

SECTION 4.8

HYDROLOGY AND WATER QUALITY

4.8 HYDROLOGY AND WATER QUALITY

This section describes the federal, state and local regulations applicable to hydrology and water quality. It also describes the regional hydrologic setting, existing hydrology/drainage (on-site and off-site), and existing flood hazards in the vicinity of the Project parcels. Water quality is also described in terms of groundwater beneath the Project parcels and surface waters in the region. This section also describes how implementation of the proposed Project would affect hydrology and water quality.

4.8.1 REGULATORY FRAMEWORK

A. FEDERAL

Federal Emergency Management Agency

Imperial County (inclusive of the City of Calexico) is a participant in the National Flood Insurance Program (NFIP), a federal program administered by the Federal Emergency Management Agency (FEMA). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted, as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of one in 100 years, although such a flood may occur in any given year. Imperial County is occasionally audited by the Department of Water Resources (DWR) to ensure the proper implementation of FEMA floodplain management regulations. The Flood Insurance Rate Map (FIRM) for the Project parcels was examined as part of this analysis.

Clean Water Act (33 USC § 1257 et seq.)

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating surface water quality standards. The CWA requires states to set standards to protect water quality, which includes regulation of stormwater and wastewater discharges during construction and operation of a facility.

The basis of the CWA was enacted in 1948 and originally was called the Federal Water Pollution Control Act. Significant amendments to the CWA in 1972 were intended to eliminate the discharge of pollutants into the nation's waters and achieve water quality that is both "fishable" and "swimmable." The 1972 amendments also prohibited the discharge of any pollutant to waters of the U.S. from any point source (e.g., a discharge pipe) unless the discharge was authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Following amendments in 1977, the "Clean Water Act" became the Act's common name.

The United States Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry and establishing water quality standards for all contaminants in surface waters. The Project would be required to comply with the provisions of the CWA.

Section 402 National Pollutant Discharge Elimination System (NPDES)

The CWA also established the NPDES which requires permits for discharges of pollutants from certain point sources into waters of the United States. The CWA allows the EPA to delegate NPDES permitting authority to states with approved environmental regulatory programs. California is one of the delegated states. In accordance with Section 402(p)(4) of the CWA, the EPA identifies regulations for NPDES permit applications for stormwater discharges. On November 16, 1990, the EPA published final regulations establishing discharge of stormwater to waters of the U.S. from construction projects disturbing one or more acres of soil. Projects disturbing areas one acre or greater in size are effectively prohibited unless the discharge complies with an NPDES Permit. SWRCB Order No. 2009-0009, NPDES General Permit No.

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CAS000002, “General Permit for Stormwater Discharges Associated with Construction Activity”, is the active general stormwater construction activity permit for the State of California and RWQCB. This permit would apply to the proposed Project.

Section 303(d)

Section 303(d) of the CWA requires states, territories and authorized tribes to develop a list of water bodies not meeting water quality standards even after point sources of pollution have installed minimum levels of pollution control technology. These waters are referred to as “impaired” and are identified on a 303(d) list. Section 303(d) also requires states to develop action plans, called Total Maximum Daily Loads (TMDLs) to improve water quality. The New River is classified as impaired and is part of the drainage system utilized by the City of Calexico (City of Calexico 2015a, p. 4-3).

Section 311

Section 311 of the CWA prohibits the discharge of oil or hazardous materials to waters of the U.S. Some hazardous materials including diesel and oil would be present in heavy equipment during construction. Diesel generators are also proposed for each of the four cultivation and manufacturing facilities to provide emergency back-up power in the event of a power outage. The Project would be required to comply with Section 311 of the CWA.

B. STATE

The Porter-Cologne Water Quality Control Act

The SWRCB regulates stormwater discharges from projects during construction in accordance with the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (NPDES No. CAS000002). Dischargers whose projects disturb one or more acres of soil, or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit Order 2010-2014-DWQ, effective February 14, 2011) (SWRCB 2012).

Construction activity subject to a Construction General Permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation. A Construction General Permit does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Program (SWPPP). The SWPPP should contain a site map(s) showing the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the proposed Project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect stormwater runoff and the placement of the BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment (SWRCB 2012). The proposed Project will comply with applicable provisions of the CWA.

CWA Section 402 - State Water Resources Control Board Construction General Permit Order No. 2010-0014-DWQ

State CWA Section 402 prohibits the discharge of pollutants into waters of the U.S. from any point source without an NPDES permit. The Colorado River Basin RWQCB implements the NPDES program by regulating point source discharges of wastewater and agricultural runoff to both land and surface

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waters so that the beneficial uses of the waters are protected. To comply with the water quality regulations, the RWQCB requires permits for discharging or proposing to discharge materials that could affect water quality, other than land uses that normally discharge into a community sewer system.

The State and Regional Water Boards issue both individual and general NPDES permits. An individual permit is issued for a specific discharge, based on the type of activity, nature of discharge, receiving water quality, and other factors. NPDES permits are issued for both wastewater and stormwater discharges. Both general and individual permits will be required for this Project.

Construction Permits

Construction site stormwater management is enforced by the Colorado River Basin RWQCB and other Regional Water Boards in accordance with the State's Water Quality Order 99-08-DWQ/NPDES General Permit No. CAS000002. This State General Permit prohibits discharges of stormwater to waters of the U.S. from construction projects that encompass 5 or more acres of soil disturbance unless the discharge is in compliance with an NPDES permit. This process requires preparation and implementation of a SWPPP, which specifies Best Management Practices (BMPs) to prevent construction pollutants from contacting stormwater so that all products of erosion will be prevented from moving off-site into receiving waters. In addition, the BMPs must eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the U.S. and inspections must be performed on all BMPs implemented for the project to eliminate or reduce discharges. The proposed Project will comply with Water Quality Order 99-08-DWQ/NPDES General Permit No. CAS000002.

Industrial Permits

The State Water Boards issue waste discharge requirements (permits) to individual or groups of dischargers, using information on water quality conditions, the type and characteristics of the discharge, and applicable water quality standards and implementing provisions established in policies, plans, regulations, and laws. Basically, four types of permits are issued by the Water Boards for point source discharges of waste: 1) NPDES permits for wastewater; 2) NPDES permits for stormwater; 3) land disposal permits for waste management units; and 4) "Non-15" permits for all other point source discharges.

The General Industrial Permit applies to all new or existing stormwater discharges and requires that a Stormwater Pollution Prevention Plan (SWPPP) be prepared, implemented, and maintained to: a) identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of stormwater discharges; and b) to identify and implement site-specific BMPs to reduce or prevent pollutants associated with industrial activities in stormwater discharges. BMPs expected to be included in the SWPPP are generally categorized as non-structural BMPs (e.g., activity schedules, prohibitions of practices, maintenance procedures, inspection checklists, etc.) or as structural BMPs (e.g., use of pervious surfaces, containment for chemical storage, retention/detention basins, etc.). An essential element of the process is continual monitoring and record-keeping so that the SWPPP can be refined and more effective BMPs can be implemented if noncompliant discharges occur (EDAW 2006b, p. 4-12).

The overall objective of the SWPPP for a General Industrial Permit is to: 1) identify sources of pollution that affect the quality of industrial stormwater discharges and authorized non-stormwater discharges; and, 2) to implement practices to reduce or prevent pollutants in stormwater discharges. An essential element of the process is continual monitoring and record-keeping so that the SWPPP can be refined and more effective BMPs can be implemented if noncompliant discharges occur. The proposed Project will apply for a General Industrial Permit.

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NPDES Wastewater (Individual) Permits

Permitted wastewater discharges come from two sources: municipal and industrial. Industrial and commercial facilities that discharge treated wastewater directly to surface waters are permitted individually. Wastewater facilities are issued permits based on the volume of wastewater discharged. A wastewater discharger with design flow of at least one million gallons per day (MGD) or that has a pretreatment program is issued a major NPDES permit; a wastewater discharger with a design flow of one MGD or less is issued a minor NPDES permit. Each cultivation and manufacturing facility is estimated to discharge 750 gallons of wastewater per day for a total of 3,000 gallons per day. Thus, the Project would be issued a minor NPDES permit.

Industrial site stormwater management is governed by the SWRCB under Water Quality Order 97-03-DWQ/NPDES General Permit No. CAS000001. These regulations prohibit discharges of stormwater to waters of the U.S. from a broad range of industrial activities, including mining, manufacturing, disposal, recycling, and transportation, unless in compliance with an NPDES permit. To comply with the State General Permit, the owner or operator of an industrial facility must send the State Board a Notice of Intent (NOI) to comply with the General Permit; prepare and implement a SWPPP; verify that any illicit connections to storm drains have been eradicated; develop and execute a Monitoring Plan to assess the effectiveness of BMPs through visual inspection of storm drains during wet and dry weather and storm sampling; and prepare and submit an annual report with monitoring results.

Municipal Separate Storm Sewer System (MS4)

The City of Calexico holds a Phase II General MS4 municipal permit (CAS000001) for stormwater discharges issued by the RWQCB. The Phase II General MS4 Permit is for municipalities serving between 10,000 and 100,000 people. The City has developed a *Draft Stormwater Management Plan* (SWMP) for its Phase II General MS4 Permit to reduce discharge of pollutants to the maximum extent practicable and to protect water quality. The SWMP specifies best management practices (BMPs) to address certain program areas. The program areas include public education and outreach, public participation and involvement, detection and elimination of illicit discharges, runoff control of construction activities, post-construction stormwater management, and good housekeeping for municipal operations. The proposed Project would adhere to the SWMP to reduce discharge of pollutants and protect water quality (City of Calexico 2015b, p. 117).

Water Quality Control Plan Colorado River – Region 7

The Water Quality Control Plan (also known as the Basin Plan) establishes beneficial uses in the Colorado River Basin. The Basin Plan also identifies water quality objectives that protect the beneficial uses of surface water and groundwater; describes an implementation plan for water quality management in the Colorado River Region; and describes measures designed to ensure compliance with statewide plans and policies. Overall, the Basin Plan provides comprehensive water quality planning in Region 7 which encompasses all of Imperial County as well as portions of San Bernardino, Riverside and San Diego Counties. Based on its location in Imperial County, the City of Calexico and the Project parcels are located within the Imperial Valley Basin of the Colorado River Hydrologic Region.

C. LOCAL

City of Calexico General Plan

The Calexico General Plan has been prepared to fulfill the requirement of California law that each city adopt a comprehensive General Plan to guide physical development of the incorporated area and land outside of the municipal boundaries.

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The Safety Element of the Calexico General Plan establishes policies and programs to protect the community from risk associated with geologic hazards (including earthquakes and secondary hazards), flooding, fire (both wildland and urban), hazardous materials, the New River, peak load water supply and emergency access. The goals, objectives, and policies provide direction for development. Calexico's current General Plan dated February 2007 was adopted by the City on May 1, 2007. Although the Safety Element discusses flooding, there are no specific objectives or policies that directly address flooding specifically.

Table 4.8-1 identifies the goal of the City of Calexico General Plan Safety Element relevant to flooding. While this EIR analyzes the Project's consistency with the General Plan pursuant to CEQA Guidelines Section 15125(d), the Calexico City Council ultimately determines consistency with the General Plan.

**TABLE 4.8-1
CITY OF CALEXICO GENERAL PLAN CONSISTENCY ANALYSIS**

General Plan Goal and Objectives	Consistent with General Plan?	Analysis
SAFETY ELEMENT		
8.5.1 Goal To identify and minimize, to the extent possible or feasible, the risks to persons and property caused by natural and human-induced hazards.	Yes	None of the Project parcels are in a flood zone. Thus, the Project would not be subject to flooding. The mitigation measures in this CEQA document for the proposed Project minimizes to the extent feasible the risks to persons and property caused by natural and human induced hazards. Therefore, the proposed Project is consistent with this Goal.

4.8.2 EXISTING SETTING

A. REGIONAL SURFACE WATER CHARACTERISTICS

Watershed

The Project parcels are within the Salton Sea Watershed, the Priority Watershed in the Colorado River Basin Region. The Salton Sea Watershed encompasses one-third of the region (approximately 8,360 square miles) and contains five of Region's six impaired surface water bodies. Most of the watershed is in Imperial County (**Figure 4.8-1**). The watershed has been identified as a Category I (impaired) Watershed under the 1997 California Unified Watershed Assessment.

Existing surface water runoff in the watershed comes from both agricultural and urban uses. Runoff from agricultural activities contains fertilizers and pesticides while from urban runoff contains a variety of pollutants including oil, grease, heavy metals, organic matter, and herbicides. Rain carries pollutants and sediments from all parts of the watershed into storm drains and surface water bodies including streams, rivers and reservoirs.

The Colorado River Basin Regional Water Quality Control Board (RWQCB) designated four water bodies as impaired: Alamo River, Imperial Valley Agricultural Drains, the New River, and the Salton Sea. The New River originates in Mexico and carries urban runoff, untreated and partially treated municipal wastes, untreated and partially treated industrial wastes, and agricultural runoff from Mexicali Valley approximately 60 miles north across the International Boundary into the United States ultimately discharging into the Salton Sea.

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The New River also carries urban runoff, agricultural runoff, treated industrial wastes, and treated, disinfected, and non-disinfected domestic wastes and treated wastewater from point sources from the Imperial Valley. The New River is considered the most polluted river in North America and is included in the Federal Clean Water Act (CWA) Section 303(d) list of impaired waters (City of Calexico 2015b, p. 119).

Hydrologic Setting

Stormwater drainage in the City currently uses a combination of storm drain piping to the New River, detention basins, and IID main and lateral drains. The City is divided into 11 drainage areas with five additional drainage areas identified for future development.

Urban stormwater runoff is discharged into IID drainage canals which eventually drain into the Salton Sea. The IID canals were originally designed to handle only agricultural runoff, and, as such, IID limits the amount of stormwater that is discharged into the canals to prevent downstream flooding. To compensate for the insufficiency of the canals, water detention basins are used to limit/regulate urban stormwater flow into the IID system. Stormwater is diverted into the detention basins and systematically released into the IID canals over an extended time period. In lieu of detention basins, some portions of Calexico also use storm drain piping that discharge into the New River (City of Calexico 2015a, p. 4-3).

Adequacy of drainage facilities is based on conformance with the City of Calexico design criteria for stormwater runoff and management. The design criteria established for determining stormwater runoff and management is based on the City of Calexico Public Works/Engineering Department Design Procedures and Improvement Standards, updated December 1, 2005, and any revisions thereafter. Stormwater detention basin design criterion is based on a 50-year storm event, or rainfall max of 3.0 inches (City of Calexico 2015a, p. 4-3).

Stormwater drainage systems must be installed to ensure adequate removal of runoff to accommodate future development. An increase in the amount of impervious surfaces will result in a greater amount of surface runoff. The exact size and location of future facilities will be determined at the time development is proposed and processed through the City of Calexico. Any future development must continue to comply with Calexico Public Works/Engineering Department Design Procedures and Improvement Standards to implement IID policies regarding retention of stormwater to reduce the impacts to the IID drains (City of Calexico 2015a, p. 4-3).

B. PROJECT PARCELS

The Project parcels are bordered by existing streets on the west and south, vacant land on the north side and by an existing development to the east. The existing streets surrounding the Project parcels slope to the north and to the west at slope percentage rates between 0.16% to 0.22%. The flat topography allows for the rain water to move slowly over the Project parcels and promote absorption into on-site soils and landscaped areas (DD&E 2018, p. 6).

On-Site Drainage

The project Parcels are currently vacant land as well as one building at 2421 Enterprise Boulevard. Non-on-site retention currently exists on any of the parcels. The vacant parcels along Sunset Boulevard are currently unpaved and pervious allowing water to absorb into on-site soils. Drainage for the existing building at 2421 Enterprise Boulevard flows to a retention basin located at the north side of the Portico Industrial Park (DD&E 2018, p. 6) (**Figure 4.8-2**).

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FIGURE 4.8-1
SALTON SEA WATERSHED

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Off-site Drainage

As shown in **Figure 4.8-2**, the existing retention basin serving the Portico Industrial Park was sited at a low point next to the existing IID Strout Drain drainage connection. The existing retention basin was designed to retain the stormwater from the entire Portico Industrial Park (full development 99.62 acres) minus the area of the IID Strout Drain (5.24 acres) for a total project drainage area of 94.38 acres. The retention basin drainage discharges to a City approved drain outlet and from there to the IID Strout Drain (DD&E 2018, p. 6). After a 100-year storm event, the retention basin should empty within 72 hours. If this does not occur the owner should prepare a mosquito abatement plan satisfying the requirements of the County Environmental Health Services Department (DD&E 2018, p. 7).

It should also be noted that the existing retention basin does not have adequate capacity to retain buildout of 100% of the Portico Industrial Park. Therefore, the retention basin capacity may need to be increased when new areas within the Portico Industrial Park are developed such that adequate retention is no longer available (DD&E 2018, p. 9).

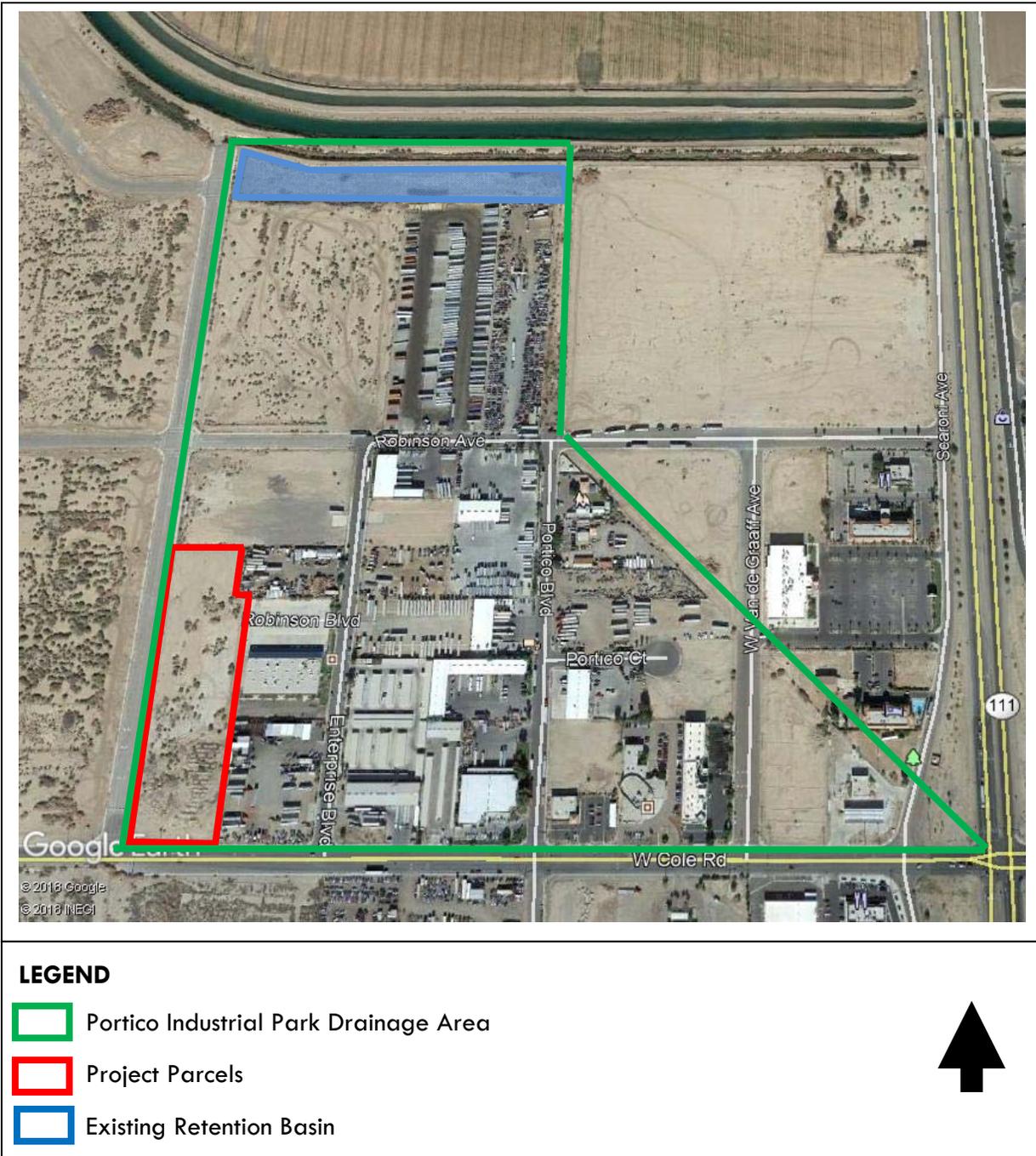
Existing Flooding

The Project parcels appear on FEMA Flood Insurance Rate Map (FIRM) 06025C2075C (September 26, 2008). As shown in **Figure 4.8-3**, all of the Project parcels and surrounding area are located in Zone X, an area determined to be outside of the 0.2% (500-year) annual chance floodplain.

Groundwater

Groundwater conditions at the Project parcels are estimated based on reasonably available data such as groundwater maps, previous subsurface investigations conducted at, or in the vicinity of the Project parcels, and local conditions. Shallow groundwater flow is generally expected to follow the ground level slope of surface elevations towards the nearest open body of water. Estimated groundwater levels may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations (EMG 2017a, p. 8).

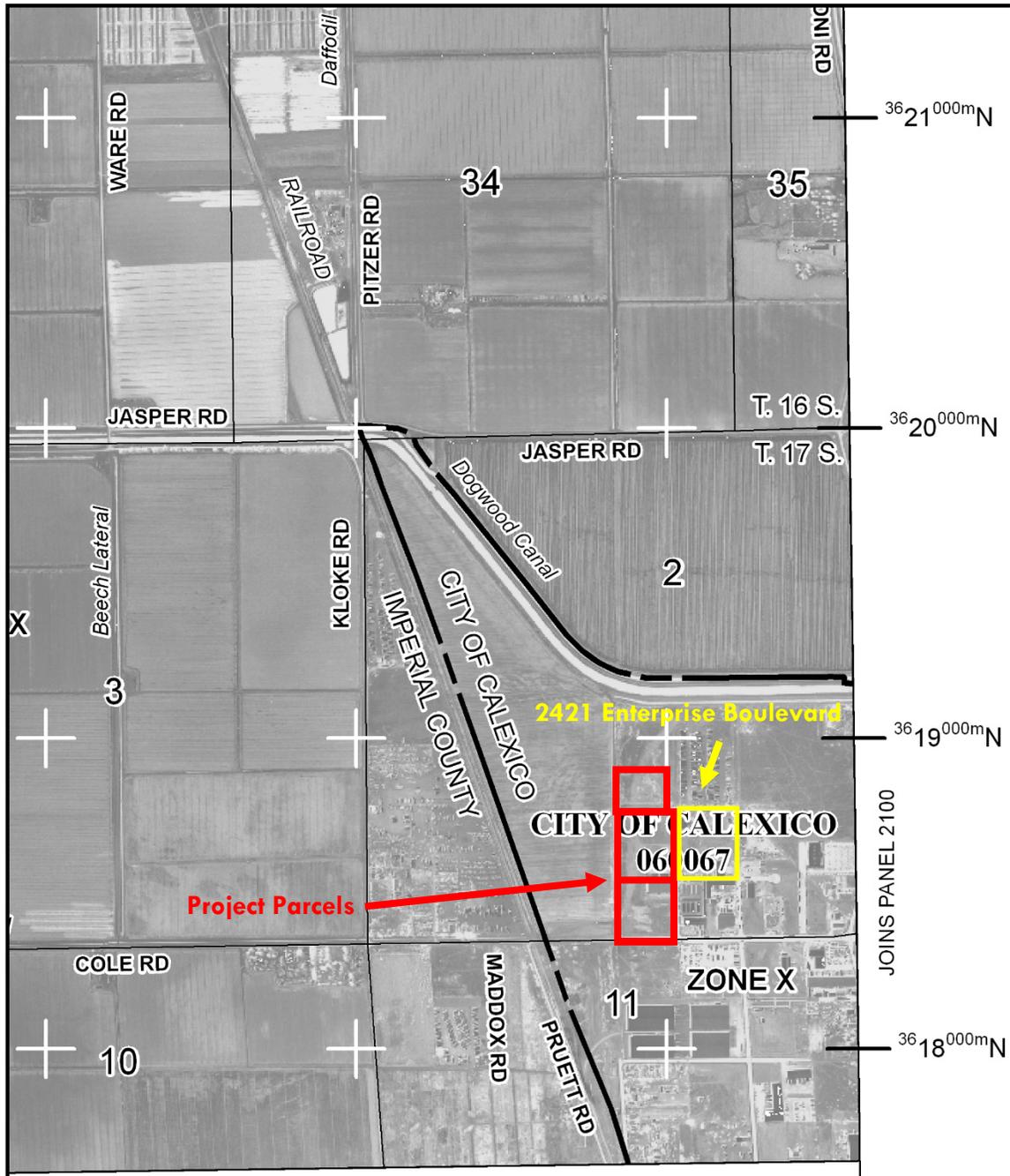
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Source: Base Map Google Earth; EGI.

FIGURE 4.8-2
PORTICO INDUSTRIAL PARK DRAINAGE AREA

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Source: FEMA 2008.

**FIGURE 4.8-3
FEMA MAP OF PROJECT SITE**

4.8.3 IMPACTS AND MITIGATION MEASURES

A. STANDARDS OF SIGNIFICANCE

The impact analysis provided below is based on the following State CEQA Guidelines, as listed in Appendix G. The Project would result in a significant impact to hydrology and water quality if it would result in any of the following:

- a) Violate any water quality standards or waste discharge requirements.
- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- d) Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.
- e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- f) Otherwise substantially degrade water quality.
- g) Place housing within a 100-year flood hazard area as mapped on a Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- h) Place within a 100-year flood hazard area structures which would impede or redirect the flood flows.
- i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- j) Inundation by seiche, tsunami, or mudflow.

B. ISSUES SCOPED OUT AS PART OF THE INITIAL STUDY

Several criteria were scoped out as part of the Initial Study Checklist. Criterion “b” was scoped out because the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The Project would be served with municipal water from the City of Calexico. The City’s water supply source is surface water, not groundwater. Therefore, no impact would occur with regard to this issue.

Criterion “e” was scoped out because the proposed Project would not 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. Thus, issues related to contributions to runoff water will not be discussed further.

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Criterion “f” was scoped out because the proposed Project would not otherwise substantially degrade water quality. Thus, issues related to degradation of water quality will not be discussed further.

Criteria “g” and “h” deals with development within the 100-year floodplain. The Federal Insurance Administration delineates areas of special flood hazards (the risk premium zones) and floodways through official maps: Flood Insurance Rate Map (FIRM); and Flood Boundary and Floodway Map. According to the FEMA FIRM 06025C02075C effective September 26, 2008, all of the Project parcels and the surrounding area is located in Zone X, which is an area determined to be outside of the 0.2% annual chance of a flood. The Project parcels do not include construction of any housing or structures within a 100-year flood hazard area. Therefore, no impact would occur with regard to this issue.

Criterion “i” was scoped out because no dams or levees are in the vicinity of the Project parcels. However, the Imperial Dam is located approximately 60 miles east of the Project parcels on the border of California and Arizona. Thus, it is too far from the Project parcels to result in damage and will not be discussed further.

Lastly, criterion “j” was scoped out because no bays or lakes are located within a two-mile radius of the of the Project parcels. Furthermore, the Project parcels are approximately 100 miles inland from the Pacific Ocean. In addition, the Project parcels and agricultural fields are relatively flat and level. Therefore, there is no potential for the Project parcels to be inundated by seiches, tsunamis, or mudflows. These issues will not be discussed further in this EIR.

C. METHODOLOGY

The analysis of impacts to hydrology and water quality were based on the “Preliminary Drainage Study for the Trinity Cultivation and Manufacturing Facility” (DD&E 2018) (**Appendix G** of this Draft EIR).

D. PROJECT IMPACTS AND MITIGATION MEASURES

Violate Water Quality Standards or Waste Discharge Requirements

Impact 4.8.1 Implementation of the proposed Project would increase runoff during construction as well as during operation through the introduction of buildings and impervious surfaces. Pollutants would be introduced to the site that could be transported offsite in stormwater runoff. Therefore, the Project’s potential to violate water quality standards or waste discharge requirements is considered a **potentially significant impact**.

Construction

The Project parcels are relatively flat and require minimal grading to accommodate construction on Parcels 1, 2 and 3. No soil import or export is proposed. The area to be disturbed (exclusive of the existing parcel developed with 2421 Enterprise Boulevard) is 6.23 acres.

Construction site stormwater management is enforced by the Colorado River Basin RWQCB in accordance with the State’s Water Quality Order 99-08-DWQ/NPDES General Permit No. CAS000002 (General Construction Permit). The RWQCB requires an NPDES permit for construction activities that disturb 5 or more acres. Without an NPDES permit, Stormwater Pollution Prevention Plan (SWPPP) or implementation of BMPs, construction activities associated with the project would result in a **potentially significant impact** to water quality standards and discharge requirements.

This process requires preparation and implementation of a SWPPP that specifies Best Management Practices (BMPs) to prevent construction-related pollutants from being exposed to runoff that can transport pollutants into nearby receiving waters. In addition, the BMPs must eliminate or reduce non-

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stormwater discharges to storm sewer systems and waters of the U.S. The Project would be required to comply with the requirements of the SWRCB Order No. 2009-0009, NPDES General Permit No. CAS000002, "General Permit for Stormwater Discharges Associated with Construction Activity". Compliance with the Permit would reduce impacts associated with the Project's potential to violate water quality standards or waste discharge requirements to **less than significant**.

Operations

The Project parcels will be developed with parking lots, trash enclosures and outfitted with a back-up diesel generator (one for each cultivation and manufacturing facility). Drainage from the Project parcels will flow to the north and west along the existing streets to an existing retention basin located on the north side of the Portico Industrial Park area. Stormwater runoff from impervious surfaces on the Project parcels could transport contaminants such as diesel and other pollutants off-site. Without implementation of measures to capture pollutants, stormwater discharge could result in a **potentially significant impact** to water quality standards and discharge requirements during Project operations.

Mitigation Measures

MM 4.8.1a The Project shall be designed and constructed in compliance with the NPDES permit and all applicable State and local water quality requirements prior to the commencement of construction.

Timing/Implementation: NPDES Permit acquired prior to start of construction/During construction.

Enforcement/Monitoring: City of Calexico Engineering Department.

MM 4.8.1b A Storm Water Pollution Prevention Plan (SWPPP) shall be developed and implemented for the Project parcels. The SWPPP shall identify pollutant sources that may affect storm water quality discharges during construction. The SWPPP shall include various pollution prevention measures such as erosion and dust control. The SWPPP shall also include a comprehensive Best Management Practices (BMPs) Guide for contractors during construction.

Timing/Implementation: SWPPP developed and approved prior to start of construction/During construction.

Enforcement/Monitoring: City of Calexico Engineering Department.

MM 4.8.1c The Applicant of each cultivation and manufacturing facility and the Applicant responsible for the Transportation and Distribution Facility shall comply with the local Standard Stormwater Mitigation Plan (SWMP) for parking lots and commercial development.

Timing/Implementation: In place prior to issuance of an Occupancy Permit/Implemented over the operational lifetime of each cultivation and manufacturing facility and the transportation and distribution facility.

Enforcement/Monitoring: City of Calexico Engineering Department.

MM 4.8.1d Outside trash container areas shall have leak proof covers on dumpsters, a screened enclosure, and drainage routed around the area.

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Timing/Implementation: Over the operational lifetime of each cultivation and manufacturing facility.

Enforcement/Monitoring: City of Calexico Building Department/City Code Enforcement.

MM 4.8.1e Each diesel generator shall be outfitted with secondary containment to prevent spilled diesel from being carried off site by stormwater runoff.

Timing/Implementation: As a condition of Project approval/installed during construction
Enforcement/Monitoring: City of Calexico Building Department/City Code Enforcement.

Significance after Mitigation

Implementation of mitigation measures MM 4.8.1a thru MM 4.8.1e would ensure that water quality standards or discharge requirements are not violated. Obtaining an NPDES permit, preparing a SWPPP and implementing BMPs would address possible off-site transport of pollutants during construction. During operation, implementation of the City SSMP, as well as mitigation measures MM 4.8.1.d and MM 4.8.1e would protect water quality by containing any leak from dumpsters and possible diesel spill. Following implementation of these measures construction and operation of the proposed Project would result in a **less than significant impact** to water quality standards and discharge requirements.

Result in Substantial Erosion or Siltation On- or Off-Site

Impact 4.8.2 The Project would develop approximately 6.23 acres of vacant land. Implementation of the proposed Project could generate erosion during construction in association with disturbance of on-site soils. Therefore, the project's potential to result in substantial erosion or siltation on- or off-site considered a **potentially significant impact**.

Construction

Project construction involves earthwork in association with site preparation and construction of three new buildings on Parcels 1, 2 and 3. Soil erosion, sedimentation and pollutants in runoff (e.g. grease, oils, sediment, and heavy metals) would be controlled during construction in accordance with the Construction General Stormwater Permit, which regulates stormwater discharges from construction sites that disturb one or more acres of land (Mitigation Measure MM 4.8.1a). A SWPPP would also be required (MM 4.8.1b). The SWPPP would be prepared by a Qualified SWPPP Developer (QSD) and implemented by a Qualified SWPPP Practitioner (QSP). The SWPPP must be designed to ensure the following requirements are met:

- All pollutants and their sources including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity, are controlled;
- Where not otherwise required to be under a RWQCB permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges from construction activity;
- Calculations and design details as well as BMP controls for site run-on are complete and correct, and;
- Stabilization BMPs installed to reduce or eliminate pollutants after construction is completed.

The SWPPP should contain a site map(s) showing the construction site perimeter; existing and proposed buildings, lots, roadways, stormwater collection and discharge points; general topography both before and after construction; and, drainage patterns across the proposed project. The SWPPP must list BMPs

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to protect stormwater runoff and the placement of the BMPs. Typical soil erosion and sedimentation BMPs expected to be used in the SWPPP include, but are not limited to: straw wattles, check dams, fabric blankets, and silt fencing. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment (SWRCB 2011). The SWPPP should be implemented by a QSP.

Based on the Project parcel's configuration and implementation of the requirements summarized above, construction of the proposed Project parcels would result in **less than significant** impacts with regard to substantial erosion or siltation on- or off-site.

Operations

During operation of the four cannabis cultivation and manufacturing facilities and the Transportation and Distribution Facility, soil erosion and sedimentation will be controlled in accordance with the Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities Excluding Construction Activities (currently Order No. 97-03-DWQ; NPDES No. CAS000001, referred to herein as the "General Industrial Permit"). With implementation of BMPs and compliance with NPDES requirements during operations, the proposed Project parcels would result in **less than significant** impacts with regard to substantial erosion or siltation on- or off-site.

Mitigation Measure

Implement mitigation measures MM 4.8.1a and MM 4.8.1b.

MM 4.8.2 The Project contractor shall install erosion barriers and apply soil stabilizers on exposed soil during site preparation and grading.

Timing/Implementation: During site preparation and grading/Project contractor.

Enforcement/Monitoring: City of Calexico Engineering Department.

Significance after Mitigation

Implementation of mitigation measures MM 4.8.1a and MM 4.8.1b would ensure that the Project contractor complies with the requirements of the NPDES permit and SWPPP and applies BMPs to reduce off-site soil erosion during construction. In addition, MM 4.8.2 would require the Project contract to install erosion barriers and apply soil stabilizers during construction. With implementation of these measures, erosion or siltation on- or off-site would be considered a **less than significant impact**.

Result in Substantial Flooding On- or Off-Site/Create or Contribute Runoff Exceeding Capacity

Impact 4.8.3 Implementation of the proposed Project would increase on-site runoff and contribute additional discharges to the City infrastructure and the IID drain system. Based on the adequacy of existing storm drainage infrastructure, the Project's potential to result in substantial flooding on- or off-site, or to create or contribute runoff exceeding capacity, is considered a **less than significant impact**.

Construction

Development of the Project will result in the construction of industrial buildings and associated paved areas on undeveloped land. The addition of these buildings and would alter the existing drainage pattern and introduce impervious surfaces to previously undeveloped land. All on-site stormwater contributions will be managed within the limits of Project parcels and will be directed to the existing Sunset Boulevard curb for collection in the Stout Drain. During construction, the Project would

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implement a SWPPP and the requirements of a NPDES permit. Therefore, the proposed project would result in a **less than significant impact** with respect to on- or off-site flooding during construction.

Operations

Operation of the proposed Project is not anticipated to result in substantial flooding on- or off-site. The Project parcels are bordered by existing roads on the west and south, vacant land on the north and existing development to the east. Drainage from the Project parcels will flow west to Sunset Boulevard and then sheet flow north to the existing Portico Industrial Park retention basin (**Figure 4.8-2**). The retention basin discharges into the IID Strout Drain. No stormwater contributions will be discharged to any neighboring property.

The existing retention basin can retain 96% of the required storage according to the City of Calexico Standards for the actual developed area including the Trinity Cannabis Cultivation and Manufacturing Facility (DD&E 2018, p. 9). Therefore, the existing retention basin is adequate to retain the drainage of the existing developed areas including the Trinity Cannabis Cultivation and Manufacturing Facility. As a result, the Project's potential to result in substantial flooding on- or off-site, or to create or contribute runoff exceeding capacity, is considered a **less than significant impact**.

Mitigation Measures

None required.

Significance after Mitigation

Not Applicable.

4.8.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

A. CUMULATIVE SETTING

The cumulative setting for hydrologic resources is the Imperial Hydrologic Unit of the Salton Sea watershed in the Colorado River region. The hydrologic unit code is 18100200 of the USDA National Resources Conservation Services (NRCS). The Salton Sea Watershed encompasses an area of approximately 8,000 square miles that extends from San Bernardino County in the north to the Valley of Mexicali (Republic of Mexico) in the south (refer to **Figure 4.8-1**). The Salton Sea lies at the lowest point in the watershed (approximately 270 feet below mean sea level) and collects runoff and agricultural drainage from most of Imperial County, a considerable portion of Riverside County, small portions of San Bernardino and San Diego Counties, as well as the northern portion of the Valley of Mexicali.

The principal sources of inflow to the Salton Sea include: the Alamo River, New River, Whitewater River/Coachella Valley Storm Channel, direct drainage from Imperial and Coachella Valleys, subsurface inflow from groundwater, San Felipe Creek, Salt Creek, other smaller local drainages, and direct precipitation. In addition, approximately one-third of the water delivered to agricultural users in the Imperial Valley is discharged into the IID's drainage system which ultimately makes its way to the Salton Sea.

The cumulative projects listed in Table 3.0-1 in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used, including the proposed project, would result in the conversion of undeveloped land within the City of Calexico to urban uses. As none of the cumulative projects are active agricultural land, the proposed projects would not contribute to reductions in the amount of agricultural runoff inflows to the Salton Sea.

B. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Impact to Hydrology and Water Quality

Impact 4.8.4 The proposed Project, in combination with existing, approved, proposed and other reasonably foreseeable projects in the Salton Sea watershed may contribute to the cumulative effects of degradation of water quality and changes in runoff patterns ultimately discharging to the Salton Sea. The proposed Project would not have any effect on flows to the Salton Sea. Therefore, cumulative impacts to hydrology and water quality are considered **less than cumulatively considerable**.

Approximately one-third of the water delivered to agricultural users in the Imperial Valley is discharged into the IID's drainage system. Reduction in field drainage due to land use conversion has an incremental effect on drain water quality, the volume of runoff in impacted drains, and the subsequent drainage path to the Salton Sea.

Reduction in Water Quantity and Quality

As described in the cumulative setting above, surface waters in the Imperial Valley ultimately drain into the Salton Sea via the New River and Alamo River as well as via irrigation drains and canals. Until recently, the amount of water entering the Salton Sea was roughly balanced by the amount of water evaporating from its surface. However, due to increased demand for water supplies in the region and recent IID water transfer agreements, increasing amounts of water are being consumed in the Imperial Valley as well as transferred out of the Valley to population centers such as San Diego County. The combined effect of demand and water transfers has resulted in a reduction of inflows to the Salton Sea (PMC 2011).

Agricultural runoff contributes significantly to total inflows to the Salton Sea. As irrigated agricultural land is converted to non-agricultural use, the associated runoff ceases to drain into the New and Alamo rivers, ultimately reducing the Sea's total inflows. As vacant land zoned for industrial and commercial highway uses, the Project parcels do not receive irrigation water but would contribute minimal amounts of runoff into IID's canal system via the Stout Drain.

The total drainage area for the Salton Sea is 8,360 square miles. The Sea has a total volume of approximately 7,500,000 AF and a surface area of 240,639 acres. Development of the Project parcels with Buildings A, B and C and associated parking lots, in addition to drainage from the entire Portico Industrial Park, would have a net positive effect on the volume of water in the Salton Sea. This is because an estimated 14.29 acre-feet of storage provided for the Portico Industrial Park would discharge into IID's canal system via the Stout Drain. As previously noted, the Project would be required to obtain a General Industrial Permit and implement BMPs to control stormwater discharges. Therefore, the Project's contribution to cumulative water quantity and quality impacts to the Salton Sea, IID's drainage system, and the New River are considered **less than cumulative considerable**. The additional discharge from the Portico Industrial Park, including the Project parcels, into the IID drainage system would result in an incremental improvement in water quality with implementation of the requirements of the General Industrial Permit and BMPs. Projects throughout the City would increase the quantity stormwater discharge to IID canals and must mitigate for water quality impacts on a project-by-project basis. Therefore, cumulative impacts to water quantity and quality in the Salton Sea resulting from cumulative projects would be **less than cumulatively considerable**.

Mitigation Measures

Implement Mitigation Measures MM 4.8.1a, MM 4.8.1b, MM 4.8.1c, MM 4.8.1d, MM 4.8.1e, and MM 4.8.2.

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Significance After Mitigation

Implementation of project-specific mitigation measures would address potential for the Project to violate water quality standards or waste discharge requirements through designing and constructing the Project in compliance with the NPDES permit and all applicable State and local water quality requirements prior to the commencement of construction (MM4.8.1a); development and implementation of a SWPPP (MM 4.8.1b); compliance with the local SSMP for parking lots and commercial development (MM 4.8.1c); outfitting outside trash containers with leak proof covers on dumpsters, and a screened enclosure and drainage routed around the area (MM 4.8.1d); and outfitting each diesel generator with secondary containment to prevent spilled diesel from being carried off site by stormwater runoff (MM 4.8.1d); and requiring that the Project contractor install erosion barriers and apply soil stabilizers on exposed soil during site preparation and grading. Therefore, following implementation of these mitigation measures, cumulative impacts associated with hydrology and water quality would be **less than cumulatively considerable**.