources Control Board (SWRCB) 303(d) list of impaired water bodies, as shown below in Table 4.9-1. Under Section 303(d) of the Clean Water Act (CWA), states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point-source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants as a means to alleviate the impairments within water bodies' surface water.

**Table 4.9-1. Downstream Water Quality Impairments**

Water Body	Impairments	TMDLs
San Luis Rey River	Chloride	N/A
	Phosphorus	N/A
	Indicator Bacteria	Bacteria
	Toxicity	N/A
	Nitrogen	N/A
	Benthic Community Effect	N/A
	Bifenthrin	N/A
Pacific Ocean Shoreline, San Luis Rey HU at San Luis Rey River Outlet	Indicator Bacteria	Bacteria

**Source:** Appendix I.

**Note:** TMDL = total maximum daily load; N/A = not applicable; HU = hydrologic unit.

## Groundwater

Based on the Geotechnical Investigation Report prepared for the project, groundwater was found at depths of 45 feet below ground surface (Appendix E). Groundwater is not anticipated to impact the project.

## Flood Zone

The project site is not located within flood zone designated by the Federal Emergency Management Agency, as indicated in the Flood Insurance Rate Map for the area (Map No. 06073C0468H).

## Tsunami Inundation

The project site does not lie within the tsunami inundation area for the City of Oceanside (CalEMA 2009).

## 4.9.2 Regulatory Setting

### Federal

#### Clean Water Act

The U.S. Environmental Protection Agency (EPA) regulates water quality under the CWA (also known as the federal Water Pollution Control Act). Enacted in 1972, and significantly amended in subsequent years, the CWA is designed to restore and maintain the chemical, physical, and biological integrity of waters of the United States. The CWA provides the legal framework for several water quality regulations, including the National Pollutant Discharge Elimination System (NPDES). The NPDES program characterizes receiving water, identifies harmful constituents, targets potential sources of pollutants, and implements a comprehensive stormwater management program. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The Regional Water Quality Control Board (RWQCB) also issues waste discharge requirements that serve as NPDES permits under the authority delegated to the RWQCBs under the CWA.

The CWA requires NPDES permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the CWA was amended to require that the EPA establish regulations for permitting of municipal and industrial stormwater discharges under the NPDES permit program. In November 1990, Phase I of the urban

runoff management strategy, the EPA published NPDES permit applicant requirements for municipal, industrial, and construction stormwater discharges. These requirements are implemented through permits issued by the SWRCB or the local RWQCB in which the project is located (California RWQCB San Diego Region, herein San Diego RWQCB) and/or the governing municipality where the project is located.

The EPA delegated its responsibility for administration of portions of the CWA to state and regional agencies. The CWA requires states to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements that represent the quality of water that supports a particular use.

### National and State Safe Drinking Water Acts

The federal Safe Drinking Water Act, established in 1974, is administered by the EPA and sets drinking water standards throughout the country. The drinking water standards established in the act, as set forth in the Code of Federal Regulations (CFR), are referred to as the National Primary Drinking Water Regulations (Primary Standards; 40 CFR 141), and the National Secondary Drinking Water Regulations (Secondary Standards; 40 CFR 143). According to the EPA, the Primary Standards are legally enforceable standards that apply to public water systems. The Secondary Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water. The EPA recommends the Secondary Standards for water systems but does not require systems to comply. California passed its own Safe Drinking Water Act in 1986 that authorizes the state's Department of Health Services to protect the public from contaminants in drinking water by establishing maximum contaminant levels (as set forth in the California Code of Regulations [CCR], Title 22, Division 4, Chapter 15) that are at least as stringent as those developed by the EPA, as required by the federal Safe Drinking Water Act.

### Federal Antidegradation Policy

The federal Antidegradation Policy (40 CCR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to this policy, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource. State permitting actions must be consistent with the federal Antidegradation Policy.

## State

### California Toxics Rule

Because of gaps in California's regulations, the EPA promulgated the California Toxics Rule (40 CCR 131.38), which established numeric water quality criteria for certain toxic substances in California surface waters. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for water bodies that are designated by the San Diego RWQCB as having beneficial uses protective of aquatic life or human health. The California Toxics Rule criteria are applicable to the receiving waters from the project site.

## Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) established the principal California legal and regulatory framework for water quality control. The Porter-Cologne Act is embodied in the California Water Code. The California Water Code authorizes the SWRCB to implement the provisions of the CWA.

California is divided into nine regions governed by RWQCBs. The RWQCBs implement and enforce provisions of the California Water Code and the CWA under the oversight of the SWQCB. The project site is located in Region 9, also known as the San Diego Region, and is governed by the San Diego RWQCB.

Each RWQCB must formulate and adopt a water quality control plan for its region. The San Diego RWQCB has adopted and periodically amends a water quality control plan titled Water Quality Control Plan for the San Diego Basin (Basin Plan). The Basin Plan must conform to the policies set forth in the Porter-Cologne Act as established by the SWQCB in its state water policy. The Porter-Cologne Act also provides the RWQCBs with authority to include within their basin plans water discharge prohibitions applicable to particular conditions, areas, or types of waste.

## Section 303(d)—Total Maximum Daily Load

The CWA requires states to publish, every 2 years, an updated list of streams and lakes that are not meeting their designated uses because of excess pollutants (i.e., impaired water bodies). The list, known as the Section 303(d) list, is based on violations of water quality standards. Once a water body has been deemed impaired, a TMDL must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (plus a margin of safety). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. Targets utilized in the TMDL do not establish new water quality objectives and are not enforceable against dischargers. Allocations made to point sources are implemented primarily through NPDES permits, particularly the region-wide NPDES Municipal Separate Storm Sewer System (MS4) permit and the General Industrial Permit and Construction General Permit. Additionally, once a TMDL is developed and adopted into a basin plan, the water body is removed from the Section 303(d) list.

States are required to submit the Section 303(d) list and TMDL priorities to the EPA for approval. The 2020-2022 Integrated Report is the current 303(d) list and was approved by the EPA on May 11, 2022.

## National Pollutant Discharge Elimination System Permits

In California, the SWRCB and its RWQCBs administer the NPDES permit program. The NPDES permits cover all construction and subsequent drainage improvements that disturb 1 acre or more, industrial activities, and municipal separate storm drain systems. Construction and industrial activities are typically regulated under statewide general permits that are issued by the SWRCB. The SWRCB also issued a statewide general small MS4 stormwater NPDES permit for public agencies that fall under that Phase II NPDES regulations.

The NPDES permit system was established in the CWA to regulate both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffused runoff of water from adjacent land uses) to surface waters of the United States. For point source discharges, each NPDES permit contains limits on allowable concentrations and mass emission of pollutants contained in the discharge. For nonpoint source discharges, the NPDES program establishes a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. The

NPDES program consists of characterizing receiving water quality, identifying harmful constituents, targeting potential sources of pollutants, and implementing a comprehensive stormwater management program.

The reduction of pollutants in urban stormwater discharge to the maximum extent practicable through the use of structural and nonstructural best management practices (BMPs) is one of the primary objectives of the water quality regulations for MS4s. BMPs typically used to manage runoff water quality include controlling roadway and parking lot contaminants by installing filters with oil and grease absorbents at storm drain inlets, cleaning parking lots on a regular basis, incorporating peak-flow reduction and infiltration features (e.g., grass swales, infiltration trenches, and grass filter strips) into landscaping, and implementing educational programs.

### Local

#### San Diego Basin Plan

The Basin Plan sets forth water quality objectives for constituents that could potentially cause an adverse effect or impact on the beneficial uses of water. Specifically, the Basin Plan is designed to accomplish the following:

- Designate beneficial uses for surface water and groundwater
- Set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy
- Describe the implementation programs to protect the beneficial uses of all waters within the region
- Describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan

The Basin Plan incorporates by reference all applicable SWRCB and RWQCB plans and policies.

#### Regional MS4 Permit

On May 8, 2013, the RWQCB approved a regional MS4 permit for San Diego, southern Orange, and southwest Riverside Counties (Order No. R9-2013-0001). Order No. R9-2013-0001 has been subsequently amended by Order Nos. R9-2015-0001 and R9-2015-0100. The region-wide NPDES Permit (commonly referred to as the Regional MS4 Permit) sets the framework for municipalities, such as the City, to implement a collaborative watershed-based approach to restore and maintain the health of surface waters. The Regional MS4 Permit requires development of Water Quality Improvement Plans (WQIPs) that will allow the City (and other watershed stakeholders) to prioritize and address pollutants through an appropriate suite of BMPs in each watershed. The MS4 Permit (Provision E.3) also requires certain development design standards for projects that create impervious surfaces in excess of certain thresholds (Priority Development Projects). These requirements are directly responsible for the implementation of the City's BMP Design Manual and codified in the City's Municipal Code.

The project lies within the San Luis Rey Watershed Management Area, and the City is one of the responsible municipalities for the watershed's WQIP. The San Luis Rey Watershed WQIP was approved by the RWQCB on February 12, 2016.

## City of Oceanside General Plan

The City of Oceanside's General Plan Community Facilities Element (City of Oceanside 2002) contains plans, policies, objectives, and goals related to stormwater system management. The overall objective for managing the City's drainage and stormwater system is:

**Objective:** To provide adequate stormwater management facilities and services for the entire community in a timely and cost-effective manner, while mitigating the environmental impacts or construction of the storm drainage system as well as stormwater runoff.

The City of Oceanside works to achieve this objective through the following nine policies:

**Policy 6.1:** The Master Drainage Plan for the City of Oceanside shall establish standards for citywide drainage. Within each major watercourse addressed by the Plan, the City and/or developers shall assure that adequate drainage improvements and facilities are provided to handle runoff when the drainage basin is fully developed to the intensity proposed by the Land Use Element of the General Plan.

**Policy 6.2:** All new development in the City of Oceanside shall pay drainage impact fees to defray the development's proportionate share of drainage facilities serving the basin where the new development is located.

**Policy 6.3:** The City shall continue to participate in the National Flood Insurance Program. Any development application for construction within the 100-year floodplain shall be reviewed to ensure that the project complies with flood protection measures required by the National Flood Insurance Program. For existing developed areas within the 100-year floodplain, these same measures and standards shall be applied if City approval of substantial improvements or upgrades is sought.

**Policy 6.4:** To the degree that it is economically feasible and consistent with sound engineering practices and maintenance criteria, the City shall discourage disruption of the natural landform and encourage the maximum use of natural drainage ways in new development. Non-structural flood protection methods, which avoid major construction programs such as channels and favor vegetative measures to protect and stabilized land areas, should be considered as an alternative to constructing concrete channels where feasible.

**Policy 6.5:** The City shall locate and/or design new critical facilities to minimize potential flood damage from the 100-year flood. Such facilities include those that provide emergency response (hospitals, fire stations, police stations, civil defense headquarters, utility lines, ambulance services, and sewage treatment plants). Such facilities also include those that do not provide emergency response but attract large numbers of people, such as schools, theaters and other public assembly facilities.

**Policy 6.6:** The City shall maintain public flood control channels and storm drains through dredging, repair, desilting, and clearing as needed to prevent any loss in effective use.

**Policy 6.7:** The City shall require appropriate and sufficient screening, fencing, landscaping, open space setbacks, or other permanent mitigation or buffering measures between drainage way corridors and adjacent and surrounding land uses. The employed measures shall be of sufficient scope to minimize,

to the maximum extent possible, negative impacts to adjacent surrounding land uses from the particular drainage way corridor.

Policy 6.8: The City of Oceanside shall integrate required drainage planning efforts with linear open space amenities and trail corridors through the community, while addressing the issues of life safety, attractive nuisances, and long-term maintenance responsibility and costs.

Policy 6.9: The City shall comply with the sections of the federal CWA in regard to stormwater drainage.

### City of Oceanside Zoning Ordinance

Article 30 of the City's Zoning Ordinance (3049 Urban Forestry Program) states that all new development that requires administrative or discretionary review shall comply with the urban forestry standards for minimum tree canopy and permeable surface area requirements. Permeable surfaces should allow water to pass through them, with pores or openings, and may include gravel, pervious concrete, porous asphalt, paving stone, or similar materials. For projects with a site area of 1 acre or more, including the project site, the minimum permeable surface area is 22% of the project site.

### City of Oceanside Municipal Code

Chapter 40 of the City of Oceanside Municipal Code is known as the Urban Runoff Management and Discharge Control Ordinance. The overall intent of this ordinance is to (City of Oceanside 2021):

...protect the health, safety, and general welfare of City residents; to protect water resources and to improve water quality; to cause the use of management practices by the City and its citizens that will reduce the adverse effects of polluted runoff discharges on waters of the state; to secure benefits from the use of storm water as a resource; and to ensure the City is compliant with applicable state and federal law.

General provisions of the Urban Management and Discharge Control Ordinance include compliance with the current and applicable RWQCB discharge permits (Order No. R9-2013-0001), requirements for discretionary approvals subject to discharge control, development of Urban Runoff Standards Manuals, and designations for permitted use of collected stormwater.

## 4.9.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to hydrology and water quality are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality would occur if the project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
3. 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 off site;
  - 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.
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
  5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

## 4.9.4 Impacts Analysis

***Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?***

### Construction

Construction activities associated with the project could result in wind and water erosion of the disturbed area leading to sediment discharges. Fuels, oils, lubricants, and other hazardous substances used during construction could be released and impact water quality. The project is required to comply with the new NPDES SWRCB Construction General Permit Order No. 2022-0057-DWQ for stormwater discharges and general construction activities and incorporate standard BMPs such as regular cleaning or sweeping of construction areas and impervious areas, and runoff controls. In compliance with the Construction General Permit Order 2022-0057-DWQ, a stormwater pollution prevention plan (SWPPP) would be prepared for the project that specifies BMPs that would be implemented during construction to minimize impacts to water quality. Construction activity subject to this permit include clearing, grading and disturbances to the ground such as stockpiling, or excavation. Compliance with the General Construction Permit, SWQMP, SWPPP, and BMPs would ensure construction-related impacts to water quality would be **less than significant**.

### Operations

In operational conditions, the 14.55-acre project site would have approximately 7.17 acres of impervious area, leaving 7.38 acres of pervious area. There would be one dedicated open space area for a biofiltration/detention basin facility (BF-1-1; Node 1) on the west side of the project site.

The proposed project would install dual storm drain systems (pipes, inlets, catch basins, brow ditches, and cleanouts). The first of the dual systems would include an 18-inch storm drain system necessary to collect and convey the 100-year runoff (on-site and comingled off-site flows) through the project site to a proposed biofiltration basin. This storm drain system would also address water quality, hydromodification, and peak flow attenuation. The second dual system would be a 24-inch bypass storm drain system, which is necessary to replace the existing 24-inch storm drain that runs through the site and conveys on-site and off-site flows to the existing western channel.

On-site runoff would be conveyed via street curb and gutter systems, to be captured by proposed inlets and routed via the proposed storm drain system to the biofiltration basin. The biofiltration basin would treat on-site and comingled off-site runoff, attenuate peak flows, and aid in addressing flow control hydromodification requirements.

Runoff from 0.8 acres of Private Drive “A” and a portion of the site would drain toward Macario Drive, where it would be captured by the proposed inlet east of the intersection of Private Drive “A” and Macario Drive. The captured flow would be routed southwesterly via the 24-inch existing storm drain and proposed bypass storm drain system to ultimately discharge into the existing western channel, similar to existing conditions. A proprietary biofiltration BMP is proposed to address the water quality requirements for this portion of runoff as outlined in the MS4 permit and the City of Oceanside BMP Design Manual dated January 2022.

Runoff from the northern and most of the southern undisturbed slopes would be routed via proposed brow ditches to enter the proposed bypassed storm drain system via catch basins. The proposed bypass storm drain system would convey these flows with the off-site flows (coming from Macario Drive) to the respected discharge point southwest of the site, where it comes together with the on-site treated flows and continues southerly to the analyzed discharge point.

The project’s source control measures would include prevention of illicit discharges, storm drain stenciling, and regular sweeping of sidewalks and parking lots. The project would be required to provide for ongoing implementation and maintenance of these features in accordance with the Operations and Maintenance Plan contained within the SWQMP. Implementation of the SWQMP, associated source control measures of the Drainage Report, and BMPs would reduce potential operational impacts related to water quality standards or waste discharge requirements to **less than significant**.

***Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***

The City’s Water Utilities Department Water Division provides potable water services to the City through operating and maintaining water treatment, distribution, and metering facilities. The Water Division purchases approximately 85% of the City’s water supply from the San Diego County Water Authority and treats it at the Robert A. Weese Filtration Plant, which is in the process of being upgraded from a capacity of 25 million gallons per day (mgd) to 37.5 mgd. Mission Basin provides for the remaining water supply through extraction and treatment at the Mission Basin Groundwater Purification Facility with a capacity of 6.4 mgd (City of Oceanside 2021).

With the exception of the City’s water supply coming from the Mission Basin Groundwater Purification Facility, the proposed project would not dig wells or directly use groundwater during construction or operation. According to the Geotechnical Investigation Report (Appendix E), groundwater was encountered 45 feet below ground surface. Although the project would result in a change in the amount of impervious groundcover on the project site, the project would include pervious features that include tree wells, landscaping throughout the site, and vegetated biofiltration basins. About 53% of the project site would be composed of permeable surface area, which is greater than the 22% minimum requirement for sites greater than 1 acre in size per Article 30 of the City’s Zoning Ordinance. Due to the proposed type of construction and surface water management, the project is not anticipated to decrease groundwater supplies or interfere with groundwater recharge in a manner that would impede sustainable groundwater management. Therefore, project impacts related to groundwater recharge would be **less than significant**.

*Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or 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 off site; (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?*

(i) During construction, the project has potential to result in exposed soils or changes in runoff that could result in erosion or siltation. This potential impact would be minimized through implementation of BMPs during construction in accordance with the 2022 Construction General Permit. As the project is larger than 1 acre in size, the project would be subject to the General Permit Order and required to prepare a SWPPP and comply with the associated BMPs. Preparation of a SWPPP and an Erosion Control Plan would also be required to obtain a grading permit for the project. Construction BMPs described in the SWPPP may include, but are not limited to, measures minimizing exposed soils, silt fencing, soil binders, street sweeping, hydroseeding soils, and using sandbags, check dams, or berms during rain events to direct flows. Surface drainage during project construction would be controlled through implementation of the SWQMP and SWPPP, and in accordance with NPDES regulations and provisions of the City's Grading and Erosion Control Ordinances.

During operations of the project, the on-site surfaces would be covered by 47% impervious area with 53% landscaped slopes and vegetated/open space areas. Figure 4.9-1, Proposed Hydrology, illustrates the proposed hydrology on site. The proposed buildings would have a drainage system to collect roof runoff, and graded and disturbed areas would be re-vegetated and landscaped to minimize erosion. Post-construction, the project site would have minimal risks of erosion occurring given property plant establishment and transport of sediments downstream would be significantly reduced by means of pretreatment and on-site biofiltration basins. As described above, the project would be subject to the post-construction structural BMPs, which would include a biofiltration basin and a proprietary biofiltration BMP and stormwater management strategies outlined in the project's Drainage Study (Appendix H) and SWQMP (Appendix I). Positive surface drainage would be provided to direct surface water on site toward the street or suitable drainage facilities, planters would be designed with provisions for drainage to the storm drain system, and surface runoff would be controlled in a manner to avoid erosion and sedimentation in accordance with regulations and the project's SWQMP. Therefore, no substantial erosion or siltation on or off site is anticipated during operation. For the reasons outlined above, neither construction nor operation of the project would result in substantial erosion or siltation on or off site, and impacts would be **less than significant**.

(ii) In existing conditions, the project site is currently vacant and was previously the site of the former Pacifica Elementary School. On-site runoff from the northeastern portion of the site drains in a southwest direction and is then captured via existing grate inlets and routed to the existing 24-inch storm drain. The existing 24-inch storm drain runs across the site in a southwesterly direction carrying flows (along with bypassed off-site flows coming from Macario Drive) to a discharge location in an existing channel. Runoff from the rest of the site is conveyed via surface flow in a southwesterly direction toward the discharge point.

The project's Drainage Study concludes that project improvements would result in an increase in peak runoff flowrate within the project site. However, to address this concern, the project proposes a biofiltration/detention basin. This basin is designed to mitigate the peak flows and ensure that they are lower than the pre-project flows, resulting in mitigated runoff levels below the existing conditions (as shown in Appendix H).

The implementation of the biofiltration/detention basin would effectively store stormwater runoff and regulate the release of flow. Additionally, the project includes the installation of landscaped areas and raised planters, which

would guide the flow toward the proposed biofiltration/detention basin for filtration and treatment before reaching the discharge point.

As a result of these drainage systems, including the biofiltration/detention basin, the total discharge from the site would be reduced to levels lower than the pre-project flows, and the water would be treated before draining into Libby Lake, the nearest receiving water.

Due to the proposed drainage systems, the project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site and the impact would be **less than significant**.

(iii) The project would result in an increase in impervious surfaces within the project site. Specifically, 53% of the project site would include impervious surfaces and 47% of the project site would include landscaped areas. Under the project, on-site areas would surface drain to the proposed bioretention basin. Flows from off-site areas that drain into the project site would be intercepted and conveyed through the project site into the project's proposed drainage system. Additional stormwater management areas include the landscaped and sloped areas along the boundaries of the site. The SWQMP includes stormwater quality measures to remove pollutants from runoff in compliance with the City's BMP Design Manual.

The existing municipal storm drain system has sufficient conveyance capacity to accept the proposed runoff from the site that would be reduced to pre-construction levels by the proposed bioretention basin. The Drainage Study calculates existing and proposed stormwater runoff conditions by reviewing time of concentration, peak intensity, and peak flowrate of stormwater. Although there would be an overall increase in runoff from the project site due to project development, with implementation of the proposed bioretention basin, on-site runoff would be less than the existing rate (Appendix H). Therefore, the project would not contribute runoff that would exceed existing capacity of storm drain facilities and impacts would be **less than significant**.

(iv) As previously discussed, although the project would result in an increase in impervious surfaces on site that would generate additional stormwater runoff, implementation of the project would utilize the same drainage points and would not substantially impede or redirect flows in comparison to existing conditions. As previously discussed, with the implementation of the proposed bioretention basin, on-site runoff would be less than under existing conditions. Due to the proposed drainage design and improvements to the existing on-site drainage, the project would not substantially impede or redirect flood flows and impacts would be **less than significant**.

***In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to project inundation?***

The project site is not located within flood zone (Map No. 06073C0468H) designated by the Federal Emergency Management Agency, as documented in the National Flood Hazard Layer map (FEMA 2023). In addition, according to the City's Tsunami Inundation Map for Emergency Planning (Oceanside Quadrangle) the project site is not located within the inundation area (CalEMA 2009). For these reasons, it is determined that because the project site is not within a flood hazard zone or subject to a tsunami, significant impacts related to the release of pollutants due to project inundation would not occur. Therefore, project impacts related to the potential release of pollutants due to project inundation would be **less than significant**.

***Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

The project site is located within the San Luis Rey Watershed WQIP area. The goal of the WQIP is to protect, preserve, enhance, and restore water quality of receiving water bodies (City of Oceanside 2016). These improvements in water quality would be accomplished through an adaptive planning and management process that identifies the highest priority water quality conditions within the watershed and identifies implementation strategies. The project is consistent with these goals by complying with the regulations, as described below.

The Sustainable Groundwater Management Act has enacted sustainable groundwater management requirements. In San Diego County, there are four basins that meet the criteria as medium priority and are subject to these requirements: Borrego Valley, San Diego River Valley, San Luis Rey Valley, and San Pasqual Valley. Currently, there is no adopted sustainable groundwater management plan applicable to the project site. The project does not involve the use or extraction of groundwater and the project would not significantly impact groundwater quality due to proposed engineering methods and regulatory compliance, as discussed above. Thus, the project would not conflict with a sustainable groundwater management plan.

The SWQMP prepared for the project was based on requirements set forth in the RWQCB's NPDES MS4 Permit that covers the San Diego Region (Order No. R9-2013-0001). The stormwater quality design was also prepared in accordance with the City's BMP Design Manual. As outlined in response to the thresholds above, the project would include appropriate BMPs to reduce water quality pollutants of concern during construction and operations. Furthermore, the project would be required to adhere to a project-specific SWPPP during construction, which would satisfy the requirements set forth by the NPDES Construction General Permit Order No. 2022-0057-DWQ. Overall, the project would comply the San Luis Rey Watershed WQIP and would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan impacts. Therefore, project impacts are determined to be **less than significant**.

## 4.9.5 Cumulative Analysis

The proposed project and cumulative projects would result in an increase of impervious surfaces in the area. More specifically, other large development projects nearby would result in conversion of large pervious areas to impervious areas. This would potentially result in increased surface runoff, alteration of the regional drainage pattern, and flooding. However, like the proposed project, each individual project applicant would be required to hydrologically engineer the respective cumulative project sites to ensure that post-development surface runoff flows can be accommodated by the regional drainage system.

The proposed project, in conjunction with other future projects, may affect water quality on a cumulative scale; however, future projects are required to comply with applicable federal, state, and City regulations for stormwater and construction discharges, including the implementation of BMPs, which would reduce cumulative impacts to water quality to a level below significance.

The proposed project would implement BMPs and project-specific measures outlined in the project-specific SWQMP and Drainage Report to reduce potential effects. The proposed project would be in compliance with state and City water quality standards. All cumulatively considered projects would be subject to the same federal water quality standards and state waste discharge requirements as the proposed project. This includes preparation of project-specific SWPPPs per the NPDES permit program and implementation of associated BMPs to prevent construction-

related runoff from polluting receiving waters. Therefore, cumulative impacts related to hydrology and water quality would be **less than significant**.

#### 4.9.6 Mitigation Measures

Impacts related to hydrology and water quality as a result of project implementation are determined to be less than significant, and therefore no mitigation measures are required.

#### 4.9.7 Level of Significance After Mitigation

No substantial impacts related to hydrology and water quality were identified; therefore, no mitigation measures are required. Impacts related to hydrology and water quality would be **less than significant**.

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# Table of Contents

<b>SECTION</b>	<b>PAGE NO.</b>
4.9 Hydrology and Water Quality.....	4.9-1
4.9.1 Existing Conditions.....	4.9-1
4.9.2 Regulatory Setting .....	4.9-2
4.9.3 Thresholds of Significance .....	4.9-7
4.9.4 Impacts Analysis .....	4.9-8
4.9.5 Cumulative Analysis.....	4.9-12
4.9.6 Mitigation Measures.....	4.9-13
4.9.7 Level of Significance After Mitigation .....	4.9-13

## **FIGURES**

4.9-1 Proposed Hydrology .....	4.9-15
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## **TABLES**

4.9-1 Downstream Water Quality Impairments.....	4.9-2
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