4.8 HYDROLOGY/WATER QUALITY

This section addresses the potential impacts that the proposed project would have on hydrology and water quality. Hydrology is addressed in terms of changes to the existing runoff volume from the site due to implementation of the project. Water quality is addressed in terms of pollutants that would be generated from project construction and operation which could result in the degradation of downstream receiving waters. Information in this section is based on the *Preliminary Storm Water Mitigation Plan* prepared by Burkett & Wong Engineers (March 2009) and the *Drainage Report for Forrester Creek Development* prepared by Chang Consultants (November 2008). These reports are included in Appendix G of the EIR.

4.8.1 EXISTING CONDITIONS

4.8.1.1 HYDROLOGY

The proposed project is located within the San Diego Hydrologic Unit (SDHU), 907.00, of the San Diego Region as defined in the San Diego Basin Water Quality Control Plan (1994), referred to as the Basin Plan. The SDHU encompasses approximately 440 square miles drained by the San Diego River. El Capitan, San Vicente, Cuyamaca, Jennings, and Murray reservoirs are the major storage facilities in the SDHU. Much of the water stored in these reservoirs serves the cities of San Diego, El Cajon, Santee, Lakeside, Alpine and Julian. The SDHU is comprised of four hydrologic areas (HAs) including Lower San Diego, San Vicente, El Capitan, and Boulder Creek. The proposed project site is located within the Lower San Diego HA. This HA is further divided into five hydrologic subareas (HSAs). The proposed project site is located within the El Cajon HSA of the Lower San Diego HA.

The project site drains in an easterly to northeasterly direction to the concrete-lined Forrester Creek drainage channel that borders the northeastern corner of the project site. The slope in the southwestern corner of the project site, adjacent to the County Operations Facility, is the highest point of the site. From this point, runoff water flows to the southeast, then to the northeast to the concrete-lined channel. A narrow drainage ditch is located in the southeastern portion of the site that directs runoff water in a northeasterly direction toward the concrete-lined channel. Another high point on the site is located in the central portion of the site. From this area, runoff flows in an easterly direction toward the Forrester Creek drainage channel.

4.8.1.2 WATER QUALITY

This section discusses the existing water quality of the runoff from the proposed project site. Runoff is a term used to describe any water that runs off of a defined area. Runoff can be the result of rain, in which case it is also sometimes referred to as stormwater. Runoff can also result from various other activities such as irrigation, washing, leaks in pipes, air conditioner condensation, and numerous other activities. When runoff is not the result of rain, it is sometimes referred to as non-stormwater. This section describes the existing water quality of the runoff that is discharged from the proposed project area as stormwater or non-stormwater.

Primary Project Area

The general hydrologic characteristics and the uses of an area have the greatest influence on runoff water quality from that area. The majority of the project site is undeveloped except for the remains of the abandoned Fletcher Hills Golf Range building and a former concrete storage facility. A small paved parking area and building that supported the driving range are located in the south-central portion of the

site. It is likely that sediments and oil and grease constitute the majority of pollutants generated on site, given the types of uses present.

Sediment is a common element found in any surface waters, including those that are unaffected by development or are in a natural state. Sediment is made up of tiny soil particles that are washed or blown into surface waters. Excessive sediment can be detrimental to aquatic life (primary producers, benthic invertebrates and fish) by interfering with photosynthesis, respiration, growth, and reproduction. The fine sediment particles can also act as a vehicle to transport other pollutants including nutrients, trace metals, and hydrocarbons. Currently, no measures exist of the project site to reduce the discharge of pollutants in runoff. However, vegetation covering most of the undeveloped portion of the site acts as a natural vegetated swale to reduce pollutants in site runoff.

Receiving Waters

Receiving waters is a general term typically used to describe any water body such as a creek, river, lake, bay, or ocean, which receives runoff. In the context of the proposed project, it refers to those water bodies that would receive runoff from the project site. As discussed above, the project site is located within the El Cajon HSA of the Lower San Diego HA of the SDHU. Therefore, the receiving waters for the proposed project area include Forrester Creek, the San Diego River, and the Pacific Ocean at the mouth of the San Diego River.

Forrester Creek

Forrester Creek is the largest drainage basin in the City of El Cajon. It enters the City in the east, flows westward through the City, and exits in the northwest portion into the City of Santee where it converges with the San Diego River. The majority of Forrester Creek is channelized, including the portion that borders the project site.

Section 303(d) of the federal Clean Water Act (CWA) requires the State of California to identify surface waters that fail to meet designated water quality standards as described in the Basin Plan. The State also publishes a Monitoring List that identifies water bodies that should be closely monitored for potential impairment by the constituents that are listed. Forrester Creek has been listed on the CWA Section 303(d) List as an impaired water body due to fecal coliform, dissolved oxygen, pH, phosphorous, and total dissolved solids (TDS). Potential sources of pollutants include urban runoff, storm sewers, spills, industrial point sources, habitat modification, agriculture return flows, and flow regulation and modification. Forrester Creek is considered an environmentally sensitive area (ESA) in the City of El Cajon JURMP.

Forrester Creek is identified as an inland surface water in the Basin Plan. The Potential and Existing Beneficial uses of the creek include the following: Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), and Wildlife Habitat (WILD). Of the beneficial use designations listed in Table 4.8-1, only the six identified above are applicable to Forrester Creek.

San Diego River

The San Diego River's headwaters are in the Cuyamaca Mountains. The 52-mile river parallels Interstate 8 as it flows through Mission Valley to the Pacific Ocean at Ocean Beach. The Forrester Creek project area is located approximately one mile south of the San Diego River. The upper reaches of the river flow through undeveloped areas, while the land surrounding the lower reaches is highly urbanized. The San Diego River is identified as an inland surface water in the Basin Plan. Beneficial uses of the river include

Table 4.8-1. Applicable Beneficial Use Designations

Designation	Abbrev.	Definition
Municipal and Domestic Supply	MUN	Includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Agricultural Supply	ARG	Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
Industrial Service Supply	IND	Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
Industrial Process Supply	PROC	Includes uses of water for industrial activities that depend primarily on water quality.
Navigation	NAV	Includes uses of water for shipping, travel, or other transportation by private, military, or commercial vessels.
Contact Water Recreation	REC-1	Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.
Non-contact Water Recreation	REC-2	Includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
Commercial and Sport Fishing	COMM	Includes the uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.
Warm Freshwater Habitat	WARM	Includes uses of water that supports warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.
Cold Freshwater Habitat	COLD	Includes uses of water that supports cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.
Marine Habitat	MAR	Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).
Wildlife Habitat	WILD	Includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife, or wildlife water and food sources.
Preservation of Biological Habitats of Special Significance	BIOL	Includes uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.
Rare, Threatened, or Endangered Species	RARE	Includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.
Migration of Aquatic Organisms	MIGR	Includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
Shellfish Harvesting	SHELL	Includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters and mussels) for human consumption, commercial, or sport purposes.

Source: RWQCB, 1997

the following: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Services Supply (IND), Industrial Process Supply (PROC), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD) and Wildlife Habitat (WILD). The lower 16 miles of the San Diego River is identified as a 303(d) impaired water body for fecal coliform, low dissolved oxygen, phosphorus, and total dissolved solids.

Pacific Ocean

The Pacific Ocean is located west of the project site bordering the entire coast of California and is the ultimate or final receiving water for the El Cajon Hydrologic Subarea. According to the Basin Plan, the Pacific Ocean has the following designated beneficial uses: Contact Water Recreation (REC1); Non-contact Water Recreation (REC2); Commercial and Sport Fishing (COMM); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Marine Habitat (MAR); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); and Shellfish Harvesting (SHELL). The Pacific Ocean at the mouth of the San Diego River is listed as an impaired water body [303(d) of the Clean Water Act] based on bacteria indicators.

4.8.2 REGULATORY FRAMEWORK

A number of federal, State and regional/local regulations govern the proposed project site with respect to hydrology and water quality. A brief description of these regulations is provided below.

4.8.2.1 FEDERAL

Clean Water Act (CWA)

The CWA was designed to restore and maintain the chemical, physical, and biological integrity of the waters in the United States. The CWA also directs states to establish water quality standards for all waters of the United States and to review and update such standards on a triennial basis. Other provisions of the CWA related to basin planning include Section 208, which authorizes the preparation of waste treatment management plans, and Section 319, which mandates specific actions for the control of pollution from nonpoint sources. The U.S. Environmental Protection Agency (EPA) has delegated responsibility for implementation of portions of the CWA to the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs), including water quality control planning and control programs, such as the National Pollutant Discharge Elimination System (NPDES) program. The NPDES program is a set of permits designed to implement the CWA that apply to various activities that generate pollutants with potential to impact water quality.

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. Section 304(a) requires the EPA to publish water quality criteria that accurately reflects the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. Section 303(c)(2)(b) of the CWA requires states to adopt numerical water quality standards for toxic pollutants for which EPA has published water quality criteria and which reasonably could be expected to interfere with designated uses of a water body.

National Pollution Discharge Elimination System (NPDES) Permit Program – Phase I

In November 1990, under Phase I of the urban runoff management strategy, the EPA published NPDES permit application requirements for municipal, industrial, and construction stormwater discharges. The application requirements were directed at municipalities which own and operate separate storm drain systems serving populations of 100,000 or more, or which contribute significant pollutants to waters of the United States, and required such agencies to obtain coverage under municipal stormwater NPDES permits.

Municipalities were required to develop and implement an urban runoff management program to address activities to reduce pollutants in urban runoff and stormwater discharges that were contributing a substantial pollutant load to their systems. Rather than establishing numeric effluent limits, the EPA established narrative effluent limits for urban runoff, including the requirement to implement appropriate best management practices (BMPs).

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 (diffuse 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.

FAA Advisory Circular (AC) 150/5200-33B

AC 150/5200-33B provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. Storm water retention and settling ponds often create standing bodies of water that attract large numbers of potentially hazardous wildlife. The FAA strongly recommends that off-airport storm water management systems be designed and operated so as not to create above-ground standing water. Stormwater detention ponds should be designed, engineered, constructed, and maintained for a maximum 48–hour detention period after the design storm and remain completely dry between storms.

4.8.2.2 STATE

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to adopt, review, and revise policies for all waters of the state (including both surface and groundwaters) and directs the RWQCB to develop regional Basin Plans. Section 13170 of the California Water Code also authorizes the SWRCB to adopt water quality control plans on its own initiative. The Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) is designed to preserve and enhance the quality of water resources in the San Diego Region for the benefit of present and future generations. The purpose of the plan is to designate beneficial uses of the Region's surface and ground waters, designate water quality objectives for the reasonable protection of those uses, and establish an implementation plan to achieve the objectives.

All projects resulting in discharges, whether to land or water, are subject to Section 13263 of the California Water Code and are required to obtain approval of Waste Discharge Requirements (WDRs)

from the RWQCBs. Land and groundwater-related WDRs (i.e., non-NPDES WDRs) regulate discharges of process and wash-down wastewater and privately or publicly treated domestic wastewater. WDRs for discharges to surface waters also serve as NPDES permits.

NPDES Construction Stormwater Permit

In California, the SWRCB and its RWQCBs administer the NPDES permit program. Stormwater runoff from construction activity that results in soil disturbances of at least one acre of total land area (and projects that meet other specific criteria) is governed by the SWRCB under Water Quality Order 99-08-DWQ, NPDES Permit #CAS000002. These regulations prohibit discharges of polluted stormwater from construction projects that disturb one or more acres of soil unless the discharge is in compliance with the general NPDES permit requirements. The nine individual RWQCBs enforce the General Construction Stormwater Permit for projects within their region. The San Diego RWQCB oversees permits for projects located in the City of El Cajon.

It is the responsibility of the construction site owner or landowner to obtain coverage under this General Permit prior to commencement of construction activities. To obtain coverage, the operator or owner must file an NOI with a vicinity map and the appropriate fee with the SWRCB. The General Permit outlines the requirements for preparation of a storm water pollution prevention plan (SWPPP).

4.8.2.3 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. The beneficial uses of the receiving waters relevant to the proposed project are listed in Section 4.8.1.2 above. Specifically, the San Diego Region Basin Plan is designed to accomplish the following:

- Designate beneficial uses for surface and ground waters,
- Set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy,
- Describe implementation programs to protect the beneficial uses of all waters within the region, and
- 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.

San Diego Watershed Urban Runoff Management Program

The goal of the San Diego Watershed Urban Runoff Management Plan (WURMP) is to positively affect the water resources of the San Diego River watershed while balancing economic, social and environmental constraints. This goal and its supporting objectives and activities described in the WURMP document comply with the waste discharge requirements of the RWQCB Order No. R9-2007-0001. The six jurisdictions that make up the SDHU collectively developed the San Diego WURMP to address the complex water quality issues represented by the diverse environment of the SDHU.

In compliance with NPDES Order No. R9-2007-0001 and to improve the watershed's water quality, the San Diego WURMP identifies and prioritizes the water quality issues that need to be addressed and designates an overarching goal and four supporting objectives:

- **Goal:** Positively affect the water resources of the San Diego River watershed while balancing economic, social and environmental constraints.
- **Objective 1:** Develop/expand methods to assess and improve water quality within the watershed.
- **Objective 2:** Integrate watershed principles into land use planning.
- **Objective 3:** Enhance public understanding of sources of water pollution.
- **Objective 4:** Encourage and develop stakeholder participation.

To achieve the goal and its attendant objectives, the WURMP includes a work plan that prescribes the activities that will be undertaken by the watershed Copermittees. These activities are described throughout the various San Diego WURMP sections.

According to the San Diego WURMP, high priority water quality problems for the Hydrologic Areas in the San Diego River Watershed are eutrophication and benthic community degradation, as well as the presence of bacteria and diazinon within the watershed.

City of El Cajon Standard Urban Stormwater Mitigation Plan (SUSMP)

The municipal storm water NPDES permit (Order No. R9-2007-0001, NPDES No. CAS0108758, hereinafter referred to as "Municipal Permit") issued to San Diego County, the Port of San Diego, the San Diego County Regional Airport District, and 18 cities (Copermittees) by the RWQCB on January 24, 2007, requires the development and implementation of a program addressing urban runoff pollution issues in development planning for public and private projects.

The requirement to implement a program for development planning is based on federal and state statutes including: Section 402 (p) of the CWA, Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 ("CZARA"), and the California Water Code. The CWA amendments of 1987 established a framework for regulating urban runoff discharges from municipal, industrial, and construction activities under the NPDES program. The Municipal Permit requires the implementation of a Jurisdictional Urban Runoff Management Program (JURMP).

The City of El Cajon SUSMP was developed to address post-construction urban runoff pollution from new development and redevelopment projects that fall under "priority project" categories. The goal of the SUSMP is to develop and implement policies to ensure to the maximum extent practicable that development does not increase pollutant loads from a project site and considers urban runoff flow rates and velocities. This goal may be achieved through site-specific controls and/or drainage area-based or shared structural treatment controls.

This SUSMP identifies appropriate BMPs for certain designated project types to achieve this goal. The City of El Cajon will approve the SUSMP project plan(s) as part of the development plan approval process for discretionary projects, and prior to issuing permits for ministerial projects. To allow flexibility in meeting SUSMP design standards, structural treatment control BMPs may be located on or off site, used singly or in combination, or shared by multiple developments, provided certain conditions are met.

All new development and significant redevelopment projects that fall into one of the following "priority project" categories are subject to these SUSMP requirements, subject to the lawful prior approval provisions of the Municipal Permit. In the instance where a project feature, such as a parking lot, falls into a priority project category, the entire project footprint is subject to these SUSMP requirements. These categories are:

- Residential development of 100 units or more
- Residential development of 10 to 99 units
- Commercial development greater than one acre
- Automotive repair shops
- Restaurants
- Hillside development greater than 5,000 SF
- Projects discharging to receiving waters within ESAs
- Parking Lots > 5,000 SF or with > 15 parking spaces and potentially exposed to urban runoff
- Streets, roads, highways, and freeways which would create a new paved surface that is 5,000 SF or greater
- Retail Gas Outlets
- Heavy Industry

The City's SUSMP has been implemented through Ordinance 4908, Chapter 16.60 of the Municipal Code.

City of El Cajon Jurisdictional Urban Runoff Management Plan (JURMP)

The 1987 amendments to the Federal Water Pollution Control Act (also known as the CWA) added Section 402 (p), which established a framework for regulating municipal, industrial and construction storm water discharges under the NPDES. In California, these permits are issued through the SWRCB and the nine RWQCBs. In general, the first phase of NPDES implementation requires the following entities to obtain storm water discharge permits:

- Municipalities with a population of over 100,000
- Industries that have been identified by the EPA as being the potential source of storm water pollution
- Construction projects that disturb more than five acres.

On July 16, 1990, the San Diego RWQCB issued Order No. 90-42, a county-wide NPDES municipal permit for urban storm water discharges within the County of San Diego. In this process, all nine watersheds within the County were incorporated under one municipal permit. This permit was issued to the City of San Diego as the Principal Permittee and to the County of San Diego, San Diego Unified Port District and 17 local municipalities (including the City of El Cajon) as Copermittees. The NPDES permit had an effective term of five years and was scheduled to expire on July 16, 1995. The expiration date of the permit was extended, pending the issuance of a new permit by the RWQCB.

On February 21, 2001, the San Diego RWQCB issued Order No. 2001-01 (NPDES No. CAS0108758), a revised county-wide NPDES municipal permit for urban storm water discharges from the County of San Diego using a watershed-based approach. In this permit, the County of San Diego is the designated Principal Permittee, with the City of San Diego, San Diego Unified Port District and the same 17 local municipalities (including the City of El Cajon) as Copermittees.

In compliance with former San Diego RWQCB Order No. 2001- 01 (Permit), the City of El Cajon developed a JURMP document. The purpose of this program was to minimize or eliminate the impact of human activities on receiving water bodies, which would be accomplished through reducing pollutants in urban runoff to the maximum extent practicable (MEP). On January 24, 2007, the RWQCB adopted a revised Municipal Stormwater Permit (Order No. R9-2007-0001). The revised Permit intends to further

reduce the pollution that runs down storm drains into local waterways. As part of the Permit, San Diego jurisdictions were required to encourage developments to incorporate minimal low impact development (LID) techniques into Priority Development Projects by January 2008. The City of El Cajon prepared an updated JURMP, adopted March 2008, to meet new Permit requirements, including requirements to implement LID.

City of El Cajon Stormwater Management and Discharge Control Ordinance (Ord. 4686)

In conformance with RWQCB Order No. R9-2007-0001, the El Cajon has adopted the Stormwater Management and Discharge Control Ordinance. The purpose of this ordinance is to protect the health, safety and general welfare of the City of El Cajon 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 stormwater as a resource; and to ensure the City is compliant with Order R9-2007-0001 and with applicable state and federal law. This ordinance seeks to promote these purposes through the following actions:

- Prohibiting polluted non-stormwater discharges to the stormwater conveyance system;
- Establishing minimum requirements for stormwater management, including source control requirements, to prevent and reduce pollution;
- Establishing requirements for development project site design, to reduce stormwater pollution and erosion;
- Establishing requirements for the management of stormwater flows from development projects, both to prevent erosion and to protect and enhance existing water-dependent habitats;
- Establishing standards for the use of off-site facilities for stormwater management to supplement on-site practices at new development sites; and
- Establishing notice procedures and standards for adjusting stormwater and non-stormwater management requirements where necessary.

4.8.3 IMPACT SIGNIFICANCE CRITERIA

Based on City and/or CEQA thresholds, hydrology and water quality impacts would be significant if the proposed project would do any of the following:

- Alter the existing drainage or hydrology of the site or area in a manner which would result in flooding, exceed the capacity of the stormwater drainage system, or result in substantial erosion or siltation on or off site;
- Violate water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade surface water or groundwater quality during or after construction; and/or
- Place habitable structures within the 100-year floodplain or be subject to inundation by levee or dam failure or seiche.

4.8.4 ISSUE 1 – SITE DRAINAGE AND HYDROLOGY

Would implementation of the proposed project alter the existing drainage or hydrology of the site or area in a manner which would result in flooding, exceed the capacity of the stormwater drainage system, or result in substantial erosion or siltation on or off site?

4.8.4.1 IMPACT ANALYSIS

Impacts from Construction Activities

Construction of the proposed project is described in the Project Description, Chapter 3.0 of this EIR. Construction activities could result in temporary on-site alteration of drainage patterns through a variety of activities including demolition, clearing, grading excavation, concrete pouring, and asphalt surfacing. Temporary ponding and/or flooding could result from such activities, from temporary alterations of the drainage system (reducing its capacity of carrying runoff), or from the temporary creation of a sump condition due to grading. Alterations may temporarily result in erosion and siltation if flows were substantially increased or routed to facilities or channels without adequate capacity to carry the flow.

Under the NPDES permit program, SWPPPs are prepared and BMPs identified in the SWPPPs are implemented for construction sites greater than one acre, which reduce the likelihood of alterations in drainage to result in construction-related hydrology impacts. In compliance with applicable construction permits, the project would implement BMPs during construction, such as the following:

- Minimizing disturbed areas. Clearing of land is limited to that which will be actively under construction in the near term, new land disturbance during the rainy season is minimized, and disturbance to sensitive areas or areas that would not be affected by construction is minimized.
- Stabilizing disturbed areas. Temporary stabilization of disturbed soils is provided whenever active construction is not occurring on a portion of the site, and permanent stabilization is provided by finish grading and permanent landscaping.
- Protecting slopes and channels. Outside of the approved grading plan area, disturbance of natural channels is avoided, slopes and crossings are stabilized, and increases in runoff velocity caused by the project are managed to avoid erosion to slopes and channels.
- Controlling the site perimeter. Upstream runoff is diverted around or safely conveyed through the project and is kept free of excessive sediment and other constituents.
- Controlling internal erosion. Sediment-laden waters from disturbed, active areas within the site are detained.

In addition, the City's Stormwater Management and Discharge Control Program Ordinance (Ord. 4907), as set forth in Chapter 13.10 of the City's Municipal Code, requires development projects to demonstrate compliance with the City's Stormwater BMP Manual described in Appendix C of the City's JURMP prior to issuance of permits or approvals. The ordinance identifies the minimum BMP requirements for all dischargers, as well as for specific types of land uses, including residential, commercial, industrial, agricultural and municipal land uses. Minimum BMPs are identified for erosion prevention, pollution prevention, prevention of illegal discharges, slope protection, storage of materials and wastes, and the use of materials.

Furthermore, the City's Ordinance 4908, Chapter 16.60 of the Municipal Code, requires the project to comply with the SUSMP design guidelines to minimize hydrology and water quality impacts. The first principle in the SUSMP requires that projects maintain pre-development rainfall run-off characteristics. The second principle requires that slopes and channels be protected to decrease potential for erosion of slopes and/or channels.

Preparation of a SWPPP and implementation of appropriate BMPs, as part of compliance with construction permits and the City's SUSMP and Stormwater Management and Discharge Control Ordinance, would ensure that project construction would not alter the existing drainage or hydrology of the site or area in a manner which would result in flooding, exceed the capacity of the stormwater drainage system, or result in substantial erosion or siltation on or off site. Therefore, short-term impacts resulting from alterations of drainage and hydrology during construction would be less than significant.

Impacts Following Construction

Implementation of the proposed project would result in the construction of new industrial facilities, parking areas, roadways, landscaping, and other features that are anticipated to result in the alteration of the existing drainage pattern of the project site. Figure 4.8-1 shows existing site drainage. The project would also convert much of the project site from softscape to hardscape, increasing runoff. Currently seven percent of the site is impervious surface. Implementation of the proposed project would increase impervious surfaces to 78 percent of the project site. In addition, the construction would alter the existing topography of the site, which currently contains steeper slopes and a localized high point in the central portion of the site. Implementation of the project would include grading of the project site into four gently sloping pads on which to industrial buildings would be constructed. The assumptions for the hydrologic analysis were based on soil infiltration, topographic relief, vegetation, and surface storage. The assumptions and methodology of the analysis are described in detail in Appendix G. The existing 100-year flow rate from the project site is 55 cubic feet per second (cfs). The proposed project would increase the 100-year flow rate to 80 cfs. Detention analyses were performed to assess the storage capacity of the proposed on-site underground detention basin. Preliminary analysis of storage volume assumes that a 30-inch RCP would discharge from a detention basin to Forrester Creek. Preliminary analysis was based on conceptual plans indicating a 7.1-foot deep detention basin with an area of 0.56-acre. The proposed detention basin dimensions and location with respect to Forrester Creek would provide for a storage volume of 2.7 acre-feet and a basin volume of 3.7 acre-feet, which would reduce flow conditions to between 40 cfs and 42 cfs. Therefore, proposed project flow conditions would be below the existing 100-year flow rate of 55 cfs. .

Additionally, flows from off-site traverse the project site, primarily from areas south of the proposed project site. There are two existing storm drains that outlet onto the site from Weld Boulevard: a double 24-inch reinforced concrete pipeline (RCP) and a 42 inch RCP. As part of the proposed project, the storm drain would be aligned along the site perimeter and ultimately outlet into the Forrester Creek channel. The post-project conditions would result in a 100-year flow rate of 30.3 cfs from the double 24-inch RCPs, and 112.5 cfs for the 42-inch RCP. Therefore, the total runoff was estimated to be 143 cfs (30.3 cfs + 112.5 cfs). The proposed project would collect the runoff from these outlets in a proposed storm drain. The drainage report concluded that this flow rate could be accommodated in a 48-inch RCP. The project site would convey off-site flows to the project site through a 48-inch RCP. This RCP would not convey any runoff generated by the proposed project, only runoff generated off site that currently traverses the site from the double 24-inch RCP and 42-inch RCP.

Implementation of the proposed project would result in a change that would convert the site from mostly permeable surfaces to impermeable surfaces, the proposed project would increase the runoff in the

immediate project area. As a result, the project has the potential to result in localized flooding, if storm water conveyance facilities are not properly sized. However, the on-site drainage basin would have a storage volume of at least 1.2 acre-feet, which would adequately reduce stormwater flows to pre-project conditions. Figure 4.8-2 shows the proposed site drainage conditions. Therefore, the proposed project would not result in a potentially significant impact to hydrology.

Additionally, the proposed project would comply with AC 150/5200-33B which recommends that off-airport storm water management systems be designed and operated so as not to create above-ground standing water. The proposed project's underground drainage basin would be designed, engineered, constructed, and maintained to detain the 100-year storm event without flooding the proposed buildings and release storm water from the site at a flow rate that mimics existing conditions before discharging into the Forrester Creek channel. BMPs and drainage structures are designed to treat the 85th percentile storm, detain, and convey the 10-year peak flow.

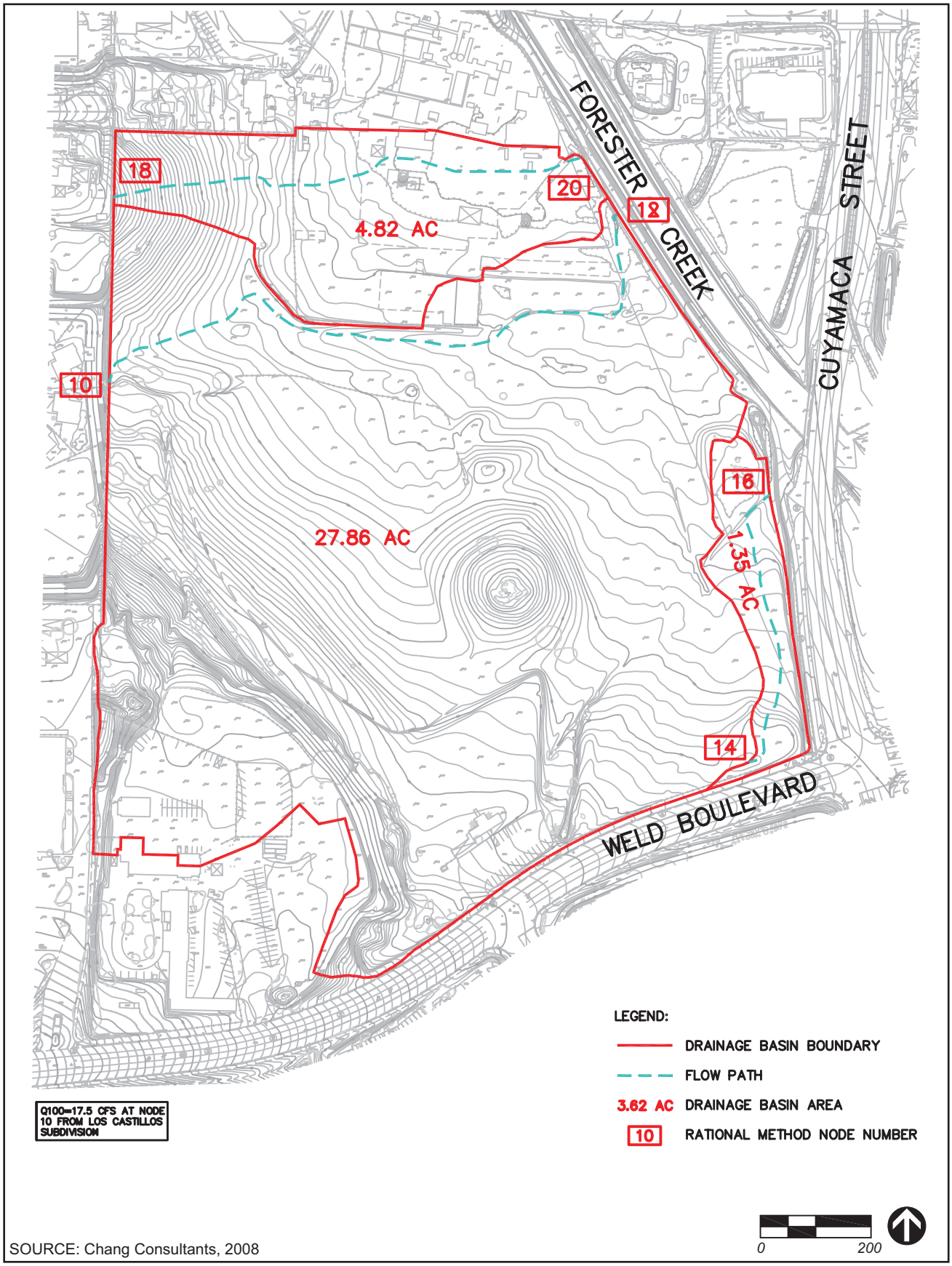
4.8.4.2 SIGNIFICANCE OF IMPACT

Compliance with applicable water quality regulations, including construction permit requirements and the City's SUSMP and Stormwater Management and Discharge Control Ordinance, would ensure that construction activities would not result in the alteration of the drainage or hydrology of the project site such that flooding, exceedance of storm drain capacity, or substantial erosion/siltation would occur. Therefore, hydrology impacts associated with construction activities would be less than significant.

The proposed project would not result in the exceedance of the existing off-site storm drainage system within the City of El Cajon. The proposed project would convert the project site from a mostly permeable surface to an impermeable surface, resulting in a potential increase in surface water runoff generated on site and the potential risk of flooding and/or exceedance of the capacity of the existing storm drain system. However, the on-site drainage basin would have a storage volume of at least 1.2 acre-feet, which would adequately reduce stormwater flows to pre-project conditions. The drainage basin would be designed, engineered, constructed, and maintained for a maximum 48–hour detention period after storms, up to 100-year storm flows, and remain completely dry between storms. Therefore, hydrology impacts associated with post-construction activities on the project site would be less than significant.

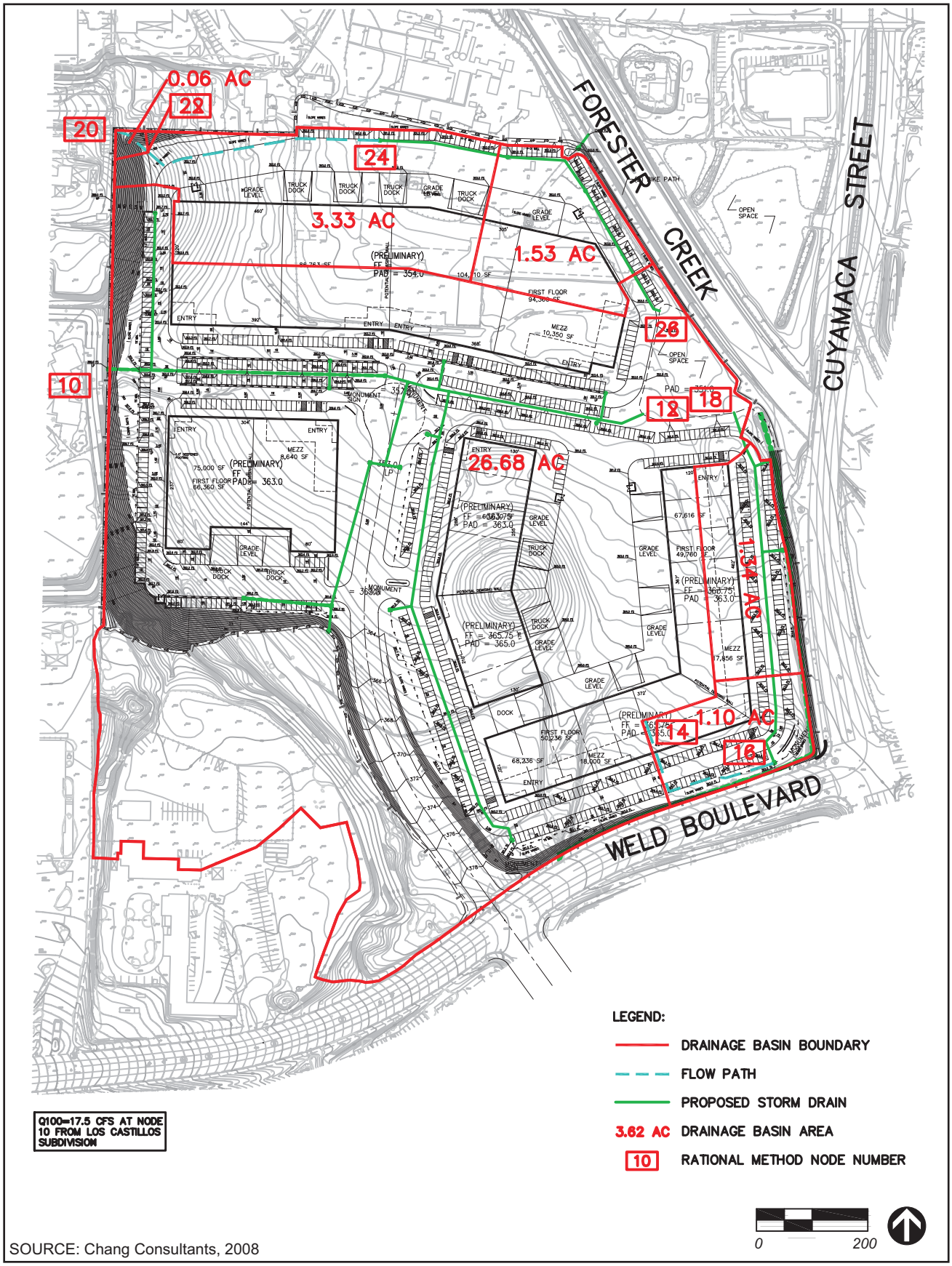
4.8.4.3 MITIGATION, MONITORING, AND REPORTING

No mitigation would be required because no significant impacts to site drainage and hydrology were identified.



SOURCE: Chang Consultants, 2008

EXISTING ON-SITE DRAINAGE CONDITION **FIGURE 4.8-1**



SOURCE: Chang Consultants, 2008

PROPOSED ON-SITE DRAINAGE CONDITION **FIGURE 4.8-2**

4.8.5 ISSUE 2 – WATER QUALITY

Would the project violate water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade surface water or groundwater quality during or after construction?

4.8.5.1 IMPACT ANALYSIS

Stormwater Standards and Waste Discharge Requirements

Applicable water quality standards developed by the SWRCB and RWQCB for stormwater are set forth in applicable stormwater permits (which also serve as waste discharge requirements). The stormwater permits applicable to the project site are the General Construction Stormwater Permit, which controls pollutants in runoff from the project site during construction activities, and the General Industrial Stormwater Permit, which regulates the discharge of stormwater from industrial facilities. Both permits require a storm water mitigation plan (SWMitP) to be prepared which identifies water quality BMPs to be implemented. The City's Stormwater Management and Discharge Control Ordinance complies with the provisions of the municipal NPDES permit issued by the RWQCB because it requires development projects to demonstrate compliance with the City's Stormwater BMP Manual prior to issuance of permits or approvals. The ordinance identifies the minimum BMP requirements for all dischargers, as well as for specific types of land uses, including industrial land uses. Minimum BMPs are identified for erosion prevention, pollution prevention, prevention of illegal discharges, slope protection, storage of materials and wastes, and the use of materials. Because the proposed project would be required to comply with this ordinance, it would also comply with the requirements of the applicable RWQCB permits; therefore, no impact would occur with regard to violation of stormwater standards or waste discharge requirements. A SWMitP has been prepared for the proposed project and is included in Appendix G. LID BMPs were included in compliance with RWQCB Order No.R9-2007-0001 and the updated El Cajon JURMP.

Water Quality Degradation

With regard to general water quality impacts from stormwater and other runoff, the various pollutants potentially generated on the project site may adversely affect water quality in a variety of ways. A summary of the general adverse environmental effects that may result from the most common pollutant categories is provided below, and potential project impacts related to construction and post construction conditions are described in the following sections. The project site would have the potential to produce the following pollutants:

- **Sediments** – Sediments are soils or other surficial materials eroded and then transported or deposited by the action of wind, water, ice, or gravity. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms' survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.

- **Nutrients** – Nutrients are inorganic substances, such as nitrogen and phosphorus. They commonly exist in the form of mineral salts that are either dissolved or suspended in water. Primary sources of nutrients in urban runoff are fertilizers and eroded soils. Excessive discharge of nutrients to water bodies and streams can cause excessive aquatic algae and plant growth. Such excessive production, referred to as eutrophication, may lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms.

- **Metals** – Metals are raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. Primary sources of metal pollution in stormwater are typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. At low concentrations that naturally occur in soils, metals are not toxic. However, at higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources and bioaccumulation of metals in fish and shellfish. Environmental concerns regarding the potential for release of metals to the environment have already led to restricted metal usage in certain applications.

- **Organic Compounds** – Organic compounds are carbon-based. Commercially available or naturally occurring organic compounds are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life.

- **Trash and Debris** – Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products that may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a stream and thereby lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide.

- **Oxygen Demanding Substances** – This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions.

- **Oil and Grease** – Oil and grease are characterized as high molecular weight organic compounds. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids. Introduction of these pollutants to the water bodies is typical due to the wide uses and applications of some of these products in municipal, residential, commercial, industrial, and construction areas. Elevated oil and grease content can decrease the aesthetic value of the water body, as well as the water quality.

- **Bacteria and Viruses** – Bacteria and viruses are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Excessive bacteria and viruses in water can alter the aquatic habitat and create a harmful environment for humans and aquatic life. The decomposition of excess organic waste causes increased growth of undesirable organisms in the water.

- **Pesticides** – Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Excessive application of a pesticide may result in runoff containing toxic levels of its active component.

Impacts from Construction Activities

Project construction would have the potential to result in substantial additional sources of polluted runoff which could have short-term impacts on surface water quality through activities such as demolition, clearing and grading, excavation, stockpiling of soils and materials, concrete pouring, painting, and asphalt surfacing. Project construction would involve various types of equipment such as dozers, scrapers, graders, loaders, compactors, dump trucks, cranes, water trucks, and concrete mixers. Stockpiled construction materials for use during later construction phases would be stored outdoors during construction. Pollutants associated with these construction activities that could result in water quality impacts include soils, debris, other materials generated during demolition and clearing, fuels and other fluids associated with the equipment used for construction, paints, other hazardous materials, concrete slurries, and asphalt materials.

These pollutants could impact water quality if they are washed off site by stormwater or non-stormwater, or are blown or tracked off site to areas susceptible to wash off by stormwater or non-stormwater. Pollutants washed off site would be discharged to Forrester Creek, the primary receiving water to the project site. Sediment is the most common pollutant associated with construction sites because of the associated earth-moving activities and areas of exposed soil. Sediment that is washed off site can result in turbidity in receiving waters that can impact aquatic species. In addition, when sediment is deposited in a receiving water, it can smother species, alter the substrate and habitat, and alter the drainage course. Hydrocarbons such as fuels, asphalt materials, and oils, and hazardous materials such as paints and concrete slurries, discharged from the site could impact aquatic plants and animals downstream. Debris and trash discharged from the site could be washed off site via existing storm drainage channels to downstream receiving waters and could impact wildlife as well as aesthetics.

Landscaping when installed could also result in water quality impacts due to the use of fertilizers. If fertilizers are discharged, they could adversely affect aquatic plants and animals downstream in receiving waters through a reduction in oxygen levels and increased eutrophication. Eutrophication is the process of over-enrichment of nutrients in a water body, fostering an increase in biotic life that results in a significant loss of dissolved oxygen.

Project compliance with the applicable RWQCB permit regulations, the City's SUSMP and the City's Stormwater Management and Discharge Control Ordinance requires implementation of water quality BMPs. Construction BMPs for water quality typically include, but are not limited to, the following:

- Proper storage, use, and disposal of construction materials.
- Removal of sediment from surface runoff before it leaves the site by silt fences or other similar devices around the site perimeter.
- Protection of all storm drain inlets downstream of the construction site to eliminate entry of sediment.
- Stabilization of cleared or graded slopes.
- Diversion of runoff from uphill areas around disturbed areas of the site.
- Prevention of tracking soil off site through use of a gravel strip or wash facilities at exit areas.
- Protection or stabilization of stockpiled soils.
- Continual inspection and maintenance of all specified BMPs through the duration of construction.

Implementation of these and other water quality BMPs would reduce the potential for construction activities to generate pollutants that could lead to the pollution of surface or groundwater. Therefore, implementation of water quality BMPs, as required by the applicable RWQCB permit regulations, the City's SUSMP and the City's Stormwater Management and Discharge Control Ordinance, would ensure that temporary water quality impacts associated with construction activities would not violate water quality standards or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade surface water or groundwater quality during construction. Impacts would be less than significant.

Impacts Following Construction

Following project construction, the operation of the project site would also have the potential to generate pollutants. The project site would include pollutant sources such as landscaping, rooftops, parking/driveways, general use areas, and trash storage areas, all of which would be expected to generate water quality pollutants. A list of the anticipated project uses and associated pollutants is provided in Table 4.8-2. The sources and associated pollutants listed in Table 4.8-2 are identified in the City's SUSMP.

Table 4.8-2. Anticipated Project Conditions and Associated Pollutants and Sources

Source	Anticipated Pollutants	Potential Pollutants
Greater than 100,000 sf commercial/industrial	Trash & debris, oil & grease	Sediment, nutrient, organic compounds, oxygen demanding substances, bacteria & viruses, pesticides
Parking lots	Heavy metals, trash & debris, oil & grease	Sediment, nutrient, oxygen demanding substances, pesticides
Greater than 5,000 sf new streets	Sediment, heavy metals, trash & debris, oil & grease	Nutrient, oxygen demanding substances, pesticides

Source: Burkett & Wong Engineers, 2009

As identified in Table 4.8-2, the following pollutants would be generated from long-term operation of the proposed project: sediment and nutrients, organic compounds, pesticides, oxygen demanding substances, trash and debris, bacteria and viruses, heavy metals, and oil and grease. The proposed project would include roads for vehicle access that would accumulate oils, other fluids, and other wastes from vehicles. Landscaped areas would be included throughout the proposed project site. Landscaped areas could generate sediment due to erosion and also typically involve the use of fertilizers and pesticides for maintenance. The areas would be open to pedestrian traffic which is typically associated with the generation of trash.

As identified in the City's SUSMP (Ordinance 4908), the proposed project is considered to be a priority project because it would discharge directly to a receiving water within an ESA (Forrester Creek), including parking areas that are greater than 5,000 SF and proposes streets which create new paved surfaces greater than 5,000 SF. As such, the design of the proposed project is required to comply with the SUSMP, which requires that the project's pollutants of concern be identified and that applicable site design, source control, and treatment control BMPs be incorporated into project design in order to reduce the project's generation of these pollutants. The generation of pollutants would reduce on-site water quality and also impact the water quality of downstream receiving waters. Table 4.8-3 lists the BMPs that would be implemented under the SWMitP. The SWMitP identified underground detention basins and hydrodynamic systems as the most effective BMPs to treat the pollutants identified in Table 4.8-2.

Table 4.8-3. Best Management Practices

Best Management Practice	Implementation
General Site Design BMPs	
Control peak runoff rates	Underground Extended Detention Basin designed for reducing the peak runoff while accounting for LID practices.
Minimize impervious areas	Minimizing impervious areas by designing in landscaped areas and maintaining natural open space.
Conserve natural areas	Conserved natural areas by keeping buildings and roadway away from natural areas where possible.
Protect slopes and channels	Erosion control plans to be prepared to ensure protection of proposed slopes and an extended detention basin proposed to maintain existing condition runoff to Forrester Creek.
Minimize effective imperviousness	Minimized impervious areas by keeping building and roadway away from natural areas where possible and adding landscaped medians to project.
Maximize canopy interception by preserving existing trees and shrubs	Preserved canopy interception at existing slopes to the southwest of the project
Preserve natural drainage systems	The post construction drainage system drains to Forrester Creek as in pre-construction, and an underground extended detention basin is proposed to maintain pre-construction flow to Forrester Creek.
Minimize Directly Connected Impervious Areas (DCIAs) (drain rooftops, sidewalks, walkways, trails, and patios to landscaping)	Proposed roof drains of the buildings would be connected to the vegetated swales along the buildings where applicable
Source Control BMPs	
Storm drain message and signage	Details of storm drain stencil message and signage to be included on grading plan
Outdoor storage area design	Outdoor storage area design to comply with City and State standards
Trash storage area design must be secured, bermed, and covered (Required in accordance with California Fire Code Section 1103.2.2).	Site trash storage area design to be secured, bermed, and covered per City and State standards
Use efficient irrigation systems & landscape design	A licensed landscape architect to prepare plans to use efficient irrigation systems.
Incorporate requirements of the applicable priority project category: a. Loading/unloading dock area design (Required) b. Repair/maintenance bay design (Required) c. Vehicle/Equipment/Accessory washing area (Required) d. Fueling area design (Required) e. Private Roads f. Outdoor Processing Areas g. Parking Areas h. Roadways i. Hillside Landscaping	Requirements of the priority project category to be incorporated into the grading plans in accordance with City and State requirements
Proof of control measure maintenance (Required)	Proof of control measure maintenance to be per City and State requirements
Treatment Controls (Require two controls, at a minimum)	
Grass swale filter	Grassy Swale Filter used for the project to collect runoff from the parking lots through curb cuts at the landscaped medians
Underground extended detention basin	Underground Extended Detention Basin used for the project to lower peak discharge to existing conditions while accounting for LID considerations
Hydrodynamic Separator	Stormceptor unit used for project at all discharge locations to the extended detention basin

Source: Burkett & Wong Engineers, 2009

Both BMPs would be implemented as part of the proposed project, as well as additional measures to further reduce pollutants. To satisfy the new LID BMP requirements, the site has proposed vegetated grassy swales, an underground extended detention basin, curb cuts, and connecting the industrial building roof drain to vegetated swales. Implementation of the BMPs would reduce water quality impacts from the proposed project to below a level of significance.

4.8.5.2 SIGNIFICANCE OF IMPACT

The proposed project would not result in any short-term water quality impacts from construction activities because the project would conform with applicable RWQCB permit requirements and City regulations pertaining to water quality impacts associated with construction activity. Implementation of the proposed project would include compliance with the SWMitP prepared for the proposed project and included in Appendix G. Therefore, the proposed project would not result in significant long-term impacts to water quality from the generation pollutants during project operation.

4.8.5.3 MITIGATION, MONITORING, AND REPORTING

No mitigation would be required because no significant impacts to water quality were identified.

4.8.6 ISSUE 3 – FLOOD HAZARD AREA

Would the project place habitable structures within the 100-year floodplain or be subject to inundation by levee or dam failure or seiche?

4.8.6.1 IMPACT ANALYSIS

A review of *Flood Insurance Rate Maps (FIRMs) for San Diego County, California and Incorporated Areas* prepared by the Federal Emergency Management Agency (FEMA) was conducted to determine whether the project site is located in a flood-prone area. The project site is mapped on Panel 1653 of 2375 for San Diego County and incorporated areas (Map No. 06073C1653F, June 19, 1997, revised March, 2002). According to this map, the northeastern portion of the project site is located in Flood Hazard Zone X (shaded) and the remainder of the site is located in Zone X (unshaded). Both of these zones (Zone X shaded and Zone X unshaded) are located above the base flood elevation. Flood Hazard Zone X (shaded) is a moderate flood hazard zone defined as the area between the limits of the base flood and the 0.2-percent-annual-chance. Flood Hazard Zone X (unshaded) is a minimal flood hazard zone located outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance flood. Neither Zone X (shaded) nor Zone X (unshaded) is located within the 100-year floodplain. Flood insurance is available in participating communities but is not required by regulation in Zone X (shaded or unshaded). Therefore, the proposed project would not place structures within the 100-year floodplain.

In addition, as shown on the proposed project grading plan (Figure 3-4), the proposed project site would be graded to an elevation of 350 feet or above. According to Map No. 06073C1653F, the base flood elevation in the project area is 348 feet. Therefore, the graded elevation of the project site would be at least two foot above the base flood elevation, in which case impacts from potential inundation of the project site due to the failure of any upstream dams or levees would be avoided, since only one foot above the base flood elevation is required to avoid potential flooding impacts. In addition, there are no inland water bodies with potential to cause a seiche in the vicinity of the project site.

4.8.6.2 SIGNIFICANCE OF IMPACT

The proposed project site would not place habitable structures within the 100-year floodplain or be subject to inundation by levee or dam failure or seiche. Impacts would be less than significant.

4.8.6.3 MITIGATION, MONITORING, AND REPORTING

No mitigation would be required because no significant impacts related to flood hazard areas were identified.

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