

4.8 Hydrology and Water Quality

4.8.1 Existing Conditions

4.8.1.1 *Hydrologic Setting*

The proposed project is located in a highly rural location within the City of Calexico. The project site is located within the Colorado River Basin (CRB) Regional Water Quality Control Board (RWQCB), Region 7. The CRB contains 63 major drainage basins, which encompasses all of Imperial County and parts of Riverside San Bernardino and San Diego Counties and is over 13 million acres in size.

The CRB has been separated into six different planning areas; the Imperial Valley Planning Area, Anza-Borrego Planning Area, Coachella Valley Planning Area, Hayfield Planning Area, East Colorado River Planning Area, and Lucerne Planning Area. The proposed project lies within the Imperial Valley Planning Area that covers 2,500 square miles in the southern portion of the region, almost all of it in Imperial County. Its northern boundary is along the Salton Sea and the Coachella Valley Planning Area. The easterly and westerly boundaries are contiguous with the westerly and easterly boundaries of the East Colorado River Basin and the Anza-Borrego Planning Area respectively. Its southerly boundary is along the International Boundary with Mexico. The Planning Area contains the cities of El Centro, Brawley, and Calexico. The Planning Area drains mostly toward the Salton Sea and is drained by the New and Alamo Rivers (RWQCB, 2005). Figure 4.8-1 depicts the general location, and the configuration of these planning areas.

The project site is located within the Imperial Hydrologic Unit (HU) (723.00) and the Brawley Hydrologic Area (HA).

4.8.1.2 *Existing Hydrology/Drainage*





All watersheds within the Imperial Valley drain into the Salton Sea, a closed water body located at an elevation of 270 feet below sea level. The Valley is within the Salton Trough, which is a depression that has its high point on the Colorado River Delta, in Mexico, at an elevation of 47 feet above sea level, and at its lowest point at -275 feet below sea level near the Riverside County Line. The lowest elevational area is the bed of the ancient Lake Cahuilla that existed about 600 years ago when the Colorado River probably flowed inland. The main sources of inflows into the Salton Sea are from the New and Alamo Rivers that flow from the Colorado River delta through the irrigated fields of the Valley and into the Salton Sea. These rivers also convey surface runoff and lesser amounts of treated municipal and industrial wastewaters from the Imperial Valley. The total watershed area draining into the Salton Sea covers 8,360 square miles (Calexico, 2004).

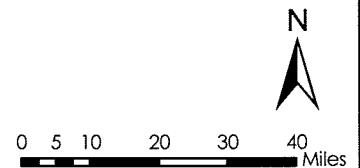
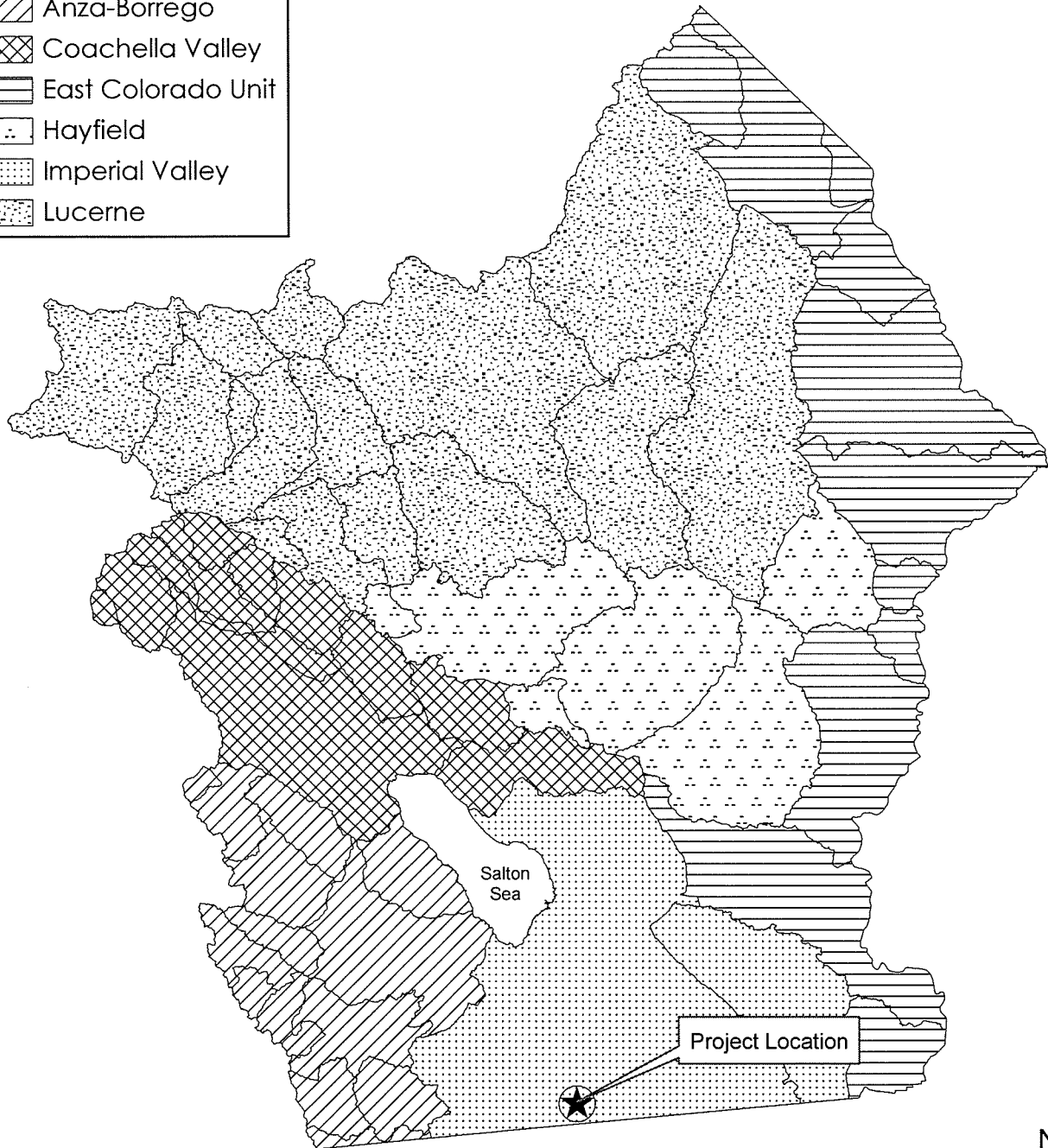
The proposed project site is currently vacant and undeveloped. The terrain is flat and slopes approximately 0.2 percent from the south to the north. Mean annual rainfall for this area is 3 to 4 inches per year.

As discussed in the Previous EIR, the project site is underlain by a network of perforated pipes referred to as "tile drains", located at a depth of 5 to 7 feet below the existing ground surface. These tile drains were

Legend

Planning Areas

-  Anza-Borrego
-  Coachella Valley
-  East Colorado Unit
-  Hayfield
-  Imperial Valley
-  Lucerne



SOURCE: Teale GIS Data Group, 1997; BRG Consulting, Inc., 2008

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Colorado River Basin Planning Area

FIGURE
4.8-1

used to capture seepage waters from the previous agricultural irrigation operations when the site was used for agriculture. The tile drains convey these flows to a sump pump located at the intersection of Jasper Road and future Sunset Boulevard. Flows are pumped from this location to the existing Stout Drain canal north of Jasper Road (City of Calexico, 2001).

4.8.1.3 Existing Flooding

~~As discussed in the Previous EIR,~~ The project site is located in Zone "GX" area, which is subject to minimal flooding defined as an area determined to be outside the 0.2 percent annual change floodplain, as shown on the effective Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) dated March 15, 1984 ~~(City of Calexico, 2001)~~ September 26, 2008). The project is located outside the 100-year floodplain boundaries, as determined by FEMA. As such, the project site is not subject to significant amounts of flooding.

4.8.1.4 Existing Water Quality

A. Water Quality Control Plan for the Colorado River Basin Region

The federal Clean Water Act and the California Porter-Cologne Water Quality Control Act require that Water Quality Control Plans (more commonly referred to as Basin Plans) be prepared for the nine state-designated hydrologic basins in California. Each of the nine regional boards in California is required to adopt a Basin Plan. The Basin Plan serves to guide and coordinate the management of water quality within the region. According to the Basin Plan, "the intent of the Basin Plan is to provide definitive guidelines, and give direction to the full scope of Regional Board activities that serve to optimize the beneficial uses of the state waters within the Colorado River Basin Region of California by preserving and protecting the quality of these waters." Specifically the Basin Plan: (1) designates beneficial uses for inland surface waters, reservoirs and lakes, and ground water; (2) sets both numerical and non-numerical (narrative) water quality objectives that must be attained or maintained to protect the designated beneficial uses; (3) describes implementation programs to protect the beneficial uses of all waters in the Region; and, (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan. The Basin Plan incorporates by reference all applicable State and Regional Board plans and policies.

B. Beneficial Uses

Beneficial uses of surface water and groundwater have been established for surface and ground waters in the region. According to the RWQCB Basin Plan:

- Beneficial uses are defined as the uses of water necessary for the survival or well being of man, plants and wildlife. The uses of water serve to promote the tangible and intangible economic, social and environmental goals of mankind.
- Examples include the drinking, swimming, industrial, and agricultural water supply, and the support of fresh and saline aquatic habitats. According to the Basin Plan, beneficial uses have been designated for specific coastal water bodies, inland surface waters, and groundwater.

In 1972, the State Water Quality Control Board (SWQCB) adopted a uniform list and description of beneficial uses to be applied throughout all hydrological basins of the State.

The following are definitions of applicable beneficial uses:

MUN – Municipal and Domestic Supply: Includes uses of water community, military, or individual water supply systems including, but not limited to, drinking water supply.

AGR – Agricultural Supply: Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

AQUA – Aquaculture: Includes uses of water for aquaculture or mariculture operations including, but not limited to, propagation, cultivation, maintenance, or harvesting of aquatic plants and animals for human consumption or bait purposes.

FRSH – Freshwater Replenishment: Includes uses of water for natural or artificial maintenance of surface water quantity or quality.

IND – Industrial Service Supply: 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, and oil well repressurization.

GWR – Ground Water Recharge: Includes uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting salt water intrusion into fresh water aquifers.

REC1 – Water Contact Recreation: 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, and use of natural hot spring.

REC2 – Non-Contact Water Recreation: Includes uses of water for recreational activities involving proximity to water, but not normally involving 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.

WARM – Warm Freshwater Habitat: Includes uses of water that support warm ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.

WILD – Wildlife Habitat: Includes uses of water that support terrestrial ecosystems including, but not limited to, the preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

POW – Hydropower Generation: Uses of water for hydropower generation.

RARE – Preservation of Rare, Threatened, or Endangered Species: 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.

Inland Surface Waters

As discussed above, there are no drainages located on the project site, surface water from the project site flows into tile drains and then into the Strout Drain and ultimately into the Salton Sea. Table 4.8-1 describes the existing and potential beneficial uses of the water bodies within the Imperial HU.

TABLE 4.8-1
Beneficial Uses Of Surface Waters

Water Body	M U N	A G R	A Q U A	F R S H	I N D	G W R	R E C 1	R E C 2	W A R M	W I L D	P O W	R A R E
Canals:												
All American Canal System	X	X	X	X	X	X	X	X	X	X	X	X
Drains:												
Alamo River				X			X	X	X	X	P	X
Imperial Valley Drains				X			X	X	X	X		X
New River				X	P		X	X	X	X		X
Lakes:												
Salton Sea			X		P		X	X	X	X		X
Sunbeam Lake	P	X					X	X	X	X		
Unlisted Perennial and Intermittent Streams	P			I X		I X	I X P	I X	I X	I X		I X
Washes (Ephemeral Streams)				I		I		I		I		

Note: I = Intermittent Uses; X = Existing Uses; P = Potential Uses

Source: RWQCB, 2005.

Groundwater

Ground water is stored in the Pleistocene sediments of the valley floor, the mesas on the west, and the East Mesa and sand hills on the east. However, the fine-grained lake sediments in the central portion of Imperial Valley inhibit ground water movement, and tile-drain systems are utilized to dewater the sediments to a depth below the root zone of crops and to prevent the accumulation of saline water on the surface (RWQCB, 2005).

Factors that diminish ground water reserves are consumptive use, evapotranspiration, evaporation from soils where ground water is near the surface, and losses through outflow export.

The existing and potential beneficial uses of groundwater in the Imperial HU of the Imperial Valley Planning Area include:

- Municipal and Domestic Supply (MUN); and,
- Industrial service supply (IND).

Based on a Geologic Hazards Evaluation prepared by Kleinfelder for the proposed project (August 16, 2007) (Technical Appendices - Volume II of II, Appendix I of this EIR), no groundwater seeps were observed on the project site.

C. Water Quality Objectives

Like the designation of beneficial uses, the designation of water quality objectives must satisfy all of the applicable requirements of the California Water Code, Division 7 (Porter-Cologne Act) and the Clean Water Act, California Water Code, Section 13241 provides that each RWQCB shall establish water quality objectives for the waters of the state (i.e., surface and ground water) which, in the Regional Board's judgment, are necessary for the reasonable protection of beneficial uses and for the prevention of nuisance. The Clean Water Act Section 303 requires that the State adopt water quality objectives (called water quality criteria) for surface waters.

D. 303(d) List of Water Quality Limited Segments

The RWQCBs identify water quality objectives in order to protect the designated beneficial uses of the water bodies. Section 303(d) of the federal Clean Water Act (CWA, 33 USC 1250, *et seq.*, at 1313(d)), requires States to identify waters that do not meet water quality standards after applying certain required technology-based effluent limits. Waters that do not meet the water quality standards are referred to as "impaired" water bodies. States are required to compile this information in a list and submit the list to the United States Environmental Protection Agency (USEPA) for review and approval. This list is known as the Section 303(d) List of Water Quality Limited Segments. As part of the listing process, States are required to prioritize water/watersheds for future development of total maximum daily load (TMDL). The TMDL establishes the allowable pollutant loadings or other quantifiable parameters for a water body and provides the basis for the State to establish water quality based controls. The purpose of TMDLs is to ensure that beneficial uses of the water body are restored and that the water quality objectives are achieved. On July 25, 2003 USEPA gave final approval to California's 2002 Section 303(d) List of Water Quality Limited Segments.

The runoff from the proposed project will flow into the Strout Drain located in the northern boundary of the project site. The Strout Drain is not listed as an impaired waterbody on the 2006 303(d) list. Downstream receiving waters include the Alamo River, which has 303(d) impairments for Pesticides and PCBs. The final receiving water, the Salton Sea, has 303(d) impairments for Nutrients, Salinity, and Selenium. Table 4.8-2 summarizes project receiving waters listed on the 303(d) list and their relative impairments.

Table 4.8-2
Project Receiving Waters 303 (d)

Receiving Water	Hydrologic Unit Code	303 (d) Impairments	Distance From Project Site
Strout Drain	723.00	None	Adjacent to the Northern Boundary of the Project Site
Alamo River	723.10	Chlorpyrifos, DDT, Dieldrin, PCBs, Toxaphene	7.3 miles
Salton Sea	728.00	Nutrients, Salinity, Selenium	29.3 miles

Source: BRG Consulting, Inc.

Under historical conditions, the project site was used for agriculture purposes. Primary pollutants of concern for such a land use include nutrients (from fertilizers), salts, chemicals (from pesticides and insecticides) and sediment (from erosion of non-vegetated areas).

Land use from the proposed project site will change from fallow and undeveloped land (previously agriculture) to commercial highway with a casino facility. Therefore, the potential pollutants for the proposed project will be primarily sediment, nutrients, oil and grease, metals, trash and debris, pathogens, and pesticides. By removing the potential for the site to revert back to agriculture use, the discharge pollutants such as nutrients, salts and pesticides will either be eliminated or decreased significantly. In addition, although increasing the amount of impervious surface, construction of paved surfaces and parking lots will result in a decrease in sediment discharge to the drainage system from the project site.

4.8.1.5 Regulatory/Legal Basis for Authority

A. Clean Water Act

The principal federal and state laws pertaining to the regulation of water quality are known respectively, as the 1972 Federal Water Pollution Control Act (also known as the Clean Water Act) and Division 7 of the 1969 California Water Code (also known as the Porter-Cologne Water Quality Control Act). The laws are similar in many ways. The fundamental purpose of both laws is to protect the beneficial uses of water. An important distinction between the two is that the Porter-Cologne Water Quality Control addresses both ground and surface waters while the Clean Water Act (CWA) addresses surface water only. The CRB RWQCB has developed policies, rules, and procedures, and has been granted the authority to implement and enforce the laws and regulations requiring the control of water quality.

The CWA also established the National Pollutant Discharge Elimination System (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. With regard to construction-related non point source

storm water discharges, the NPDES permit applicable to this project is the General Construction Storm Water Permit.

B. General Construction Storm Water Permit

Pursuant to Section 402(p)(4) of the CWA, EPA promulgated regulations for NPDES permit applications for storm water discharges. On November 16, 1990, the EPA published final regulations that establish storm water discharges to waters of the United States from construction projects that encompass one (1) or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, NPDES General Permit No. CAS2000002, "General Permit for Storm Water Discharges Associated with Construction Activity", is the active general storm water construction activity permit for the State of California and RWQCB.

This permit was modified and reissued on August 19, 1999 based on a court challenge by the San Francisco, Santa Monica, San Diego, and Orange Coast Bay Keepers groups. The Court issued a judgment and directed the SWRCB to modify the provisions of the General Permit to, among others, require permittees to implement specific sampling and analytical procedures to determine whether Best Management Practices (BMPs) implemented on the construction site are: 1) preventing further impairment by sediment in storm waters discharged directly into waters listed as impaired for sediment or silt; and 2) preventing other pollutants, that are known or should be known by permittees to occur on construction sites and that are not visually detectable in storm water discharges, from causing or contributing to exceedences for water quality objectives. Based on the Court's direction, the two areas of the permit that were modified were the Storm Water Pollution Prevention Plan (SWPPP) and the Monitoring Program and Reporting Requirements portions of the permit.

The CRB RWQCB administers the NPDES permit program regulating storm water from construction activities for projects greater than one acre in size in the project site. In order to be in compliance with the Permit, all projects involving one acre or more of soil disturbance require a General Construction Storm Water Permit, which includes the following:

- Notices of Intent (NOIs) – Certification to be signed by owner of the construction site.
- Storm Water Pollution Prevention Plans (SWPPPs). Required elements of SWPPP include: 1) Site description addressing the elements and characteristics specific to the site; 2) Description of BMPs for erosion and sediment controls; 3) BMPs for construction waste handling and disposal; (4) Implementation of approved local plans; (5) Proposed post-construction controls, including description of local post-construction erosion and sediment control requirements; (6) Non-storm water management; (7) Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity which discharge into water bodies listed on the 303 (d) List of Water Quality Limited Segments; and 8) For all construction activity, identify a sampling and analysis strategy and sampling schedule for pollutants which are not visually detectable in storm water discharges, which are known to occur on the construction site, and which could cause or contribute to an exceedance of water quality objectives in receiving waters.

- Monitoring Program and Reporting Requirements – Including inspection of prevention measures record keeping and annual certification of compliance, due July 1, 1993, and each July 1st thereafter. Dischargers of storm water associated with construction activity that directly enters a water body listed on the 303 (d) List of Water Quality Limited Segments shall conduct a sampling and analysis program for the pollutants causing the impairment. Discharges that flow through tributaries that are not listed on the 303(d) List of Water Quality Limited Segments or that flow into MS4 are not subject to these sampling and analysis requirements.

C. Best Management Practices

Best Management Practices (BMPs) were originally developed to protect water quality by controlling erosion and sedimentation at the source. They have since been expanded to include controlling the volume and concentration of chemical pollutants entering Waters of the United States.

BMPs include such standard practices as lengthening runoff detention periods, covering bare areas with mulches, constructing infiltration facilities, and providing public education as to the consequences, both legally and environmentally, of illicit discharges to storm drains.

Quality control BMPs are further subdivided into source control BMPs as the primary system, and treatment BMPs as the secondary system. Treatment BMPs are more effective and efficient when used to handle pollutants that get past the source control BMPs. Quantity control BMPs are subdivided into volume control (e.g., infiltration and retention BMPs) and those directed toward peak rate control (e.g., detention facilities).

To maximize efficiency and minimize costs, treatment and quantity control BMPs can be designed into a single facility. An example is the use of a wet pond, which treats storm water by allowing solids to settle out and promoting biological assimilation of dissolved pollutants through the use of an extended retention period. Peak rate is then obtained through the controlled release of water from the pond.

In order to select, design and implement the most effective and efficient BMPs, certain parameters have to be established. Important items to consider include identification of target pollutants, physical and chemical characteristics of those pollutants, anticipated volumes and concentrations of pollutants and storm water, and any regulatory action levels (e.g., drinking water standards, nondegradation policies).

Some of the potential BMPs that would be implemented during the various phases of construction of the proposed project include, but are not limited to:

- soil stabilizers;
- scheduling grading during dry periods;
- preservation of existing vegetation;
- designated storage and vehicle areas; and/or
- temporary landscaping.

4.8.2 Impact Thresholds

For purposes of this EIR, a significant Hydrology and Water Quality impact would occur if implementation of the proposed project would:

- *Violate any water quality standards or waste discharge requirements;*
- *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will 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 will drop to a level which will not support existing land uses or planned uses for which permits have been granted);*
- *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 will result in substantial erosion or siltation on- or off-site;*
- *Substantially alter the existing drainage pattern 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 will result in flooding on- or off-site;*
- *Create or contribute runoff water which will exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;*
- *Otherwise substantially degrade water quality;*
- *Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;*
- *Place within a 100-year flood hazard area structures that will impede or redirect flood flows;*
- *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; and/or*
- *Inundate by seiche, tsunami, or mudflow.*

4.8.3 Impact Analysis

4.8.3.1 Hydrology/Drainage

The proposed project would include the construction of buildings, roads and parking lots. Such construction would increase the impervious surface area on the site. Because the project site is currently undeveloped, proposed development will create an increase in impervious surface area and there will be a corresponding level of increased storm water runoff volumes. However, the development of the site will not cause any diversion to or from the existing condition watershed. Surface inlets and roof drains would collect on-site runoff from the developed project site and would convey flows through an underground storm drain system to one of four on-site detention basins.

As discussed in the *Utility Study* prepared by BJ Engineering and Surveying, Inc. for the proposed project (dated February 2008) provided as Appendix H to this EIR, currently the subsurface system drain lines on the project site,

known as tile lines, collect and drain the site, there are no existing city drainage facilities on the project site. However, with the proposed project these tile lines will be cut and plugged. The proposed storm drain system includes a number of pipe sizes from 15 inches up to 42 inches that will be designed for a 25-year storm event, which is consistent with the City's design guidelines. In addition, four detention basins will be developed on-site. One detention basin will be located on Lot 1 and the other three will be located on Lot 7. The detention basin located on Lot 1 will have a capacity of 1,986,690 cubic feet. The detention basins on Lot 7 will have the capacities of 798,120 cubic feet and 99,495 cubic feet. The detention basins will drain into the Strout Drain within 72 hours and will be designed for a 100-year storm event, which is consistent with the requirements of the City of Calexico. Figure 4.8-2 depicts the proposed storm drain system for the proposed project.

Contaminates associated with urban non-point source pollution (e.g., grease, oils, herbicides, pesticides, and synthetic/organic chemicals) could enter the on-site detention basins as a result of construction or post-construction activities, resulting in potential significant water quality impacts. However, compliance with regulations concerning a National Pollution Discharge Elimination System (NPDES) general permit, as well as rules found in the Federal Clean Water Act, Section 402(p)(1) and 40 CFR 122.26, and implemented by Order No. 90-42 of the California Regional Water Quality Control Board, would reduce water quality impacts below a level of significance. With compliance to these regulations, this issue is considered less than significant.

Currently, the tile drains collect runoff onsite and discharge into the Strout Drain. With the proposed project, runoff from the project site will be collected in the onsite detention basins which will hold and discharge a similar volume of water to the existing onsite drainage, into the existing Strout Drain. The proposed project would increase onsite runoff, but will not alter the existing drainage patterns on-site in a manner that may negatively impact surrounding development. The proposed project will actually improve on-site drainage by constructing four on-site detention basins to retain surface flows on-site during heavy rain events. Additionally, implementation of the proposed project will not substantially alter the existing drainage pattern of the site, in a manner that will result in substantial erosion, siltation or flooding on- or off-site. Drainage from the project site will continue to drain into the Strout Drain, consistent with the existing conditions, and the area drainage will not be altered. No impact related to these hydrological issues is anticipated.

4.8.3.2 *Flooding*

As discussed above, the project site is not located within a 100-year floodplain or floodway. Furthermore, as a condition of approval, the proposed project would be required to comply with City Council of the City of Calexico Ordinance No. 1080, which provides a flood damage prevention plan and floodplain management regulations. As such, the potential flood hazard associated with a 100-year floodplain or failure of a dam is considered less than significant. Additionally, the project site is not located within an area subject to the inundation by a seiche, tsunami, or mudflow. No impact to this issue area is anticipated.

4.8.3.3 *Water Quality*

A. Surface Water – Short-term

Grading requirements of the proposed project have the potential to alter existing drainage patterns, causing erosion or siltation on the site or in the area on a short-term basis during construction. Therefore,

the proposed project has the potential to result in short-term a violation of water quality standards through sedimentation/siltation or emission of pollutants into the local surface waters from construction related activities. As such, implementation of the proposed project will result in a significant short-term impact to surface water quality. However, the implementation of Mitigation Measure HWQ1 will reduce this impact to level less than significant.

B. Surface Water – Long-term

As discussed previously, the total amount of impervious surfaces would increase from the existing condition. The presence of impervious surfaces creates the potential for runoff during a storm event to transport pollutants (such as organic compounds, trash & debris, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides) and trash off site. As such, the implementation of the proposed project will result in a significant long-term impact to surface water quality. However, the implementation of Mitigation Measure HWQ1 will reduce this impact to level less than significant.

C. Groundwater

There are no seeps, springs, or other surface indications of shallow groundwater observed on the project site. Due to the increase in impervious surfaces on the project site, only a minimal amount of storm water runoff (most likely associated with the landscaped areas including the detention basins) will enter the groundwater system. Therefore, the potential for pollutants in storm water runoff will not substantially degrade groundwater quality. In addition, the proposed project will not deplete groundwater supplies or cause groundwater recharge, because water for the project will be supplied by the City of Calexico and the project would not use groundwater. This issue is considered less than significant.

4.8.4 Significance of Impact

4.8.4.1 *Hydrology/Drainage*

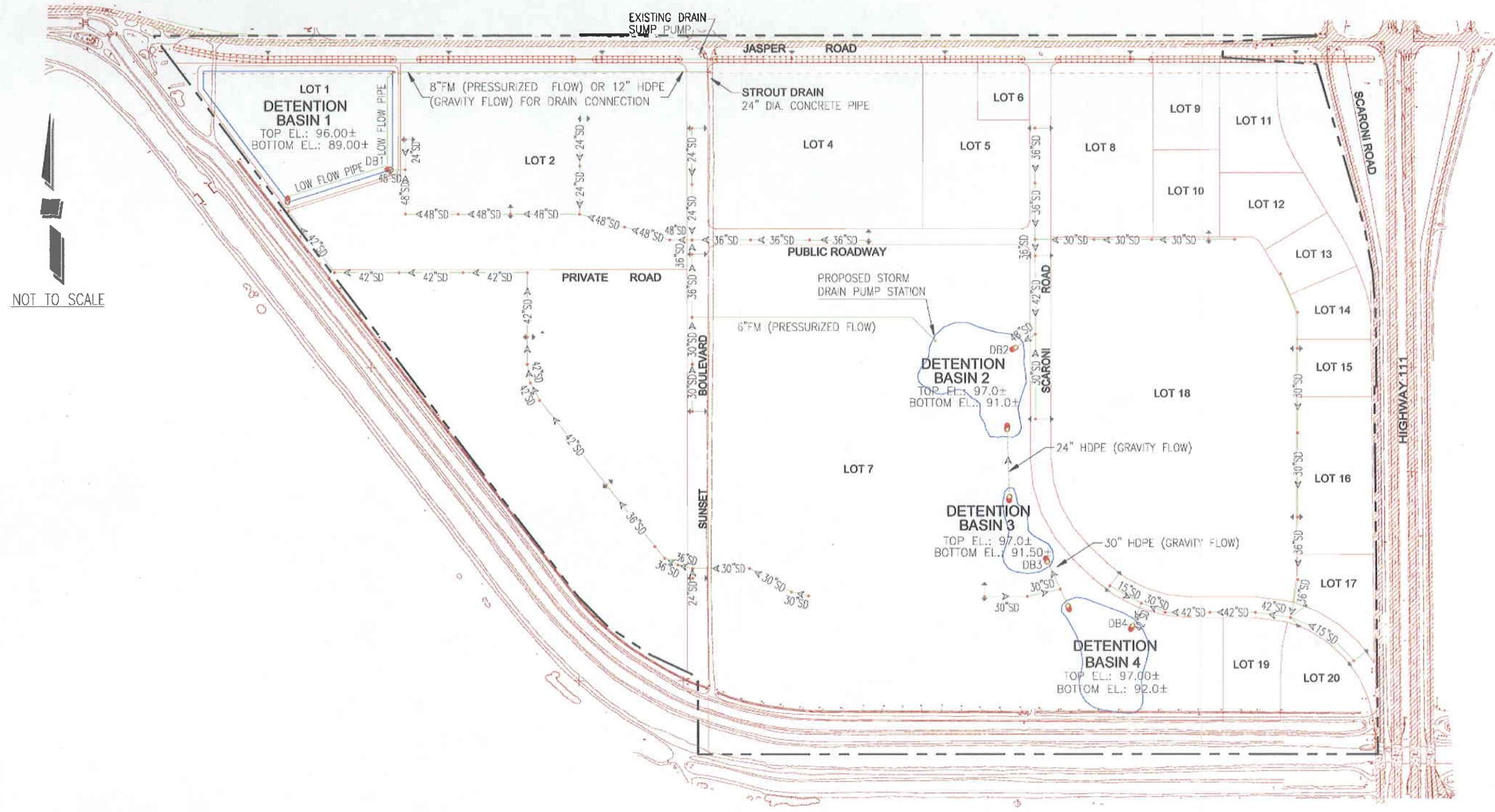
Implementation of the proposed project would increase the rate and amount of surface runoff. Drainage facilities are designed in a manner so that flooding does not occur on- or off-site. The proposed detention basins ensure that the project would not contribute runoff that may exceed the capacity of the existing storm water drainage system. Therefore, the proposed project would not substantially alter an existing drainage pattern and would not create or contribute

With the implementation of the regulations of the NPDES, the potential contamination impact to the detention basins during construction is considered a less than significant impact.

4.8.4.2 *Water Quality*

A. Surface Water – Short-term

Implementation of the proposed project has the potential to result in a violation of water quality standards in local surface waters through sedimentation/siltation or emissions from construction related activities. This issue is considered a significant impact.



SOURCE: BJ Engineering & Surveying, Inc., 2008

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111 Calexico Place Specific Plan EIR
 Proposed Storm Drain System

FIGURE
 4.8-2

B. Surface Water – Long-term

The implementation of the proposed project will result in an increased amount of impervious surfaces on the project site, which creates the potential for runoff during a storm event to transport pollutants to local surface waters. As such, the implementation of the proposed project will result in a significant long-term impact to surface water quality. This issue is considered a significant impact.

C. Groundwater

The implementation of the proposed project will result in a minimal amount of storm water runoff into the groundwater system. However, because a minimal amount of storm water runoff will enter the groundwater system, substantial degradation of groundwater quality will not occur. In addition, the proposed project will not result in an impact to groundwater supplies or recharge, because water to the project will be supplied by the City of Calexico. This issue is considered less than significant.

4.8.4.3 Flooding

Based on the Initial Study that was prepared for the proposed project, which is provided as Appendix A of this EIR, the proposed project is not located within a flood zone and no housing is proposed as part of the project, therefore no impact related to a 100-year flood hazard area is identified for the proposed project. In addition, there are two major dams on the Colorado River in Imperial County. However, the project site is located several miles from the Colorado River; therefore, the flooding associated with dam failures is not anticipated to impact the project site. No impact related to flooding is identified for the proposed project.

4.8.5 Mitigation Measures

HWQ1 Because the proposed project will disturb more than one acre of land, prior to commencement of construction activities of the proposed project, the Applicant will be required to obtain coverage under the General Construction Permit (Order No. 99-08-DWQ). In order to obtain coverage under the General Construction Permit, the project applicant shall obtain a Waste Discharge Identification Number and shall prepare an effective site-specific Storm Water Pollution Prevention Plan (SWPPP) subject to approval by the RWQCB. The SWPPP shall include construction and post-construction BMPs to the satisfaction of the RWQCB. Construction BMPs may include, but are not limited to:

- soil stabilizers,
- scheduling grading during dry periods,
- preservation of existing vegetation,
- designated storage and vehicle areas, and/or
- temporary landscaping.

Post-construction BMPs may include, but are not limited to:

- permanent landscaping,
- vegetation buffer strips,
- detention basins,

- fossil filters
- mechanical filtration devices,
- dedicated open areas, and/or
- routine sweeping and maintenance parking areas.

4.8.6 Conclusion

Implementation of HWQ1 will reduce the short-term and long-term water quality impacts to a level less than significant.