

3.9 Hydrology and Water Quality

This section describes and evaluates potential impacts related to hydrology and water quality that could result from implementation of the Proposed Project. The section contains: (1) a description of the existing hydrology of the Project Site and the surrounding areas; (2) a description of the existing water quality of the surrounding areas; (3) a description of the regulatory setting related to hydrology and water quality; and (4) an analysis of the changes in hydrology and water quality associated with the implementation of the Proposed Project.

Comments received in response to the NOP for the EIR can be found in Appendix B, though no specific comments regarding hydrology and water quality were provided.

The analysis included in this section was developed based on information contained in the City of Inglewood General Plan, City of Inglewood Urban Water Management Plan, Golden State Water Company (GSWC) Urban Water Management Plan, Federal Emergency Management Agency Digital (FEMA) Flood Insurance Rate Maps (FIRMs), Groundwater Basins Master Plan, Enhanced Watershed Management Program for the Dominguez Channel Watershed, Los Angeles Regional Water Quality Control Board (RWQCB) Plan, the project-specific Water Supply Assessment (Appendix J), the project-specific Low Impact Development (LID) Report (Appendix XX), and the project-specific Preliminary Hydrology Report (Appendix XX).

3.9.1 Environmental Setting

Surface Water

The City of Inglewood is located in the Dominguez Channel Watershed, within the Upper Dominguez Channel drainage area. The Project Site is located approximately one-mile north of the start of the Dominguez Channel. The Dominguez Channel Watershed encompasses approximately 133 square miles of land and water in the southern portion of the Los Angeles Basin.¹ Approximately 81 percent of the watershed has been developed. Residential development covers nearly 40 percent of the watershed, and another 41 percent is made up by industrial, commercial, and transportation uses. Overall, the watershed is approximately 61 percent impervious. Constructed waterways are predominant, however some small natural creeks are located in the hills of the Palos Verdes Peninsula. Because the majority of the watershed is urban, drainage is primarily conducted through an extensive network of underground storm drains.

The Dominguez Channel Watershed is designated as Hydrologic Unit 405.12 by the State Water Resources Control Board (SWRCB) and as the San Gabriel Hydrologic Unit by the Los Angeles RWQCB.² Water bodies within the hydrologic unit include the Dominguez Channel, Wilmington Drain, Torrance/Carson Channel (“Torrance Lateral”), Machado Lake, Los Angeles and Long

¹ Los Angeles County Department of Public Works, 2018. *Dominguez Watershed*. Available: [HYPERLINK "https://dpw.lacounty.gov/wmd/watershed/dc/"]. Accessed October 2, 2018.

² State Water Resources Control Board, 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Available: [HYPERLINK "https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html"]. Accessed October 4, 2018.

Beach Harbors, and Cabrillo Beach. Approximately 70 square miles of the Dominguez Channel Watershed drains to the 15.7-mile-long Dominguez Channel, which is the largest drainage feature in the Dominguez Channel Watershed. The man-made Dominguez Channel begins at the City of Hawthorne and City of Inglewood boundary and discharges into the Los Angeles and Long Beach Harbors.³ The remaining portion of the Dominguez Channel Watershed drains to retention basins for groundwater recharge; into Wilmington Drain, which empties into Machado Lake; or to the Los Angeles Harbor or Long Beach Harbor independently of the Dominguez Channel.

Flows in the Dominguez Channel Watershed are influenced by the volume of surface runoff, local groundwater, and rainfall. The Los Angeles Basin has a Mediterranean climate with moderate, dry summers and cool winters, consistent with coastal Southern California. Precipitation in the region occurs primarily as rain from November through March, with an average annual rainfall of 12.02 inches.⁴ In general, stormwater runoff within the City of Inglewood, including the Project Site, flows into the Los Angeles County Flood Control District storm drain system.

Soil Drainage

The Project Site currently consists of both pervious and impervious surfaces, including restaurant fast-food restaurant, a motel, a light manufacturing/warehouse facility, a warehouse, a commercial catering business, a groundwater well, and large portions of vacant land. The Project Site is currently made up of approximately 15 percent impervious surfaces and 85 percent pervious surfaces. Preliminary investigations of the Project Site indicate that the site's native soil characteristics have poor drainage with a low infiltration rate.⁵⁻⁶ According to the Los Angeles County Guidelines for LID Stormwater Infiltration, the minimum standard for soil infiltration is 0.3 inches per hour.⁷ Preliminary percolation tests were conducted at five selected locations at the Project Site. Based on the results, infiltration rates for the soils in the upper 10 feet ranged from 0.32 to 3.52 inches per hour. However, the subsurface native soils at the Project Site consist predominately of clayey soils with estimated infiltration rates lower than 0.3 inches per hour and with few or no connectivity to permeable soil horizons. Moreover, there is no evidence that the underlying, predominantly clayey soils at the Project Site have experienced saturation. These characteristics indicate that infiltration is largely infeasible at the Project Site, and that the Project Site currently provides very little groundwater recharge through percolation of soils.

³ City of Los Angeles Stormwater Program, 2018. *Dominguez Channel Watershed*. Available: [HYPERLINK "http://www.lastormwater.org/about-us/about-watersheds/dominguez-channel/"]. Accessed October 2, 2018.

⁴ City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 3-4.

⁵ AECOM, 2018. *Inglewood Basketball & Entertainment Center Project Low Impact Development (LID) Report*. August 23, 2018. p. 2.

⁶ AECOM, 2018. *Preliminary Geotechnical Investigation*. September 14, 2018. p. 34.

⁷ County of Los Angeles Department of Public Works, 2014. *Administrative Manual: Guidelines for Design, Investigation, and Reporting Low Impact Development Stormwater Infiltration*. p. 2.

Drainage Infrastructure

Arena Site

The Arena Site is the central part of the Project Site that would include the arena, team offices, practice facility, sports medicine clinic, employee access pavilion, public plaza, outdoor stage, retail/restaurants, community space, and a parking structure. The Arena Site currently includes a restaurant, hotel, food warehouse, City water well, and vacant commercial uses. West 102nd Street crosses through the Arena Site in an east-west direction. Storm drainage facilities at this portion of the Project Site includes a 60-inch storm drain pipeline within South Prairie Avenue, known as the Los Angeles County Department of Public Works (LACDPW) Storm Drain Line Project 681.⁸⁻⁹⁻¹⁰ In addition, an existing catch basin is located at the intersection of West 102nd Street and South Prairie Avenue.

West Parking Garage Site

The West Parking Garage Site is part of the Project Site, west of the Arena Site, and would include a parking garage and a bus staging/transportation network company (TNC) drop-off area. The West Parking Garage Site is currently vacant, with West 101st Street crossing through the site in an east-west direction. This portion of the Project Site includes a 24-inch diameter storm drain pipeline (the LACDPW Storm Drain Line Project 4402) that begins in West 101st Street, travels north to West Century Boulevard, turns east along West Century Boulevard, and then turns north and south along South Prairie Avenue, connecting to the abovementioned 60-inch diameter storm drain pipeline within South Prairie Avenue (LACDPW Storm Drain Line Project 681).

East Parking and Hotel Site

This portion of the Project Site is located east of the Arena Site and would include a hotel and surface parking lot. The East Parking and Hotel Site is currently vacant. Storm drainage pipelines (84-inch diameter) are located within South Doty Avenue (LACDPW Storm Drain Line Project 4401). In addition, a 48-inch diameter storm drainage pipeline crosses under parcels to the west of the East Parking and Hotel Site, extending north through West Century Boulevard and south through West 102nd Street (LACDPW Storm Drain Line Project DDI #8).

Well Relocation Site

The Well Relocation Site is located east of the Arena Site and would contain a city-owned and operated potable water well. The Well Relocation Site is currently vacant. This portion of the Project Site includes storm drainage pipelines within West 102nd Street and South Doty Avenue, detailed above.

Groundwater

The City of Inglewood is located over two groundwater basins: the West Coast Groundwater Basin (WCGB) and the Central Basin. While the Project Site is located only within the WCGB,

⁸ AECOM, 2018. *Existing Conditions Plan Sheet C-101*. August 29, 2018.

⁹ Los Angeles County Department of Public Works, 2019. *Los Angeles County Storm Drain System*. Accessed February 8, 2019.

¹⁰ D&D Engineering, Inc., 2019. Preliminary Hydrology Report.

the Proposed Project would be served by the GSWC, which produces water from both the WCGB and Central Basin. Characteristics of both the WCGB and Central Basin are described below.

West Coast Groundwater Basin

The WCGB is approximately 160 square miles and occupies 37 percent of the southwestern part of the Los Angeles Coastal Plain.¹¹ The WCGB is bounded to the north by the Ballona Escarpment (an abandoned erosion channel from the Los Angeles River), on the east by the Newport-Inglewood fault zone and the Central Basin, and on the south and west by the Pacific Ocean.

Aquifers in the WCGB are generally confined and receive the majority of their natural replenishment from adjacent groundwater basins or from the Pacific Ocean through seawater intrusion.¹² Both the Newport-Inglewood Uplift fault and the Charnock fault are partial barriers to groundwater flow, causing differences in water levels on opposite sides of each fault system. Most of the groundwater in the WCGB is at an elevation below sea level due to historic over pumping, making maintenance of seawater barrier wells important to keep out intruding saltwater.

The WCGB is underlain by various geologic formations. Water bearing formations include Holocene, Pleistocene, and Pliocene age sediments.¹³ The Silverado aquifer, underlying most of the Basin, is the primary production aquifer and yields between 80 to 90 percent of the groundwater extracted from the WCGB. Other aquifers within the WCGB include the Semiperched, Bellflower, Gaspur, Gardena, Gage, and Lynwood aquifers.¹⁴ The groundwater in the underlying aquifers is confined throughout most of the WCGB, however the Gage and Gardena aquifers are unconfined where water levels have dropped below the Bellflower aquifer. These aquifers merge with adjacent aquifers, particularly near the Redondo Beach area.

The WCGB has a total storage capacity of 6,500,000 acre feet (AF).¹⁵ Prior to the adjudication of groundwater rights in the early 1960s, annual pumping of the WCGB reached levels as high as 94,000 AF per year (AFY). Due to serious overdraft, water levels declined, groundwater was lost from storage, and seawater intruded into the aquifer. To remedy this problem, the courts adjudicated the basin to limit pumping, and the WCGB adjudication was set at 64,468 AFY. The City of Inglewood's adjudicated share of water rights is 4,449 AFY, and the GSWC's adjudicated share of water rights is 7,502 AFY. The total pumping of the WCGB was set higher than the natural replenishment amounts, creating an annual deficit known as the annual overdraft. In order to combat this, the Water Replenishment District of Southern California (WRD), which is the

¹¹ City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 6-7.

¹² Water Replenishment District of Southern California, 2016. *Groundwater Basins Master Plan*. Available: [HYPERLINK "https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf"]. Accessed October 3, 2018. p. 1-4.

¹³ City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 6-7.

¹⁴ California Department of Water Resources, 2004. *California's Groundwater Bulletin 118: Coastal Plan of Los Angeles County Groundwater Basin, West Coast Subbasin*.

¹⁵ City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 6-7.

entity responsible for maintaining the WCGB, purchases and recharges additional water to make up for the overdraft.

The City of Inglewood and the GSWC own and operate wells that extract groundwater from the WCGB. The City of Inglewood currently produces groundwater from the WCGB via four active groundwater wells, Well Numbers 1, 2, 4, and 6, that were constructed in 1974, 1974, 1990, and 2003, respectively. The City of Inglewood is also currently constructing Well Number 7, which will be operational in March 2019. Well Number 7 is designed to operate at 1,500 gallons per minute (gpm). GSWC operates ten wells within their Southwest System, eight of which are located within the WCGB.¹⁶ **Table 3.9-1**, WCBG Historical Well Production (AFY), below shows historical well production from the WCGB for both the City of Inglewood and the GSWC. Based on available data, groundwater pumped from the WCGB generally declined from 2011 to 2015 due to strong conservation efforts in response to a state-wide drought.¹⁷

**TABLE 3.9-1
 WCGB HISTORICAL WELL PRODUCTION (AFY)**

Entity	2011	2012	2013	2014	2015	2016	2017
City of Inglewood	2,383	2,761	1,843	1,879	1,763		
GSWC	13,116	12,732	12,738	13,333	5,484		
Total	15,499	15,493	14,581	15,212	7,247		

SOURCE: City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 6-11.; Golden State Water Company, 2016. *2015 Urban Water Management Plan, Southwest*. p. 6-10.

The City of Inglewood Well Number 6 is located within the Project Site. As part of the Proposed Project the existing Well Number 6 would be demolished, and a new Well Number 6 would be constructed on the Well Relocation Site. The existing Well Number 6 was constructed in 2003 and has been experiencing declining pumping capacity over the years.¹⁸ **Table 3.9-2**, Well Number 6 Historical Well Production (AFY), shows the City’s historical well production from Well Number 6. The well’s original recommended flow rate was 2,800 gallons per minute (gpm). The well pump was replaced in 2011 with a reduced flow of 1,400 gpm, however, mechanical issues and emergency repairs reduced the average day use to approximately 1,200 gpm (or approximately 1,550 AFY). As shown in Table 3.9-2, in 2017, the most recent year for which data is available, Well Number 6 produced a total of 1,026 AF. Well Number 6 is scheduled for emergency repair rehabilitation to increase its capacity to 1,500 gpm. The rehabilitation work would seal off holes in the casing and cleaning perforations.

¹⁶ Golden State Water Company, 2016. *2015 Urban Water Management Plan, Southwest*. pp. 6-8 through 6-10.

¹⁷ City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 6-9.

¹⁸ City of Inglewood, 2018. *Proposed Well Number 8 Preliminary Design Report*. July. p. 1.

**TABLE 3.9-2
 WELL NUMBER 6 HISTORICAL WELL PRODUCTION (AFY)**

Well	2008	2009	2010	2011	2012	2013	2014	2015	2016 ^a	2017 ^a
Well Number 6	2,055	1,810	1,441	1,062	1,835	1,288	1,493	1,330	1,256	1,026

SOURCES: City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 6-11.

a City of Inglewood, 2019. Well Production and Water Consumption Data Years 2016 and 2017.

According to the project-specific Preliminary Geotechnical Report, the historically highest groundwater level in the project vicinity was greater than 50 feet below existing grade.¹⁹ The existing Well Number 6 is set at approximately 400-feet below grade.

Central Basin

The Central Basin, or southeastern portion of the Los Angeles Coastal Plain, has a surface area of approximately 270 square miles.²⁰ The Central Basin is bounded to the north by the Hollywood Basin and the Elysian, Repetto, Merced, and Puente Hills; to the east by the Los Angeles County/Orange County line; and to the south and west by the Newport-Inglewood fault zone and the WCGB.

Similar to the WCGB, water bearing deposits in the Central Basin include the unconsolidated and semi-consolidated marine and alluvial sediments of Holocene, Pleistocene, and Pliocene ages.²¹ The Central Basin is divided into four sections, including the Los Angeles Forebay, the Montebello Forebay, the Whittier Area, and the Pressure Area.²² The two forebays represent areas of unconfined aquifers that allow percolation of surface water down to deeper production aquifers to replenish the rest of the basin. The Whittier Area and Pressure Area are confirmed aquifer systems that receive relatively minimal recharge from surface water, but are replenished from the upgradient forebay areas or other groundwater basins. As detailed above, the Newport-Inglewood Uplift fault is a partial barrier to groundwater flow, causing differences in water levels on opposite sides of the fault system. Groundwater flows between the WCGB and Central Basin are based on the groundwater elevations on either side of the fault. Most of the groundwater in the Central Basin remains at an elevation below sea level due to historic over pumping.

The Central Basin has an estimated storage capacity of approximately 13.8 million AF.²³ The Central Basin was adjudicated by the courts in 1965 due to over pumping and a decline in water levels. The Central Basin adjudication was originally set at 267,900 AFY, and adjusted to

¹⁹ AECOM, 2018. *Preliminary Geotechnical Report*. p. 10.

²⁰ Water Replenishment District of Southern California, 2016. *Groundwater Basins Master Plan*. Available: [HYPERLINK "https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf"]. Accessed October 3, 2018. p. 1-3.

²¹ Todd Groundwater, 2018. *Water Supply Assessment: Golden State Water Company – Southwest, Inglewood Basketball and Entertainment Center*. September.

²² Water Replenishment District of Southern California, 2016. *Groundwater Basins Master Plan*. Available: [HYPERLINK "https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf"]. Accessed October 3, 2018. p. 1-4.

²³ Golden State Water Company, 2016. *2015 Urban Water Management Plan, Southwest*. p. 6-4.

217,367 AFY to impose stricter control.²⁴ The GSWC’s adjudicated share of water rights is 16,439 AFY.²⁵ Similar to the WCGB, WRD is responsible for maintaining water levels in the Central Basin, and determines replenishment requirements.

The City of Inglewood does not own or operate wells within the Central Basin. The GSWC operates two wells that are located within the Central Basin (Bellhaven Number 3 and Bellhaven Number 4), which have a combined total design well capacity of 3,468 AFY.²⁶ **Table 3.9-3, Central Basin Historical Well Production (AFY)**, below shows GSWC’s historical well production from the Central Basin. Similar to the WCGB, groundwater pumped from the Central Basin has declined from 2011 to 2015 due to strong conservation efforts in response to a state-wide drought.

**TABLE 3.9-3
 CENTRAL BASIN HISTORICAL WELL PRODUCTION (AFY)**

Entity	2011	2012	2013	2014	2015	2016	2017
GSWC	3,260	3,250	2,920	2,861	430		

SOURCE: Golden State Water Company, 2016. *2015 Urban Water Management Plan, Southwest*.

Flooding

Natural flooding within the City of Inglewood is not a common occurrence, as the region’s largest river, the Los Angeles River, does not flow through the City’s boundaries. The Dominguez Channel, which begins at the City of Hawthorne and City of Inglewood boundary convergence, does not have a history of flooding into the adjacent neighborhoods. In addition, the Project Site is flat with only gentle slopes and is not near the Pacific Ocean, and thus is not located within a seiche or tsunami flooding inundation zone.

FEMA administers the National Flood Insurance Program (NFIP) and delineates areas subject to flood hazards on FIRMs for each community participating in the NFIP. The FIRMs show the areas subject to inundation by a flood that has a one percent chance or greater of being equaled or exceeded in any given year. This type of flood is commonly referred to as the 100-year or base flood. Areas on FIRMs are divided into geographic areas, or zones, that FEMA has defined according to varying levels of flood risk. **Table 3.9-4, FEMA Flood Zone Designations**, includes a description of the risk associated with each zone.

²⁴ Water Replenishment District of Southern California, 2016. *Groundwater Basins Master Plan*. Available: [HYPERLINK "https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf"]. Accessed October 3, 2018. p. 1-4.

²⁵ Golden State Water Company, 2016. *2015 Urban Water Management Plan, Southwest*. p. 7-6.

²⁶ Golden State Water Company, 2016. *2015 Urban Water Management Plan, Southwest*. p. 6-8.

The Project Site is designated as Zone X (unshaded), which means the Project Site is in an area above the 500-year flood level.²⁷ It is important to note that over time, climate change may increase the potential for localized and regional flooding to occur.²⁸ Climate change-related flooding may have the potential to change over the years, despite FEMA mapping, as a result of climate change effects. However, in the event that flooding would occur in the Dominquez Channel, the channel is located downstream of the Project Site.

**TABLE 3.9-4
 FEMA FLOOD ZONE DESIGNATIONS**

Zone	Description
Moderate to Low Risk Areas	
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year events. Are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year event, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
High Risk Areas	
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
Undetermined Risk Areas	
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

SOURCE: Federal Emergency Management Agency, 2018. *Managing Floodplain Development Through the NFIP*. Available: [HYPERLINK "https://www.fema.gov/media-library/assets/documents/6029"]. Accessed October 4, 2018.

²⁷ Federal Emergent Management Agency, 2018. *FEMA Flood Map Service Center, City of Inglewood, Map Number 06037CI780G*. Available: [HYPERLINK "https://msc.fema.gov/portal/search" \l "searchresultsanchor"]. Accessed February 9, 2019.

²⁸ California Governor’s Office of Planning and Research, 2018. *California’s Fourth Climate Change Assessment Los Angeles Region Report*. Available: [HYPERLINK "http://www.climateassessment.ca.gov/regions/docs/20180928-LosAngeles.pdf"]. Accessed February 27, 2019.

Water Quality

Surface Water Quality

Ambient water quality in the Dominguez Channel Watershed is influenced by numerous natural and artificial sources depending on location within the Dominguez Channel Watershed, including pollutants, sediment toxicity, bacteria, algae and eutrophic conditions, and trash.²⁹ **Table 3.9-5, Local Waterbodies Exceeding Water Quality Standards**, below shows water bodies within the Dominguez Channel Watershed that are considered impaired because water quality standards are exceeded. Table 3.9-5 includes those waterbodies that exceed total maximum daily load (TMDL), those listed on the State’s 303(d) list as impaired, and those without an associated TMDL or on the State’s 303(d) list but showing exceedances of water quality criteria.

**TABLE 3.9-5
 LOCAL WATERBODIES EXCEEDING WATER QUALITY STANDARDS**

Water body	TMDL	303(d) List	Other
Dominguez Channel (lined portion above Vermont Avenue)	Copper, Lead, Zinc, Toxicity	Indicator Bacteria, Ammonia, Diazinon	Cadmium, Chromium, Mercury, Thallium, Bis (2-Ethylhexyl) phthalate, pH, Dissolved Oxygen
Torrance Lateral	Copper, Lead, Zinc	Coliform Bacteria	Cadmium, Cyanide, pH, Ammonia, PCBs, DDT
Dominguez Estuary (unlined portion below Vermont Avenue)	Cadmium, Copper, Lead, Zinc, DDT, Chlordane, Dieldrin, PAHs, Benthic Community Effects, Sediment Toxicity	Ammonia, Coliform Bacteria	Arsenic, Chromium, Silver, Nickel, Mercury, Thallium
Machado Lake	Trash, Total Phosphorus, Total Nitrogen, Ammonia, Chlorophyll-a, PCBs, DDT, Chlordane, Dieldrin, Dissolved Oxygen	None	E. coli, pH
Wilmington Drain	None	Coliform Bacteria, Copper, Lead	Total Nitrogen, DDT, PCBs, Chlordane, Dieldrin
LA Harbor – Cabrillo Marina	DDT, PCBs, PAHs	None	None
LA Harbor – Consolidated Slip	Cadmium, Chromium, Copper, Lead, Mercury, Zinc, DDT, PCBs, PAHs, Chlordane, Dieldrin, Toxaphene, Benthic Community Effects, Sediment Toxicity	None	Arsenic, Silver, Nickel
LA Harbor – Fish Harbor	Copper, Lead, Mercury, Zinc, DDT, PCBs, Chlordane, PAHs, Sediment Toxicity	None	None
LA/Long Beach Inner Harbor	Copper, Zinc, DDT, PCBs, PAHs, Benthic Community Effects, Sediment Toxicity, Indicator Bacteria	None	Copper, Silver
LA/Long Beach Outer Harbor	DDT, PCBs, Sediment Toxicity	None	Cadmium, Nickel, Silver, Copper, Mercury
LA Harbor – Inner Cabrillo Beach	Indicator Bacteria, DDT, PCBs	None	None

²⁹ Dominguez Channel Watershed Management Area Group, 2016. *Enhanced Watershed Management Program*. p. 2-8. February 2016.

**TABLE 3.9-5
 LOCAL WATERBODIES EXCEEDING WATER QUALITY STANDARDS**

Water body	TMDL	303(d) List	Other
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SOURCE: Dominguez Channel Watershed Management Area Group, 2016. *Enhanced Watershed Management Program*. p. 2-8. February 2016.

Dominguez Channel drains a highly industrialized area with numerous sources of pollution resulting from polycyclic aromatic hydrocarbons (PAHs) and also contains remnants of persistent legacy pesticides as well as polychlorinated biphenyls (PCBs), all of which contribute to poor sediment quality both within the channel and adjacent harbor areas.³⁰ Historically oil pumping had a large presence in the area, and some oil wells remain in operation. The pollutant dichlorodiphenyltrichloroethane (DDT) is highest (compared to the rest of the Dominguez Channel Watershed) in the Dominguez Channel estuary and Consolidated Slip sediments, along with being present throughout the harbors. Metals are elevated at some located in the inner harbors, and at the Consolidated Slip, which is the part of the Inner Harbor immediately downstream of the Dominguez Channel, exhibits a very impacted benthic invertebrate community.

Beneficial uses identified by the Los Angeles RWQCB for the surface water bodies in the Dominguez Channel Watershed are summarized in **Table 3.9-6**, Beneficial Uses Listed for Surface Waters within the Dominguez Channel Watershed.

**TABLE 3.9-6
 BENEFICIAL USES LISTED FOR SURFACE WATERS WITHIN THE DOMINGUEZ CHANNEL WATERSHED**

Water Body		Existing Beneficial Uses	Potential Beneficial Uses
Dominguez Channel	Lined portion above Vermont Avenue (Freshwater)	RARE, REC-2	WARM, WILD, REC-1, MUN
	Unlined portion below Vermont Avenue (Estuary)	COMM, EST, MAR, WILD, RARE, MIGR, SPWN, REC-1, REC-2	NAV
	Torrance Carson Channel	RARE, REC-2	WARM, WILD, REC-1, MUN
Machado Lake	Machado Lake	WARM, WILD, WET, REC-1, REC-2	None
	Wilmington Drain	WARM, WILD, WET, REC-1, REC-2	None

³⁰ State Water Resources Control Board, 2014. Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. Available: [HYPERLINK "https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html"]. Accessed October 4, 2018.

TABLE 3.9-6
BENEFICIAL USES LISTED FOR SURFACE WATERS WITHIN THE DOMINGUEZ CHANNEL WATERSHED

Water Body	Existing Beneficial Uses	Potential Beneficial Uses	
Los Angeles Harbor	Consolidated Slip	IND, NAV, REC-2, COMM, MAR, RARE	REC-1, SHELL
	Inner Harbor	IND, NAV, REC-2, COMM, MAR, RARE	REC-1, SHELL
	Fish Harbor	IND, NAV, REC-2, COMM, MAR, RARE	REC-1, SHELL
	Inner Cabrillo Beach	NAV, REC-1, REC-2, COMM, MAR, WILD, MIGR, SPWN, SHELL	None
	Outer Cabrillo Beach (Los Angeles County beach)	NAV, REC-1, REC-2, COMM, MAR, WILD, MIGR, SPWN, SHELL	None

NOTES:

COMM: Commercial and Sport Fishing
 EST: Estuarine Habitat
 IND: Industrial Service Supply
 NAV: Navigation
 MAR: Marine Habitat
 MIGR: Migration of Aquatic Organisms
 MUN: Municipal and Domestic Supply
 RARE: Rare, Threatened, or Endangered Species

REC-1: Water Contact Recreation
 REC-2: Non-Contact Water Recreation
 SHELL: Shellfish Harvesting
 SPWN: Spawning, Reproduction, and/or Early Development
 WARM: Water Freshwater Habitat
 WET: Wetland Habitat
 WILD: Wildlife Habitat

SOURCE: Dominguez Channel Watershed Management Area Group, 2016. *Enhanced Watershed Management Program*. p. 1-6. February 2016.

Groundwater Quality

City of Inglewood wells in the WCGB, and GSWC-used wells in both the WCGB and Central Basin have historically produced and currently produce groundwater that meets federal and State water quality standards.³¹⁻³² However, the WCGB has water quality constituents of concern, including iron, manganese, hydrogen sulfide odor, and total dissolved solids. In order to address these constituents, WCGB wells have treatment processes and are monitored closely. In addition, groundwater is treated for iron and manganese at the City of Inglewood’s Sanford M. Anderson Water Treatment Plant to meet water quality standards.

The Salt and Nutrient Management Plan for the Central Basin and WCGB was adopted by the Los Angeles Regional Water Quality Control Board, on February 12, 2015.³³⁻³⁴ The Salt and Nutrient Management Plan is a tool to monitor and manage salt and nutrient levels in these groundwater basins. WCGB groundwater aquifers do not meet water quality objectives of the Los Angeles RWQCB because of historical seawater intrusion due to excessive over-pumping.³⁵

³¹ Golden State Water Company, 2016. *2015 Urban Water Management Plan, Southwest*. p. 6-5.

³² City of Inglewood, 2016. *2015 Urban Water Management Plan*. p. 6-13.

³³ Water Replenishment District of Southern California (WRD), 2015. Salt and Nutrient Management Plan, Central Basin and West Coast Basin, Southern Los Angeles County, California. February 12, 2015.

³⁴ California Regional Water Quality Control Board, Los Angeles Region, 2015. Resolution No. R15-001, Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate Stakeholder-Proposed Groundwater Quality Control Measures for Salts and Nutrients in the Central and West Coast Groundwater Basins. February 12, 2015.

³⁵ Water Replenishment District of Southern California (WRD), 2015. Salt and Nutrient Management Plan, Central Basin and West Coast Basin, Southern Los Angeles County, California. p. 14. February 12, 2015.

However, existing and planned implementation measures (including barrier projects, desalters, recharge projects, and other programs) ensure that salt and nutrient levels in groundwater would achieve water quality objectives.³⁶

3.9.2 Adjusted Baseline Environmental Setting

As discussed in Chapter 3, Environmental Impacts, Settings, and Mitigation Measures, the Proposed Project is not anticipated to complete construction and begin operations until mid-2024 for the 2024-25 NBA basketball season. Section 3.9, Hydrology and Water Quality, assumes the Adjusted Baseline Environmental Setting described in Chapter 3, Environmental Impacts, Settings, and Mitigation Measures. The projects described in the Adjusted Baseline Environmental Setting will be constructed and in operation prior to opening of the Proposed Project. For this reason, as explained in Chapter 3, Environmental Impacts, Settings, and Mitigation Measures, the City of Inglewood determined that it is appropriate to include these projects in an adjusted environmental setting for the Proposed Project. Due to the certainty that these projects will be constructed and in operation prior to opening of the Proposed Project, the City has determined that it would be misleading to disregard these projects in the environmental setting, because these projects are certain to exist by the time the Proposed Project is constructed and commences operations. Accordingly, the changes associated with these developments within the Hollywood Park Specific Plan area are considered as part of the Adjusted Baseline Environmental Setting.

In its current condition, the Hollywood Park Specific Plan area is under construction, largely with pervious exposed soils, haul roads, and some paved areas. Compared to the site's previous use as a horse racetrack and current construction conditions, the Hollywood Park Specific Plan Project will add impervious surfaces with the construction of the NFL Stadium, performance venue, retail and restaurant uses, office space, and parking spaces. While development of these uses differ from the planned development under the Hollywood Park Specific Plan EIR, the Hollywood Park Specific Plan area was still planned for an increase in impervious surfaces at the site. At the time of the opening of the Proposed Project, the permeability of the Hollywood Park Specific Plan area would be limited to landscaped areas and retention basins, which would be designed to reduce runoff and treat pollutants of concern.

Drainage infrastructure at the Hollywood Park Specific Plan area associated with the previous horse racetrack is currently being rerouted and replaced as necessary, and additional drainage infrastructure will be constructed to accommodate the new Hollywood Park Specific Plan development. New drainage infrastructure includes various on-site drains, open-channel drainage, an off-site bypass north of the Hollywood Park Specific Plan area, catch basins, vegetated bio-retention areas, and an Arroyo and Lake Park stormwater treatment system. The Hollywood Park Specific Plan Project will include Best Management Practices (BMPs) as required by the site-specific Stormwater Pollution Prevention Plan (SWPPP) to reduce runoff flows and treat runoff

³⁶ Todd Groundwater, 2018. *Water Supply Assessment: Golden State Water Company – Southwest, Inglewood Basketball and Entertainment Center*. September.

water leaving the site, in accordance with federal, state, and local regulations. The storm drainage calculations within the Proposed Project's Preliminary Hydrology Report (Appendix XX) include drainage and stormwater flows from build out of the Adjusted Baseline portion of the Hollywood Park Specific Plan area area.

3.9.3 Regulatory Setting

Federal

Clean Water Act

Water quality objectives for all waters of the United States are established under applicable provisions of Section 303 of the federal Clean Water Act (CWA). The CWA prohibits the discharge of pollutants to navigable waters from a point source unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Point sources are defined as any discernible, confined, and discrete conveyance including but not limited to any pipe, ditch, channel, tunnel, well, or vessel from which pollutants are discharged. Nonpoint sources come from many diffuse sources including land runoff, precipitation, drainage, seepage, or hydrologic modification. Because implementation of these regulations has been delegated to the State, additional information regarding this permit is discussed under the "State" subheading, below.

National Pollutant Discharge Elimination System Permits

The NPDES permit system was established in the CWA to regulate municipal and industrial point discharges to surface waters of the US. Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the EPA must consider in setting effluent limits for priority pollutants.

The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of structural and non-structural BMPs. BMPs can include the development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales and detention ponds). The NPDES permits that apply to activities in the City of Inglewood are described under local regulations below.

Code of Federal Regulations

Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR). FEMA imposes building regulations on development within flood hazard areas depending upon the potential for flooding within each area. Building regulations are incorporated into the municipal code of jurisdictions participating in the NFIP.

FEMA does not regulate buildings or require flood insurance in areas designated Zone X, such as the Project Site.

State

Porter-Cologne Water Quality Control Act

The SWRCB and Los Angeles RWQCB are delegated authority from the US Environmental Protection Agency (EPA) to implement portions of the CWA, and to also implement the State's water quality law, the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). These agencies have established water quality standards that are required by Section 303 of the CWA and the Porter-Cologne Act. The Porter-Cologne Act states that a Water Quality Control Plan, or Basin Plan, will consist of beneficial uses, water quality objectives, and a program of implementation for achieving water quality objectives. A Basin Plan, prepared by the Los Angeles RWQCB, establishes water quality numerical and narrative standards and objectives for rivers and their tributaries within the area subject to the Basin Plan. In cases where the Basin Plan does not contain a standard for a particular pollutant, other criteria apply such as EPA water quality criteria developed under Section 304(a) of the CWA. The Basin Plan that applies to the Project Site is described under local regulations below.

General Construction Activity Stormwater Permit

In accordance with NPDES regulations, to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity affecting one acre or more obtain coverage under a General Construction Activity Stormwater Permit (General Construction Permit). The current General Construction Permit is the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002, effective July 1, 2010. General Construction Permit applicants are required to prepare and implement a SWPPP which includes implementing BMPs to reduce construction effects on receiving water quality by implementing erosion and sediment control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction BMPs in SWPPPs include, but are not limited to: using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment so as to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the City drainage system or receiving waters.

Construction activity that results in soil disturbances of less than one acre is subject to the General Construction Permit if there is potential for significant water quality impairment resulting from the activity as determined by the Los Angeles RWQCB.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA) consists of three legislative bills, Senate Bill SB 1168, Assembly Bill AB 1739, and Senate Bill SB 1319, (or Division 6 Part

2.74 through Part 2.78 of the California Water Code), that provide a framework for long-term sustainable groundwater management across California. Under the legislation, local and regional authorities in medium and high priority groundwater basins will form Groundwater Sustainability Agencies (GSAs) that oversee the preparation and implementation of a local Groundwater Sustainability Plan (GSP). Groundwater within the WCGB and Central Basin is adjudicated by court order to protect the underground water supply within the basins. As such, these basins are already managed and are not required to submit a GSP, but is required to submit groundwater monitoring data annually to the California Department of Water Resources.

Regional

Los Angeles Regional Water Quality Control Board

As previously detailed, the Project Site is located within the jurisdiction of the Los Angeles RWQCB. The Los Angeles RWQCB authorizes NPDES permits that ensures compliance with wastewater treatment and discharge requirements. The Los Angeles RWQCB enforces wastewater treatment and discharge requirements for properties near and surrounding the Project Site.

Local

City of Inglewood General Plan

The City of Inglewood General Plan Conservation Element, adopted on October 21, 1997, addresses the plan for conservation, development and utilization of natural resources found within the jurisdiction of the City. Chapters III through IV of the Conservation Element address resource conservation and management and contain several goals, objectives, and policies related to hydrology and water quality. The following policies from the City of Inglewood General Plan Conservation Element are applicable to the Proposed Project:

Water Production

Policy 1: Protect aquifers and water sources (which includes prevention of contamination of ground water by surface contaminants leaching into the soil).

Policy 2: Reduce the ever-increasing demand being placed on the aquifers and on the statewide water sources.

Storm Drains and Waste Water

Policy 2: Require periodic sweeping to remove oil, grease and debris from parking lots of 25 spaces or more.

The Proposed Project would appear to be consistent with each of the policies listed above. Consistent with Water Production Policy 1 and as further detailed below in Impact 3.9-1, the Proposed Project would be required to comply with federal, state, and local regulations and implement BMPs to reduce erosion and runoff to protect aquifer and water sources. Consistent with Water Production Policy 2 and as detailed in Impact 3.9-2 below, the Proposed Project would not interfere with groundwater recharge or demand being placed on aquifers. In addition,

consistent with Storm Drains and Waste Water Policy 2, the Proposed Project would implement periodic sweeping of parking lots to remove oil, grease, and debris. The responsibility for the final determination of consistency with the City's General Plan is the responsibility of the City of Inglewood City Council.

Municipal Separate Storm Sewer System Permit

Los Angeles County and 84 incorporated cities, including the City of Inglewood, have a joint Municipal Separate Storm Sewer System NPDES permit (MS4 Permit) (Permit Order No. R4-2012-0175, NPDES Permit No. CAS004001) that was granted on November 8, 2012. The MS4 Permit is intended to implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. The permittees listed under the joint permit have the authority to develop, administer, implement, and enforce storm water management programs within their own jurisdiction. On June 27, 2013, the cities of El Segundo, Hawthorne, Inglewood, Carson, Lawndale, Lomita, Los Angeles (including the Port of Los Angeles), and the Los Angeles County Flood Control District formed the Dominguez Channel Watershed Group to develop a collaborative approach to meet the requirements of the MS4 Permit.

Urban storm water runoff is defined in the MS4 Permit as including stormwater and dry weather flows from a drainage area that reaches a receiving water body or subsurface. The permit regulates the discharge of all wet and dry weather urban storm water runoff within the County of Los Angeles (with exception to the City of Long Beach). Part VI.C of the Los Angeles County MS4 permit allows permittees the flexibility to develop Watershed Management Programs (WMP) or Enhanced Watershed Management Programs (EWMP) to implement the requirements of the permit on a watershed scale through customized strategies, control measures, and best management practices (BMPs). The Dominguez Channel Watershed Management Area Group developed a EWMP that was approved by the Los Angeles Water Board on February 26, 2016.³⁷ The EWMP includes water quality priorities for the Dominguez Channel Watershed Management Area, watershed control measures consisting of both structural and non-structural BMPs, financial strategies, and legal authority (permittees have the necessary legal authority to implement the BMPs identified in the EWMP or the legal authority exists to compel implementation of the BMPs).

Standard Urban Stormwater Mitigation Plan and City of Inglewood Municipal Code Low Impact Development Requirements

In 2000, the Standard Urban Stormwater Mitigation Plan (SUSMP) was approved by the Los Angeles RWQCB as part of the MS4 program to address stormwater pollution from new construction and redevelopment. The SUSMP contains a list of minimum BMPs that must be employed to infiltrate or treat stormwater runoff, control peak flow discharge, and reduce post-project discharge of pollutants from stormwater conveyance systems. Based upon land type, the SUSMP defines the types of practices that must be included and issues that must be addressed as appropriate to the development type and size. One of the most important requirements of the

³⁷ Dominguez Channel Watershed Management Area Group, 2016. *Enhanced Watershed Management Program*. February 2016.

SUSMP is the specific sizing criteria for stormwater treatment BMPs for new development and significant redevelopment projects.

In 2015, the City replaced the SUSMP with Chapter 10, Article 16, Section 10-208 of the City of Inglewood Municipal Code, titled Low Impact Development Requirements for New Development and Redevelopment. This portion of the Municipal Code builds on the SUSMP and establishes requirements for construction activities and facility operations of development projects to comply with the current MS4 Permit. These include requirements to lessen the water quality impacts of development by using smart growth practices and integrate LID practices and standards for stormwater pollution mitigation.

City of Inglewood Water Conservation and Water Supply Shortage Program

Chapter 10, Article 19, Section 10-260 of the City of Inglewood Municipal Code is titled City of Inglewood Water Conservation and Water Supply Shortage Program. This water conservation and water supply program was established to reduce water consumption in the City through conservation, water supply planning, ensure beneficial use of water, prevent waste of water, and maximize the efficient use of water in the City to avoid and minimize the effect and hardship of water shortage. The Code establishes permanent water conservation standards intended to alter behavior related to water use efficiency at all times and further establish three levels of water supply shortage response actions during times of declared water shortage, with increasing restrictions on water use in response to worsening drought.

City of Inglewood Green Street Policy

The City of Inglewood Public Works Department adopted the Green Street Policy to implement Green Street BMPs for the addition of new streets, redevelopment projects, and roadway improvement projects. The policy was enacted to demonstrate compliance with the NPDES MS4 Permit for the Los Angeles Region. According to the policy, green streets are an amenity that can provide many benefits including water quality improvement, groundwater replenishment, creation of attractive streetscapes, creation of parks and wildlife habitats, and pedestrian and bicycle accessibility. Green streets are defined as right-of-way areas that incorporate infiltration, biofiltration, and/or storage and use of BMPs to collect, filter, retain, or detain storm water runoff as well as promote attractive streetscape designs. Implementation of BMPs within roadways require that drainage patterns be considered such that drainage may be routed to the BMPs prior to entering the storm drain facility. BMPs include, but are not limited to vegetated curb extensions, bioswales, permeable pavers, alternative street widths, and infiltration basins, as feasible.

County of Los Angeles Low Impact Development Standards Manual

In 2014, the County of Los Angeles prepared the Low Impact Development Standards Manual (LID Standards Manual) to comply with the requirements of the NPDES MS4 Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of Los

Angeles County.³⁸ The LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the County with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges. The City of Inglewood implements these standards for projects within the city.

Groundwater Basins Master Plan

As detailed above, the WCGB and Central Basin were adjudicated in 1961 and 1965, respectively, due to over pumping.³⁹⁻⁴⁰ The adjudication limits the allowable annual extraction of groundwater per water rights holder within the basin in order to prevent seawater intrusion and an unhealthy groundwater level. As part of the adjudication, the court appointed the California Department of Water Resources to serve as Watermaster to account for all water rights and groundwater extraction amounts per year.

Since the adjudicated groundwater production is higher than the natural recharge of the basin, the California Legislature created the WRD to manage, regulate, and replenish the WCGB and Central Basin. Each year through WRD's Regional Groundwater Monitoring Program, WRD determines the amount of supplemental recharge that is needed for the WCGB and Central Basin based upon annual groundwater extractions and groundwater levels. In 2016, WRD published the Groundwater Basins Master Plan, which provides a single reference document for parties operating within and maintaining the WCGB and Central Basin. The Groundwater Basins Master Plan provides options for meeting replenishment requirements and options for expanding the use of the basins' storage to increase reliability of water supplies.

3.9.4 Analysis, Impacts and Mitigation

Significance Criteria

The City has not adopted thresholds of significance for analysis of impacts to hydrology and water quality. The following thresholds of significance have been adapted from CEQA Guidelines section 15065 and CEQA Guidelines Appendix G. A significant impact would occur if the Proposed Project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

³⁸ County of Los Angeles Department of Public Works, 2014. *Low Impact Development Standards Manual*. February 2018.

³⁹ West Basin Municipal Water District, 2018. West Coast Groundwater Basin. Available: [HYPERLINK "<http://www.westbasin.org/water-supplies-groundwater/west-coast-groundwater-basin>"]. Accessed October 8, 2018.

⁴⁰ Water Replenishment District of Southern California, 2016. *Groundwater Basins Master Plan*. Available: [HYPERLINK "https://www.wrd.org/sites/pr/files/GBMP_FinalReport_Text%20and%20Appendicies.pdf"]. Accessed October 3, 2018.

3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i. Result in substantial erosion or siltation on- or off-site;
 - ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - iv. Impede or redirect flow.
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Methodology and Assumptions

The following impact analyses are qualitative and quantitative in nature and are based on existing hydrologic and water quality information. It is assumed that through its plan check and building inspection functions, the City would require that all aspects of the Proposed Project comply with all applicable laws, regulations, design standards, and plans. Impacts on water quality were evaluated qualitatively by considering the type of pollutants the Proposed Project would generate during construction and operation phases, and whether meeting the requirements of applicable regulations would reduce potential impacts to a less-than-significant level. Onsite drainage impacts were evaluated quantitatively by comparing calculations of existing and post-development stormwater runoff to Los Angeles County Department of Public Works allowable flow rates into the storm drainage system, as detailed in the Proposed Project's Preliminary Hydrology Report (Appendix XX).

The analysis of impacts to groundwater considers how development of the Proposed Project would influence groundwater recharge based on increases in impervious surfaces as a result of the Project and the existing and projected condition of the groundwater basin, along with the relocation of Well Number 6.

An analysis of impacts to water supply, sewer, and stormwater infrastructure is included in Section 3.15, Utilities and Service Systems. An analysis of General Plan consistency is also discussed below. The City's General Plan Conservation Element Storm Drains and Waste Water Policy 2 is discussed below under Impact 3.9-1, and Water Production Policy 1 and Policy 2 are discussed below under Impact 3.9-2.

Issues Previously Determined to be Less Than Significant

Upon review of the Proposed Project, the City of Inglewood determined that due to the physical characteristics of the Project Site and the Project as proposed, several environmental resources addressed in the significance criteria would not be affected by the Proposed Project and need not be further considered in the Draft EIR.⁴¹ The discussions below provide brief statements of reasons for the City's determination that these issues do not warrant further consideration in the EIR.

The following significance criteria were found to address issues that would not be affected by the Proposed Project. With regard to significance criteria (4), as described under Environmental Setting, the Project Site is not within a 100-year flood hazard area as mapped on the FIRM. In addition, as described under Environmental Setting, the Project Site is flat with gentle slopes and is not near any body of water, including the Pacific Ocean. The Project Site would not be located in a flood hazard, tsunami, or seiche zone. Therefore, significance criterion (4) does not apply to the Proposed Project. The following discussion further addresses these criteria.

The Proposed Project would not be in a flood hazard, tsunami, or seiche zone, and would not risk release of pollutants due to project inundation. (No Impact)

The Project Site is not within a 100-year flood hazard area as mapped on the FIRM by FEMA.⁴² The closest mapped flood hazard area is 2.1 miles slightly to the northwest; this mapped area is a 500-year flood zone. Therefore, the Proposed Project would not be located within a flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or other flood hazard delineation map.

A seiche occurs when there is a temporary disturbance or oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank, often as a result of earthquakes or other large environmental disturbances. There are no lakes or reservoirs proximate to the Project Site, with the nearest being the Morningstar Park Reservoir, approximately 1.1 miles to the northeast of the Project Site. Due to the distance from the reservoir, the Project Site is not located within a seiche hazard zone.

The hazards from tsunamis are relatively low in southern California because of its wide physiographical offshore borderland. There is no immediate danger to Inglewood from this type of natural hazard. If a major tsunami were to strike the southern California region, Inglewood would not suffer direct damage because it is not a coastal city. The City's elevation ranges from approximately 50 feet to 250 feet above sea level and is located over four miles inland from the

⁴¹ Public Resources Code section 21003(e) states that “[t]o provide more meaningful public disclosure, reduce the time and cost required to prepare an environmental impact report, and focus on potentially significant effects on the environment of a proposed project, lead agencies shall, in accordance with Section 21100, focus the discussion in the environmental impact report on those potential effects on the environment of a proposed project which the lead agency has determined are or may be significant. Lead agencies may limit discussion on other effects to a brief explanation as to why those effects are not potentially significant.”

⁴² AECOM, 2018. Preliminary Geotechnical Report for Murphy's Bowl LLC. p. 12.

Pacific Ocean.⁴³ Given the Project Site's distance from the Pacific Ocean, and its general elevation profile, the Project Site is not located within a tsunami inundation zone.

The Proposed Project would not be located in a flood, seiche, or tsunami inundation zone, and therefore would not risk release of pollutants due to project inundation. Thus, there would be **no impact** of the Proposed Project related to this significance criterion.

Impacts and Mitigation Measures

Impact 3.9-1: Implementation of the Proposed Project has the potential to violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality, or conflict with or obstruct implementation of a water quality control plan. (Less than Significant with Mitigation)

Construction

The use of construction equipment and other vehicles could result in spills of oil, grease, gasoline, brake fluid, antifreeze, or other vehicle-related fluids and pollutants. Improper handling, storage, or disposal of fuels and materials or improper cleaning of machinery could result in accidental spills or discharges that could degrade water quality. In addition, the use of equipment and ground disturbing activities could increase erosion, in turn potentially increasing sediment discharged into storm water that could degrade water quality. As discussed in the Regulatory Setting, above, the Proposed Project would be required to comply with a number of regulations designed to reduce or eliminate construction-related water quality effects, including the NPDES General Construction Permit and the City's Municipal Code Section 10-208 (Low Impact Development Requirements). Before the onset of any construction activities, an application for coverage under the General Construction Permit would be submitted to the Los Angeles RWQCB.

In addition, in compliance with Municipal Code Section 10-208, the project applicant would be required to prepare and submit to the City a LID Plan, which would implement set LID standards and practices for stormwater pollution mitigation consistent with the County's LID Standards Manual. The LID Plan would demonstrate the Project's compliance with the MS4 Permit. Before construction could begin, a SWPPP would be developed and a Notice of Intent (NOI) filed with the Los Angeles RWQCB. After approvals of coverage under the General Construction Permit, the LID Plan, and the SWPPP is approved, construction could commence and would be required to include all BMPs outlined in the LID Plan and SWPPP. BMPs could consist of a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. The City would complete inspections to verify that the LID Plan and SWPPP are implemented correctly.

The City's Municipal Code Section 10-208 also requires BMPs to minimize the potential for and effects from discharge (defined as any spill or release of substances) and pollutants (which include metals, fuels, solvents, petroleum substances, and more) during construction activities for

⁴³ City of Inglewood, Department of Community Development and Housing, 1995. Safety Element of the Inglewood General Plan. Adopted July 1995, p. 51.

all contractors. If a spill were to occur, the contractor would notify the City, and the contractor would take action to contact the appropriate safety and clean-up crews to ensure that a prevention program is followed. In addition, the City would investigate any spills reported. A written description of reportable releases would be submitted to the Los Angeles RWQCB and the Department of Toxic Substances Control (DTSC) by the contractor or land owner. If an appreciable spill were to occur and it were determined that construction activities have adversely affected surface water or groundwater quality, a detailed analysis would be performed to the specifications of DTSC to identify the likely cause of contamination. This analysis would include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, contractors would select and implement measures to control contamination, with a performance standard that surface and/or groundwater quality must be returned to baseline conditions. These measures would be subject to approval by the City and/or the Los Angeles RWQCB.

Compliance with the MS4 permit regulations, NPDES General Construction Permit, and Inglewood Municipal Code regulations as outlined above would prevent the substantial degradation of water quality during Project construction. While these regulatory instruments are designed to ensure that construction projects result in water quality discharges that are not in violation of SWRCB objectives, because final plans have not yet been approved by the City or Los Angeles RWQCB, construction impacts would be **potentially significant**.

Operation

During operation of the completed Proposed Project, runoff from the Project Site would contain pollutants common in urban runoff including metals, oils and grease, pesticides, herbicides, nutrients, pet waste, and garbage/litter. The Proposed Project would therefore conflict with the City's General Plan Storm Drains and Waste Water Policy 2, detailed above in the Regulatory Setting. Without BMPs to remove these pollutants, stormwater leaving the Project Site could degrade the quality of receiving waters, including the Dominguez Channel. Through compliance with the NPDES stormwater discharge permit, the Proposed Project would be designed to reduce operational stormwater pollution to the maximum extent practicable and eliminate prohibited non-stormwater discharges.

Operation of the Proposed Project would also be required to comply with the County's LID Standards Manual. A Project-specific LID Report has been prepared to reduce the volume of stormwater runoff and potential pollutants in stormwater runoff at the Project Site.⁴⁴ According to the LID Report, the Proposed Project would utilize a combination of County standard bio-filtration planters and bio-filtration systems to treat the stormwater. Runoff would be directed from drainage areas to onsite bio-filtration plants and bio-swales. The bio-filtration systems are designed to capture site runoff from roof drains, treat the runoff through biological reactions within the planter soil media, and discharge at a rate intended to mimic pre-developed conditions.

⁴⁴ AECOM, 2018. *Inglewood Basketball & Entertainment Center Project Low Impact Development (LID) Report*. August 23, 2018. pp. 3 through 6.

Sizing and capacity analysis of the proposed bio-filtration systems would be calculated following the design guidelines defined from the Los Angeles RWQCB.

The Proposed Project would also be designed to comply with the regulatory requirements listed above and to obtain certification under the US Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) program. The Project would meet or exceed current uniform codes designed to achieve a LEED Gold rating. The Project would apply for LEED certification of the proposed buildings and accompanying development in the Building Design + Construction (BD+C) category, and would adopt a LEED campus approach in order to capture site-wide strategies such as those related to stormwater management and provision of open space. LEED certification for the Arena Structure would be sought under LEED BD+C New Construction and Major Renovation, and certification for the other buildings surrounding the proposed plaza would be sought under LEED BD+C Core + Shell. The proposed future hotel would be LEED Gold certified under LEED BD+C Hospitality.

Specific BMPs have not been identified because Project design is in an early phase. The Project development process includes identification of BMPs that respond to the design and construction methods of the project. The BMPs are implemented to ensure that water quality would not be degraded and the violation of water quality or waste discharge objectives set by the SWRCB would not occur. City review would confirm that BMP implementation complies with all applicable regulations. The LEED certification process also requires extensive coordination with the USGBC, and through that coordination, identifies measures that ensure that water pollutant removal would be implemented in full compliance with the program and certification requirements.

Since the Project design is in an early phase, and specific BMPs have not been identified and approved by the City or the Los Angeles RWQCB, operational impacts would be **potentially significant**. Mitigation would be required to reduce the magnitude of the impact and in order for the Proposed Project to comply with the General Plan Storm Drains and Waste Water Policy 2, requiring periodic sweeping of parking lots.

Mitigation Measures

Mitigation Measure 3.9-1(a)

The project applicant shall comply with the MS4 permit regulations, NPDES General Construction Permit, Inglewood Municipal Code regulations, the County's LID Standards Manual, and the USGBC's LEED program to prevent the substantial degradation of water quality during Project construction and operation. A LID Plan and SWPPP shall be prepared to the satisfaction of the City and Los Angeles RWQCB. These plans shall be approved by the City and Los Angeles RWQCB to confirm that these permit and regulatory requirements have been satisfied before construction commences on the site.

Mitigation Measure 3.9-1(b)

Operation of the Proposed Project shall include periodic sweeping to remove oil, grease, and debris from parking lots of 25 spaces or more. Such sweeping shall occur not less than weekly.

Level of Significance After Mitigation: With the implementation of Mitigation Measures 3.9-1(a), the Proposed Project would comply with applicable regulations as approved by the City and the Los Angeles RWQCB and not result in an impact to water quality. With implementation of Mitigation Measure 3.9-1(b), the Proposed Project would be consistent with the City's General Plan Storm Drains and Waste Water Policy 2. Thus, this impact would be considered **less than significant**.

Impact 3.9-2: Implementation of the Proposed Project could substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin, or conflict with or obstruct implementation of sustainable groundwater management plan. (Less than Significant)

Groundwater Recharge

The Project Site currently consists of both pervious and impervious surfaces, including commercial buildings, a hotel, a fast-food restaurant, and portions of vacant land. The Project Site is currently made up of approximately 15 percent impervious surfaces and 85 percent pervious surfaces. As detailed above in section 3.9.1, preliminary investigations of the Project Site indicate that the site's native soil characteristics have poor drainage with a low infiltration rate.⁴⁵ The underlying, predominantly clayey soils at the Project Site have never experienced saturation. This indicates that the Project Site currently provides very little groundwater recharge through percolation of soils.

The Proposed Project would include a multi-purpose sports arena, retail/commercial buildings, a parking structure, outdoor plaza, a hotel, and associated surface parking. Due to these improvements, it is estimated that approximately 90 percent of the Project Site would be covered by impervious surfaces. However, as the existing condition of the Project Site is either developed with impervious surfaces or has low infiltration and groundwater recharge, the net change of groundwater recharge at the Project Site would be negligible. Nevertheless, as detailed above in Impact 3.9-1, the Proposed Project would include County standard bio-filtration planters and bio-filtration systems to treat stormwater. Runoff would be directed from drainage areas to onsite bio-filtration plants and bio-swales. The bio-filtration systems would be designed to capture site runoff from roof drains, treat the runoff through biological reactions within the planter soil media, and discharge at a rate intended to mimic pre-developed conditions or better. Consistent with the City of Inglewood General Plan Water Production Policy 1, detailed above in the Regulatory

⁴⁵ AECOM, 2018. *Inglewood Basketball & Entertainment Center Project Low Impact Development (LID) Report*. August 23, 2018. p. 2.

Setting, the Proposed Project would protect aquifers and water sources through the bio-filtration treatment of runoff, preventing the contamination of groundwater. In addition, no demand would be placed on the aquifers, making the Proposed Project consistent with the City's General Plan Water Production Policy 2.

Therefore, the potential for the Proposed Project to interfere with groundwater recharge would be negligible, and this impact would be considered **less than significant**.

Well Relocation

Please see Section 3.15, Utilities and Service Systems, for a discussion of Project impacts related to water supply, including the provision of local groundwater to meet Project needs. The Proposed Project would include the relocation of Well Number 6, which is currently located within the Project Site. Well Number 6 would be replaced with a new Well Number 8. The proposed Well Number 8 would be located on two parcels south of West 102nd Street and west of South Doty Avenue. Water Well Number 8 discharge piping would connect to the existing City of Inglewood raw water main, located immediately in front of the proposed well site on West 102nd Street.⁴⁶ The potential well capacity would be approximately 2,500 gpm (or approximately 4,000 AFY).

While the capacity of proposed Well Number 8 would be an increase from the existing capacity of Well Number 6 (which produced an average of 1,540 AFY from 2008 through 2015), regulations are in place to ensure that there would not be a deficit in aquifer volume. As detailed above in the Environmental Setting and Regulatory Setting, WRD is responsible for maintaining water levels in the Central Basin and WCGB. Each year through WRD's Regional Groundwater Monitoring Program, WRD determines the amount of supplemental recharge that is needed for the WCGB and Central Basin based upon annual groundwater extractions and groundwater levels. The Regional Groundwater Monitoring Program consists of a network of more than 300 monitoring wells at over 50 locations throughout the WRD service area.⁴⁷ WRD has dedicated staff that engage in year-round activities to closely monitor groundwater conditions. WRD performs extensive collection, analysis and reporting of groundwater data to ensure proper resource management. Source waters used for groundwater replenishment comes from annual precipitation, stormwater infiltration, and surface water imported by the Metropolitan Water District of Southern California and via the State Water Project. According to WRD's 2016-2017 Groundwater Monitoring Report, artificial replenishment activities combined with natural replenishment and controlled pumping have ensured a sustainable, reliable supply of groundwater in the WRD service area. Through this system of managing recharge in light of groundwater extraction, the overall level of groundwater resources is maintained over time.

⁴⁶ City of Inglewood, 2018. *Proposed Well Number 8 Preliminary Design Report*. July. pp. 4 through 5.

⁴⁷ Water Replenishment District of Southern California, 2018. *Regional Groundwater Monitoring Report Water Year 2016-2017*. Available: [HYPERLINK "<https://www.wrd.org/sites/pr/files/2017%20RGWMR%20Final%20for%20Web.pdf>"]. Accessed February 9, 2019.

Therefore, as the net change in groundwater recharge would be negligible with implementation of the Proposed Project, and as existing regulations would monitor the WCGB and Central Basin groundwater levels with the relocated well, the impact of the Proposed Project related to substantial depletion of groundwater supplies would be **less than significant**.

Mitigation Measures

None required.

Impact 3.9-3: Implementation of the Proposed Project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which has the potential to: result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flow. (Less than Significant with Mitigation)

A thorough analysis regarding the potential for substantial erosion or siltation on- or off-site is also addressed in Section 3.6, Geology and Soils, under Impact 3.6-2.

Erosion, Runoff Flooding, and Redirection of Flows

Construction

There are no natural water or drainage features on the Project Site, and current flow of stormwater runoff is to existing storm drain facilities which ultimately flow to City maintained storm drain mains. The Proposed Project would include ground disturbing activities to construct the proposed sports arena, retail/commercial buildings, parking structure, outdoor plaza, hotel, and associated surface parking. Ground disturbing activities, including excavation and grading, would alter the ground surface, consequently altering drainage patterns. Altered drainage patterns have the potential to result in erosion, sedimentation, and/or flooding on or offsite by redirecting or concentrating flows.

As detailed above under Impact 3.9-1, construction of the Proposed Project would be required to comply with the NPDES General Construction Permit and the City's Municipal Code Section 10-208. Through these regulations, the project applicant would be required to prepare and implement a LID plan and a SWPPP. These plans would include erosion and sediment control BMPs to minimize the potential for erosion and sedimentation to occur during construction. BMPs would include, but would not be limited to, filtering runoff during construction, avoiding heavy grading and earthwork operations during the rainy season, and incorporating landscaping as early as possible. In addition, prior to receiving grading and building permits from the City, the project applicant would be required to prepare a final geotechnical report, which requires recommendations for surface and subsurface drainage, slope stabilization, erodible soils, and compliance with City drainage requirements.

Because the final LID plan and SWPPP have not yet been approved by the City or Los Angeles RWQCB, construction impacts would be **potentially significant**.

Operation

As detailed above under Impacts 3.9-1 and 3.9-2, approximately 90 percent of the Project Site would be covered by impervious surfaces.⁴⁸ Through compliance with the NPDES stormwater discharge permit, the Proposed Project would be designed to reduce operational stormwater runoff, which in turn would reduce associated erosion, sedimentation, and/or flooding on and off the Project Site. In addition, in compliance with the County's LID Standards Manual, the Proposed Project would utilize a combination of County standard bio-filtration planters and bio-filtration systems to treat the stormwater. Runoff would be directed from drainage areas to onsite bio-filtration plants and bio-swales. The bio-filtration systems are designed to capture site runoff from roof drains, treat the runoff through biological reactions within the planter soil media, and discharge at a rate intended to mimic pre-developed conditions.

Because the Proposed Project would be designed to capture runoff and mimic pre-developed conditions, impacts to drainage patterns and associated erosion, sedimentation, and/or flooding during operation of the Proposed Project would be **less than significant**.

Stormwater Drainage

Construction

Existing drainage from the Project Site flows to adjacent off-site storm drain facilities and ultimately in to the City-maintained storm drain mains located along all streets surrounding the Project Site. Construction of the Proposed Project would require the use of water on-site for various purposes including dust control, concrete mixing, and sanitation. Construction activities and materials would alter the drainage pattern of the Project Site, potentially increasing water flow and the risk of siltation into the existing drainage system.

With implementation of BMPs as required by the site-specific SWPPP, erosion and other pollutants would be prevented from being discharged from the Project Site. Typical construction BMPs may include the use of silt fences, fiber rolls, and compost blankets during construction activities. Although specific BMPs have not been identified for the Proposed Project, implementation of BMPs would also slow flows and reduce the rate of runoff leaving the Project Site. By controlling and limiting the flow of water, runoff to stormwater drainage systems would be reduced. With implementation of these regulations and BMPs, the Proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or result in substantial additional sources of polluted runoff. However, final plans, including the SWPPP and specific BMPs, have not yet been approved by the City or Los Angeles RWQCB, and therefore, impacts related to the alteration of drainage patterns during construction causing an increase of runoff into the storm drainage system would be **potentially significant**.

⁴⁸ AECOM, 2018. *Inglewood Basketball & Entertainment Center Project Low Impact Development (LID) Report*. August 23, 2018. pp. 2 through 6.

Operation

The Proposed Project would include the following on-site drainage features and infrastructure improvements that would connect to existing storm drains within surrounding streets.

Arena Site

Under the Proposed Project, a portion of West 102nd Street would be vacated and incorporated into the Arena Site. The Proposed Project would construct new site access roads along the periphery of the arena. The existing catch basin at the intersection of West 102nd Street and South Prairie Avenue would be removed, along with the existing storm drain line within West 102nd Street. Stormwater pipelines, storm drains, and storm drain overflow pipes would be installed within and along the proposed site access roads. New 12-, 18- and 24-inch storm drainage lines would be extended from existing drainage lines in South Prairie Avenue near West 103rd Street into the Project Site. The new stormwater pipelines within the proposed site access roads would connect to the existing storm drain lines within South Prairie Avenue. Grate opening catch basins, stormwater pipelines, and storm drain overflow pipelines would also be installed within the northern portion of the Arena Site to accommodate the public plaza, outdoor stage, community space, and retail/restaurant uses. In addition, an underground detention basin and pretreatment system would be constructed under the South Parking Garage on the Arena Site. Bio-filtration systems would be installed throughout the Arena Site, including but not limited to, along South Prairie Avenue, along the proposed site access roads, and within the public plaza space.

West Parking Garage Site

With implementation of the Proposed Project, a parking garage would be constructed over a portion of West 101st Street, and new site access roads would be constructed along the periphery of the parking garage to redirect traffic. An underground precast detention and pretreatment system would be installed west of the parking garage under the westerly proposed site access road. Stormwater pipelines and a side opening catch basin would be installed within West 101st Street to connect the proposed detention and pretreatment system to the existing storm drain line within West 101st Street. Stormwater pipelines, storm drain overflow pipe, and bio-filtration systems would be installed within the proposed periphery site access roads. In addition, a trench drain would be installed at the southwest corner of the West Parking Garage Site.

East Parking and Hotel Site

Under the Proposed Project, new 18-inch stormwater pipelines and storm drain overflow pipes would be installed along the boundary of the East Parking and Hotel Site. An underground precast detention and pretreatment system would be installed at the southwest corner of the East Parking and Hotel Site. Stormwater pipelines would be installed within West 102nd Street to connect the proposed detention and pretreatment system to existing storm drain line within West 102nd Street.

Well Relocation Site

No storm drain infrastructure improvements would occur on the Well Relocation Site under the Proposed Project.

Analysis

As detailed above, portions of West 102nd Street and West 101st Street that cross the Project Site would be vacated and constructed over, which would include the removal of drainage features (including stormwater pipelines and an existing catch basin) within these roadways, after the construction of new facilities that serve offsite properties. The Proposed Project would include new site access roads around the periphery of the Arena Site and the West Parking Garage Site, which would include new stormwater pipelines, storm drains, and storm drain overflow pipes. These features would also be constructed at the East Parking and Hotel Site. In addition, the Proposed Project would include grate opening catch basins, side opening catch basins, underground precast detention and pretreatment systems, and bio-filtration systems throughout the Project Site. All proposed onsite drainage features would be required to be approved by City engineers and comply with local regulations.

As previously described, the Proposed Project would be required to comply with all applicable drainage regulations and standards, including the NPDES General Construction Permit, the City's Municipal Code, and the County's LID Standards Manual. The Proposed Project would utilize bio-filtration planters and bio-filtration systems to treat the stormwater runoff. Runoff would be directed from drainage areas to onsite bio-filtration plants and bio-swales, slowing the rate of runoff and in turn slowing the amount of water entering the stormwater drainage system. The bio-filtration systems are designed to capture site runoff from roof drains, treat the runoff through biological reactions within the planter soil media, and discharge at a rate intended to mimic pre-developed conditions.

Table 3.9-7 details operational stormwater flows without and with the above-described drainage infrastructure and underground detention basins. As shown in the table, post-development runoff flows would exceed the approved allowable discharge rates without drainage infrastructure. With implementation of underground detention basins, bio-filtration systems, and other drainage infrastructure throughout the Project Site, the Proposed Project would discharge approximately 23.6 cfs, within the allowable limit of 24.4 cfs. With construction of on-site drainage features and infrastructure improvements that would connect to existing storm drains within surrounding streets, along with implementation of regulations and BMPs, the Proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or result in substantial additional sources of polluted runoff. However, final plans, including the SWPPP and operational BMPs, have not yet been approved by the City, and therefore, impacts related to the alteration of drainage patterns during operation causing an increase of runoff into the storm drainage system would be **potentially significant**.

**TABLE 3.9-7
 STORMWATER RUNOFF FLOWS WITH AND WITHOUT DRAINAGE INFRASTRUCTURE**

Scenario	Project 4402 (Storm Drain Line within West Century Boulevard) (cfs)	Project 681 (Storm Drain Line within South Prairie Avenue) (cfs)	DDI#8 (Storm Drain Line west of East Parking and Hotel Site) (cfs)	Total (cfs)
Flows prior to detention and drainage infrastructure	6.6	41.0	10.7	58.3
Flows with proposed detention and drainage infrastructure	2.2	16.6	4.8	23.6
Los Angeles County Department of Public Works Allowable Flow Rates	2.4	16.9	5.1	24.4

SOURCE: D&D Engineering, 2019. Preliminary Hydrology Report.

Mitigation Measure

Mitigation Measure 3.9-3

Implement Mitigation Measure 3.9-1.

Level of Significance After Mitigation: With the implementation of Mitigation Measure 3.9-1, construction of the Proposed Project would comply with applicable regulations as approved by the City and the Los Angeles RWQCB and would not result in a significant impact related to alteration of the existing drainage pattern of the site. Thus, this impact would be considered **less than significant**.

Cumulative Impacts

The geographic scope of analysis for cumulative impacts related to water quality includes the Dominguez Channel Watershed. Cumulative impacts have the potential to discharge pollutants, including erosion and siltation, off site during construction and operational activities, which could further degrade the receiving waters within the hydrologic unit.

The geographic scope of analysis for cumulative impacts related to surface water runoff and drainage capacity is the Dominguez Channel Watershed, as stormwater runoff flows throughout the Dominguez Channel Watershed.

The geographic scope of analysis for cumulative impacts related to groundwater recharge and supply is the WCGB.

Impact 3.9-4: Implementation of the Proposed Project, in combination with related cumulative projects within the Dominguez Channel Watershed, could cumulatively violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality. (Less than Significant)

Cumulative projects have the potential to discharge pollutants, including erosion and siltation, off site during construction and operational activities, which could further degrade receiving waters within the Dominguez Channel Watershed. However, similar to the Proposed Project, cumulative projects would be required to implement project-specific BMPs and comply with federal, state, and local regulations related to water quality. These regulations include, but are not limited to, the NPDES General Construction Permit, the City's Municipal Code Section 10-208, and the County's LID Standards Manual. If cumulative projects are greater than one acre, they would be required to prepare and implement a SWPPP to reduce pollutants in stormwater and other non-point source runoff. While the Proposed Project would require mitigation for the City to approve applicable final plans of the Project, the Proposed Project would not be cumulatively considerable as impacts would be reduced to less than significant. As a result of the regulatory framework that exists to regulate the quality of water discharged from the Project Site and other sites of cumulative projects within the Dominguez Channel Watershed, including regulations such as the NPDES General Construction Permit and the County's LID Standards Manual, related cumulative projects would not exacerbate the effect of the Proposed Project. The Proposed Project's contribution to a significant cumulative impact would not be considerable, and therefore, impacts would be **less than significant**.

Mitigation Measures

None required.

Impact 3.9-5: Implementation of the Proposed Project, in combination with related cumulative projects within areas served by the WCGB and Central Basin groundwater basins, could cumulatively decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin, or conflict with or obstruct implementation of sustainable groundwater management plan. (Less than Significant)

As stated above, the geographic scope of analysis for cumulative impacts related to groundwater recharge is the WCGB and Central Basin. Groundwater infiltration relates to the infiltration rate of soils and the amount of impervious surfaces within the groundwater basin. As the land that would provide infiltration and percolation into the WCGB and Central Basin is largely built out (including but not limited to the cities of Los Angeles, Long Beach, Carson, Torrance, Inglewood, Redondo Beach, Cerritos, Lawndale, Artesia, and Whittier), cumulative projects would not substantially increase the amount of impervious surfaces. In addition, if cumulative projects directly or indirectly effect groundwater supplies, existing regulations are in place to annually monitor the WCGB and Central Basin groundwater levels. As detailed above within

section 3.9.1 and section 3.9.2, WRD is responsible for maintaining water levels within the WCGB and Central Basin, including through purchasing and recharging additional water to make up for overdraft. Groundwater monitoring data for both basins is required to be submitted annually to the California Department of Water Resources. Source waters used for groundwater recharge and replenishment comes from annual precipitation, stormwater infiltration, and surface water imported by the Metropolitan Water District of Southern California and via the State Water Project. Artificial replenishment activities combined with natural replenishment and controlled pumping have ensured a sustainable, reliable supply of groundwater in the WRD service area. Therefore, because existing regulations are in place to monitor the groundwater basins and because WRD ensures a sustainable, reliable supply of groundwater recharge into the basins, related cumulative projects would not exacerbate the effect of the Proposed Project. The Proposed Project's contribution to a significant cumulative impact would not be considerable, and therefore, impacts would be **less than significant**.

Mitigation Measures

None required.

Impact 3.9-6: Implementation of the Proposed Project, in combination with related cumulative projects in the Dominguez Channel Watershed, could cumulatively alter the drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flow. (Less than Significant with Mitigation)

Erosion, Runoff Flooding, and Redirection of Flows

Cumulative projects would likely have ground disturbing activities that would alter drainage patterns, which in turn could result in erosion or siltation, flooding, or redirection of flows. However, similar to the Proposed Project, construction and operation of cumulative projects within the Dominguez Channel Watershed would be required to implement project-specific BMPs and comply with federal, state, and local regulations related to drainage. These regulations include, but are not limited to, the NPDES General Construction Permit, the City's Municipal Code Section 10-208, and the County's LID Standards Manual. In addition, if cumulative projects are greater than one acre, these projects would be required to prepare and implement a SWPPP that would include BMPs to reduce erosion, reduce the rate of runoff and flooding, and increase sediment control. The Proposed Project would require mitigation for the City to approve applicable final plans of the Proposed Project. Because the related cumulative projects would not exacerbate the effect of the Proposed Project, the Proposed Project's contribution to a significant cumulative impact would not be considerable, and therefore, impacts would be **less than significant**.

Stormwater Drainage

As stated above, the geographic scope of analysis for cumulative impacts related to surface water runoff and drainage capacity is the Dominguez Channel Watershed, as stormwater runoff flows throughout the Dominguez Channel Watershed. As the Dominguez Channel Watershed is largely built out, cumulative projects (listed in Section 3.0, Introduction to the Analysis) would involve redevelopment of existing paved or developed sites, and would not substantially increase the amount of impervious surfaces. Thus, the change of runoff to stormwater drainage systems would largely be negligible after development of cumulative projects. Additionally, as previously discussed, cumulative projects would be required to comply with applicable stormwater runoff regulations, including the NPDES General Construction Permit, the City's Municipal Code Section 10-208, and the County's LID Standards Manual. BMPs associated with these regulations would reduce runoff, therefore reducing the amount of stormwater entering the drainage systems. In addition, redeveloped parcels would likely undergo changes that would eliminate outdated water drainage features that no longer meet current regulations. Older infrastructure would be replaced with features that would provide higher quality of stormwater runoff than exists under current conditions. Because the related cumulative projects would not exacerbate the effect of the Proposed Project, the Proposed Project's contribution to a significant cumulative impact would not be considerable, and therefore, impacts would be **less than significant**.

Mitigation Measures

None required.

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