

4.15 UTILITIES

4.15.1 METHODOLOGY

This Draft Environmental Impact Report (EIR) section describes the existing utilities and service systems that serve the Project Site and surrounding areas, and addresses potential Project-related impacts on available capacity of the local utility providers related to wastewater, water supply, storm drainage infrastructure, and solid waste. Information provided by the former Oil Field Operator (FM O&G), along with published data, was used to provide the analysis of wastewater, water supply, and solid waste. The storm drainage infrastructure analysis was derived from Section 4.8, Hydrology and Water Quality, of this Draft EIR. Direct, indirect, and cumulative impacts are addressed for each threshold criteria below, and growth-inducing impacts are described in Sections 6.0, CEQA-Mandated Analyses, of this Draft EIR.

Throughout this Draft EIR, the City's portion of the Inglewood Oil Field (77.8 acres) is referred to as the "Project Site" or the "City IOF." The entire surface boundary limits of the Inglewood Oil Field, including lands within both the City and County, is referred to as "Inglewood Oil Field". The portion of the Inglewood Oil Field (IOF) that is only within the jurisdiction of the County of Los Angeles is referred to as the "County IOF".

4.15.2 ENVIRONMENTAL SETTING

Wastewater

The Oil Field Operator's main office building is the only structure within the Inglewood Oil Field that is served by a sanitary sewer (FM O&G 2016). This building is located outside of the Project Site, within the County IOF. It generated approximately 1,500 gallons per day (gpd) of sewage in the 2007 timeframe, and current sewage generation rates are expected to be approximately the same (FM O&G 2016). This private sewer line constructed conveys sewage to the Joint Water Pollution Control Plant (JWPCP), which is owned and operated by the Los Angeles County Sanitation Districts (LACSD). The JWPCP provides both primary and secondary treatment to approximately 260 million gallons of wastewater per day (mgd), and has a total permitted capacity of 400 mgd (LACSD 2017b).

Water Supply

FM O&G, the former Oil Field Operator, reported that operations in the Inglewood Oil Field in 2015 used approximately 84,000 gpd of water. This water was used for well maintenance activity, well re-work activity, dust control, and fire watch for welding (FM O&G 2016). There were no well stimulation activities conducted or new wells drilled within the Inglewood Oil Field in 2015. California Division of Oil, Gas, and Geothermal Resources (DOGGR) data obtained in June 2016 show that, of the 1,639 wells in the Inglewood Oil Field as a whole, 774 are classified as active (production or injection); 672 are plugged or abandoned; 92 are idle; 56 are cancelled; 44 are new; and 1 is classified as "U" or "not applicable" (DOGGR 2016). The active wells within the Inglewood Oil Field totaled 774 wells. In order to achieve a general water use per well active amount, it can be estimated that activities on the Inglewood Oil Field result in a use of approximately 109 gpd per active well¹ in 2015, which does not include new well drilling or well stimulation techniques.

¹ 84,000 gpd ÷ 774 active and new wells = 108.5 gpd per active/new well.

The California American Water Company (California American) delivers water to the Inglewood Oil Field via connection near Allegheny Court to the internal private water pipeline distribution system. The potable water is delivered to a water tank located within the County IOF and is conveyed throughout the field via the private distribution system. The former operator (FM O&G) reported they have water meters with both California American and Golden State Water Company (Golden State) (FM O&G 2016). Additionally, the City of Culver City, including the City IOF, is located within the service area boundary of Golden State. However, unlike Golden State, California American has confirmed that they provide water supplies to the Inglewood Oil Field and that the water demands of the Oil Field were included in their 2015 UWMP (California American 2016b). Additionally, in the 2012 *Hydraulic Fracturing Study – PXP Inglewood Oil Field*, the demand for potable water within the Inglewood Oil Field was reported to be fully served by California American (Cardno Entrix 2012). Therefore, the analysis of water supplies in this Draft EIR assumes that all supplies to the City IOF are provided by California American.

California American Water

The Los Angeles County District in California American Water's Southern Division (California American), a subsidiary of the American Water Works Company, provides water to three service areas: Baldwin Hills, Duarte, and San Marino. The Inglewood Oil Field is located in the Baldwin Hills service area, which has 6,253 total service connections in portions of the City of Inglewood and the unincorporated communities of Ladera Heights and View Park-Windsor Hills (California American 2016a). The 2015 Urban Water Management Plan (UWMP) for the Los Angeles County District included water demands from the Inglewood Oil Field that were known at the time of the UWMP preparation. The 2015 UWMP is the current UWMP for the Project area and therefore applies to the analysis of the Project's water supply.

California American's Baldwin Hills service area is served by groundwater from the Central Groundwater Basin (Central Basin), and the demand that cannot be met from groundwater is met by purchased water from the West Basin Municipal Water District (WBMWD). California American has a fixed annual water-year allocation of 2,067 acre-feet (af) from the Central Groundwater Basin; however withdrawals may exceed the fixed allocation up to 20 percent without violating the basin's adjudication. The difference however must be compensated for in the following water year (California American 2016a).

Solid Waste

Solid waste generated in Los Angeles County is collected and disposed by the LACSD, as well as by private waste management collectors and/or disposal facilities. Los Angeles County's solid waste stream is generally comprised of residential, construction, industrial, and commercial wastes. Generally, the solid waste is hauled directly to a Class III landfill and the rest is taken to transfer stations, resource recovery centers, or refuse-to-energy facilities. Class III landfills typically handle non-hazardous wastes. According to the Los Angeles County Integrated Waste Management Plan 2013 Annual Report (2013 IWMP), there are currently 11 active Class III landfills and two refuse-to-energy (transformation) facilities in Los Angeles County, and 1 out-of-County Class III landfill (Mesquite Regional Landfill) (LACDPW 2015).

Solid waste generated in the City IOF is collected and disposed of with the solid waste generated by the County IOF, which is served by Republic Services, Inc. (Republic). Republic brings the collected wastes to the Republic-owned and operated Sunshine Canyon City/County Landfill (Sunshine Canyon) located in Sylmar. Although municipal solid wastes generated within the Inglewood Oil Field could be disposed at other facilities within the County, based on the current

waste hauler and to provide a conservative analysis, this analysis assumes that all wastes generated within the Culver City portion are disposed of only at the Sunshine Canyon Landfill.

Sunshine Canyon Landfill has a daily permitted capacity of 12,100 tons per day (tpd) (or 16,351 cubic yards [cy]). As of October 2012, the landfill had a remaining permitted capacity of approximately 96.8 million cy (or approximately 65.8 million tons) and an estimated closing date of December 2037 (CalRecycle 2017d). Currently, the landfill accepts about 8,300 tons of trash per day or more than 23 million tons annually (Republic Services 2017).

Hazardous wastes must be sent to a Class I and/or Class II landfill for treatment and eventual disposal. There are three Class I and/or Class II landfills in Central and Southern California that can accept hazardous waste generated within Los Angeles County:

- **Kettleman Hills Landfill, Kettleman City, Kings County, California.** This is a Class I and Class II permitted landfill that accepts both hazardous and non-hazardous waste with a daily permitted capacity of 8,000 tpd and a remaining capacity of 6 million cy (CalRecycle 2017b).
- **McKittrick Waste Treatment Site, McKittrick, Kern County, California.** This facility is a Class II permitted landfill that accepts both hazardous and non-hazardous waste with a daily permitted capacity of 3,500 tpd and a remaining capacity of approximately 769,790 cy (CalRecycle 2017c).
- **Clean Harbors Buttonwillow, LLC, Buttonwillow, Kern County, California.** This is a Class I permitted landfill that accepts both hazardous and non-hazardous waste with a daily permitted capacity of 10,500 tpd and a remaining capacity of approximately 13,250,000 cy (CalRecycle 2017a).

4.15.3 REGULATORY SETTING

Wastewater

Federal

There are no federal plans or policies identified related to wastewater on the Project Site.

State

There are no State plans or policies identified related to wastewater on the Project Site.

Local

County Sanitation District Wastewater Ordinance

The LACSD has adopted a Wastewater Ordinance for the operation and financing of its wastewater conveyance, treatment, and disposal facilities. Under this ordinance, the LACSD requires Industrial Wastewater Discharge Permits that regulate industrial wastewater discharges to protect the public sewage system (LACSD 1998).

City of Culver City Municipal Code

Chapter 5.02 of the City Municipal Code sets forth the requirements for sewers including when sewer permits are required, operation and maintenance of sewer laterals, connections

specifications and connection to a public disposal system mandatory and exceptions among other requirements.

Potable Water

State/Regional

Urban Water Management Planning Act

The California Urban Water Management Planning Act (Sections 10610–10656 of the *California Water Code*) requires urban water suppliers to develop urban water management plans. While generally aimed at encouraging water suppliers to implement water-conservation measures, it also creates long-term planning obligations. The Urban Water Management Planning Act requires urban water suppliers that either provide over 3,000 acre-feet of water annually or serve more than 3,000 or more connections to assess the reliability of its water sources over a 20-year planning horizon and to update the data in an UWMP every 5 years and submit it for review and approval by the California Department of Water Resources (DWR). In preparing their 20-year management plans, water suppliers must directly address the subject of future population growth. The suppliers must also identify sources of supply to meet demand during normal, single-dry, and multiple-dry years. California American meets the criteria to be required to prepare UWMPs, and have prepared and submitted a 2015 UWMP to the DWR.

Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act of 2006 (Assembly Bill [AB] 1881) requires Cities and Counties, including Charter Cities and Charter Counties, to adopt landscape water conservation ordinances by January 1, 2010. In accordance with this Act, the Department of Water Resources (DWR) prepared a Model Water Efficient Landscape Ordinance, as contained in the *California Code of Regulations* (Title 23, Division 2, Chapter 2.7). Cities and Counties had the option to adopt DWR's ordinance or to develop their own.

Mandatory Water Conservation

Following Governor Brown's declaration of a State of Emergency, on July 15, 2014 the State Water Board adopted Resolution No. 2014-0038 prohibiting several activities, including (1) the application of potable water to outdoor landscapes in a manner that causes excess runoff; (2) the use of a hose to wash a motor vehicle except where the hose is equipped with a shut-off nozzle; (3) the application of water to driveways and sidewalks; and (4) the use of potable water in non-recirculating ornamental fountains. The State Water Board resolution also directed urban water suppliers to implement the stage of their water shortage contingency plans that impose mandatory restrictions on outdoor irrigation of ornamental landscaping or turf with potable water and report monthly water production information to the State Water Board.

On April 1, 2015, Governor Brown signed Executive Order (EO) B-29-15, which contains a total of 31 directives – the primary requirement being a 25 percent statewide water reduction in potable urban water use through February 28, 2016, as compared to the amount used in 2013. EO B-29-15 requires the State Water Resources Control Board to impose restrictions to achieve the 25 percent reduction, and is directed to consider the relative per capita water usage of each water supplier's service area. Those areas with high per capita use will be required to achieve proportionally greater reductions than those with low use.

Another directive in EO B-29-15 included development of a new Model Water Efficient Landscape Ordinance (MWELo), which was adopted by the State on July 15, 2015. This ordinance will

effectively reduce water use for new landscaping and prohibits the use of turf in non-residential landscapes, unless irrigated with non-potable water. Agencies have until February 1, 2016, to adopt this model ordinance or a similar ordinance and must start reporting on implementation and enforcement of the ordinance by December 31, 2015, and then by January 31st in subsequent years. The impact of this new MWELO will be reduced water demands in new and renovated landscapes.

Local

City of Culver City Municipal Code

Chapter 5.03 of the City Municipal Code sets forth the Culver City Water Conservation and Water Supply Shortage Program. The purpose of this program is to manage the City's potable water supply in the short- and long-term to avoid or minimize the effects of drought and shortage within the City and ensure a reliable and sustainable minimum water supply. The Municipal Code describes several water conservation requirements, including, but not limited to, limits on watering hours and duration, prohibition on washing down hard or paved surfaces, limits on washing vehicles, serving drinking water upon request only, and a requirement for recirculating water in decorative features. The program also defines the condition under which a Level 1, 2, or 3 Water Supply Shortage can be declared by the City, and the accompanying conservation measures for each condition. A Level 3 condition is considered an emergency condition.

Solid Waste

State

California Integrated Waste Management Act (Assembly Bill 939)

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) requires all Counties to prepare an Integrated Waste Management Plan. The California Integrated Waste Management Board (now the California Department of Resources Recycling and Recovery or CalRecycle) requires that all Counties have an approved Countywide Integrated Waste Management Plan (CIWMP) that demonstrates sufficient solid waste disposal capacity for a minimum of 15 years. In compliance with AB 939, Los Angeles County has prepared a CIWMP, which it keeps current, demonstrating the required 15-year disposal capacity.

Under AB 939, each City and County is also required to reduce by 50 percent the amount of waste going to landfills, based on 1990 levels. Jurisdictions select and implement the combination of waste prevention, reuse, recycling, and composting programs that best meet the needs of their community while achieving the diversion requirements. The City of Culver City Public Works Department is responsible for AB 939 compliance activities.

California 75 Percent Goal (AB 341)

In 2011, Governor Brown signed AB 341, which sets a goal of 75 percent recycling, composting, or source reduction of solid wastes by 2020. AB 341 does not change the mandatory diversion for local jurisdictions set forth in AB 939. CalRecycle has held workshops with stakeholders to identify existing programs and new ways to reduce the waste streams. By 2020, 23 million tons will need to be recycled, reduced or composted in order to reach the 75 percent reduction goal. Strategies and focus areas have been identified:

- Moving Organics Out of the Landfill

- Expanding the Recycling/Manufacturing Infrastructure: Permitting/Compliance Assistance and Financing
- Exploring New Models for State and Local Funding of Materials Management Programs
- Promoting State Procurement of Postconsumer Recycled Content Products
- Promoting Extended Producer Responsibility

Solid Waste Disposal Measurement Act of 2008 (Senate Bill 1016)

The Solid Waste Disposal Measurement Act of 2008 (Senate Bill [SB] 1016) introduced a per capita disposal measurement system that measures the 50 percent diversion requirement using a disposal measurement equivalent. The purpose of SB 1016 was to make the process of goal measurement established by AB 939 simpler by changing to a disposal-based indicator (i.e., the per capita disposal rate), which uses only two factors: (1) a jurisdiction's population (or in some cases employment) and (2) its disposal as reported by disposal facilities. The per capita disposal rate is expressed in pounds per resident, or employee, per day (lbs/resident or employee/day). Each year CalRecycle calculates each jurisdiction's per capita disposal rates; the per capita resident disposal rate is used for determining diversion rates in most jurisdictions. If business is the dominant source of a jurisdiction's waste generation, CalRecycle may use the per employee disposal rate. Each year's disposal rate will be compared that jurisdiction's 50 percent per capita disposal target.

California Green Building Standards Code.

The California Green Building Standards Code (CalGreen) includes mandatory requirements for construction and demolition (C&D) material conservation and resource efficiency (CalGreen Sections 4.408.1). Section 5.408.1 requires that a minimum of 50 percent of the nonhazardous construction and demolition waste be recycled and/or salvaged for reuse.

Local

City of Culver City Municipal Code

Chapter 5.01 of the City Municipal Code establishes regulations for the collection, transportation, disposal, and recycling of solid waste generated within the City. Section 5.01.010 states the following:

Solid waste handling and recyclable waste material handling shall be performed exclusively by the City or its authorized agents. The City Council may regulate, by ordinance or resolution, all aspects of solid waste handling and recyclable waste material handling, including, but not limited to, frequency of collection, means of collection and transportation, level of services, charges, fees, and nature, location, and extent of providing solid waste handling services.

4.15.4 SPECIFIC PLAN REQUIREMENTS AND REGULATORY REQUIREMENTS

Specific Plan Drilling Regulations

Section 19. Toilet and Wash Facilities. The Operator shall be required to provide a portable toilet for temporary employees on the permitted premises, within 200 feet of the derrick. Sanitary toilet and washing facilities shall be installed at any

site where personnel are permanently stationed. Temporary and permanent facilities shall be maintained in a clean and sanitary condition at all times.

Section 20.F Retention Basins. All retention basins used in Oil Operations shall be adequately sized, sited, inspected, maintained and operated to handle a 100-year storm event to the satisfaction of the Public Works Director/City Engineer.

Section 28. Storage of Hazardous Materials and Oil Field Waste Removal.

B.1 No drilling, redrilling, reworking or maintenance waste ("Drilling Waste") shall be discharged into any sewer, storm drain, irrigation systems, stream, creek, street, highway or drainage canal.

B.4 All Drilling Waste shall be disposed of in compliance with all applicable City, regional, State, and federal rules and regulations.

C. Recycling and Removal Plan. Within 180 days of the date of approval of the Comprehensive Drilling Plan or at such later date as may be approved by the Public Works Director/City Engineer, for good cause shown, the Operator shall prepare a Recycling Plan, to be reviewed and approved by the Public Works Director/City Engineer:

1. The Recycling and Removal Plan shall include, but not be limited to, the following:
 - a. Identification of how recycling will be incorporated into Oil Operations, including debris generated during construction, drilling and other Oil Operations;
 - b. Use of mulching, composting, and grass-cycling on landscaped areas;
 - c. Design and allocation of recycling collection and storage space;
 - d. An employee participation recycling program;
 - e. Employee education through a series of brief educational sessions to demonstrate how employees can further contribute to recycling and conservation; and
 - f. Identification of methods of loading, transport, and receiving locations for all waste from the Oil Field.
2. This requirement may be satisfied if the Operator can demonstrate, to the satisfaction of the Public Works Director/City Engineer, that a Recycling and Removal Plan is being implemented and has been approved for other parts of the Oil Field and can conclusively show that the Recycling and Removal Plan applies to the Oil Field within the jurisdiction of the City. Additional information may be required by the Public Works Director/City Engineer to demonstrate compliance with this Section.

Section 37. Landscaping.

A. Landscaping Plan. Concurrently with the submission of the Comprehensive Drilling Plan, or at such later date as may be approved by the Community Development Director, for good cause shown, Operator shall submit a Landscaping Plan to be reviewed and approved or

conditionally approved by the Community Development Director. The Plan shall be designed to (1) specify landscaping and fencing that will be used to visually screen the Oil Operations and related equipment and facilities from Developed Areas or adjacent public streets; (2) improve the visual appearance of the existing Oil Field; and (3) ensure compatibility with the surrounding environment. The Plan shall be reviewed by the Operator in conjunction with the Annual Drilling Plan to determine if modifications to the Plan are required and report its findings to the Community Development Director. Such findings and proposed modifications to the Plan shall be submitted to the Community Development Director for review and consideration of approval. Operator shall comply with all provisions of the approved Plan.

- B. Irrigation.** Landscaping shall be irrigated and maintained to ensure that landscaping provides sufficient screening.
- C. Inspection and Maintenance.** All landscaping and vegetation shall be routinely inspected (on at least a monthly basis) and maintained in a neat, clean and healthful condition, including proper watering, pruning, weeding, removal of litter, fertilizing, and replacement of plants as needed. Litter shall also be removed on a regular basis when necessary.

Regulatory Requirements

RR UTIL 15-1 The Oil Field Operator must comply with pertinent regulations in the California Green Building Standards Code (CalGreen), including standards for construction waste diversion.

RR UTIL 15-2 The Oil Field Operator must ensure that all applicable facilities are designed, constructed and operated in accordance with the County of Los Angeles Sanitation District's (LACSD's) Wastewater Ordinance, all wastewater discharges into LACSD facilities shall be required to comply with the discharge standards set forth to protect the public sewage system.

DOGGR determined that several of the mitigation measures developed in the SB4 EIR should be converted into formal regulations, including SB4 GW-1a (Use Alternative Water Sources to the Extent Feasible). These measures are intended to be applied without change throughout the State because (1) they address the direct environmental effects of well stimulation treatment; (2) they relate to activities that occur physically very close to the oil and gas wells; and (3) they already reflect the lessons of a considerable amount of scientific input and empirical experience. TSB4 GW-1a is temporarily included within the DOGGR Draft Mitigation Policy Manual (see Appendix B-2 of this Draft EIR) until such time as formal regulations are duly adopted and in place (DOC 2015b). Interim MM UTIL-2, which corresponds to SB4 GW-1a, will be implemented and enforced by the City until such time as DOGGR adopts the measure as a formal regulation.

SB4 GW-1a **Use Alternative Water Sources to the Extent Feasible.** Prior to issuance of a well stimulation treatment permit for stimulation proposed inside or outside of existing oil and gas fields, DOGGR shall work with the applicant to determine the quantity of water to be used, and the source and supplier(s) of the water. DOGGR shall in general consider recycled water and saline water to be the preferred water sources for well stimulation treatments, and shall require an applicant for a well stimulation permit to conduct a feasibility study to determine if recycled water or alternative water

sources (including produced water, flowback water, or saline groundwater) may effectively be used for well stimulation. The feasibility study shall be incorporated into the applicant's proposed Water Management Plan, as required by CCR Title 14, Section 1783.1(a)(23)).

Based on the results of the final version of the feasibility study, prepared to DOGGR's satisfaction, the well owner/operator/service provider shall be required, through the final version of the Water Management Plan, to use recycled or saline water to the maximum extent feasible, as determined by DOGGR. The source of water for the well stimulation treatment permit, including groundwater, shall also be included in the Water Management Plan.

The primary objective of the draft study on the feasibility of using recycled water or saline water submitted with the permit application is to demonstrate all of the following: that the applicant has made good faith efforts to identify any produced water, flowback water, saline groundwater, or other source of recycled water potentially available for use in well stimulation treatment; that the proposed well stimulation treatment will use any such available source(s) to the maximum extent feasible; and that the proposed strategy would not cause adverse effects on drinking water sources, protected groundwater, or the environment. At a minimum, the draft Study must identify: (1) the amount of produced water, flowback water, saline groundwater, or other source of recycled water that the applicant has determined could be feasible to use for well stimulation; (2) whether the produced water, flowback water, saline groundwater, or other source of recycled water under consideration would likely be used for future drinking water supplies; and (3) whether any saline groundwater aquifer being considered as a source is connected to freshwater aquifers. The draft Study shall be integrated into the proposed Water Management Plan, which is required by DOGGR's permanent regulations for well stimulation treatments under CCR Title 14, Section 1783.1(a)(23). The Study shall be finalized after review and input by DOGGR as part of the process by which DOGGR considers issuance of a well stimulation treatment permit.

In making its own determinations regarding how much recycled or saline groundwater may feasibly be used for well stimulation, and the availability of any non-recycled water intended to be used for the well stimulation, DOGGR shall consider all relevant economic, legal, social, and technological factors, consistent with the concept of "feasibility" as it occurs in CEQA, the State CEQA Guidelines, and CEQA case law. DOGGR may also consider such information as: adopted urban water management plans; an assessment of whether the intended water supply system has projected water supplies available during the intended period of use that will meet the demand associated with the well stimulation project in addition to the water system's existing and planned uses, including municipal, agricultural and manufacturing uses; written contracts or other proof of entitlement to an identified water supply; and any capital outlay program for financing the delivery of a water supply.

In the event that DOGGR receives well stimulation treatment permit applications for which recycled water, saline water, or an assured non-

recycled supply as described above cannot be feasibly obtained, DOGGR shall either deny the permit or require the applicant to identify a feasible alternative means of obtaining a substitute water supply.

After the issuance of a well stimulation treatment permit and completion of well stimulation treatment, the permittee shall document and report the actual amount of recycled water or saline groundwater used and the reasons for any deviation from the conditions of approval derived from the final Study. The permittee shall integrate this information into the Post-well Stimulation Treatment Report, as required by CCR Title 14, Section 1789 et seq.

4.15.5 THRESHOLDS OF SIGNIFICANCE

The Initial Study for the Project concludes that additional project-level analysis of the following thresholds of significance is required in this Draft EIR. According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project would normally have a significant adverse environmental impact on utilities if it will:

- Threshold 15-1:** Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Threshold 15-2:** Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Threshold 15-3:** Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Threshold 15-4:** Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?
- Threshold 15-5:** Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?
- Threshold 15-6:** Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?
- Threshold 15-7:** Comply with federal, state, and local statutes and regulations related to solid waste?

4.15.6 IMPACT ANALYSIS

- Threshold 15-1:** Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Threshold 15-5:** Would the project result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate

capacity to serve the Project's projected demand in addition to the provider's existing commitments?

The Specific Plan allows for new oil and gas production wells to be drilled. As a result, there would be an increase in the volume of produced water from these activities. Water from the T-Vickers production tank, located within the Project Site, is processed at a small water plant located within the City IOF (FM O&G 2016). The T-Vickers system consists of a single raw tank, clarifier, and filtered water tank. Once the water is processed at the small water plant located within the Project Site, the water is injected into the subsurface reservoirs.

In California, most produced water is injected into the oil producing reservoir zones with the objective of balancing the fluid injection volumes and the volumes withdrawn through production activities such that the reservoir pressures are maintained. Produced water within the Inglewood Oil Field has historically been reinjected back into the producing formation using Class II Underground Injection Control (UIC) injection wells (LACDRP 2008). It is anticipated that the Oil Field Operator will continue to treat all produced water on-site and then inject it (i.e., waterflooding) back into the oil producing formation to help control subsidence. Therefore, as oil/gas extraction increases within the City IOF, produced water from production activities is anticipated to be reinjected to maintain reservoir pressures through waterflooding. Therefore, there would be no impact to wastewater treatment due to new oil production and injection wells within the City IOF.

Water produced during hydraulic fracturing activities, known as flowback water, would be transported by pipeline to the Inglewood Oil Field water treatment plant where it would be mixed with other produced water generated on the oil field. Treatment at the plant within the County IOF includes removing suspended solids and oil. The "treated" water would then be pumped back into producing formations. Historically, treated water was reinjected into the oil and gas producing formations (Cardno Entrix 2012), and it is anticipated that this practice would continue in the future. However, there is the potential that flowback from fluids used for hydraulic fracturing in the City IOF could have impurities that render it unusable for waterflooding; then, either deep well wastewater disposal within the City IOF, the County IOF, and/or transport to an off-site treatment facility and/or injection site, would be required. As discussed in Section 4.5, Geology, Soils, Seismicity of this Draft EIR, MM GEO-2 would prohibit deep well wastewater injection for the disposal of flowback from hydraulic fracturing within the City IOF.

Per discussions with the Los Angeles County Sanitation Districts, their facilities do not currently accept or treat produced water from hydraulic fracturing (LACSD 2016). There are private oilfield waste management companies that service Kern and Ventura counties for the disposal of solid (drill cuttings or muds) and flowback/brine disposal. It is too speculative to evaluate how fluids generated at the City IOF that may be unsuitable for injection for waterflooding would be disposed due to the number of assumptions that would need to be made, including the quality of the flowback water for waterflooding, cost/benefit of deep well wastewater disposal within the County IOF from the perspective of the Oil Field Operator, as well as the feasibility of off-site transport for treatment/disposal. As such, this speculative scenario is not evaluated in this Draft EIR. However, it is known that no produced water from well stimulation activities would be discharged into the sewer system. Therefore, there would be no impact to wastewater treatment due to well stimulation activities within the City IOF. Issues related to groundwater quality are addressed in Section 4.8, Hydrology and Water Quality, of this Draft EIR.

Section 19 of the Specific Plan states that the Oil Field Operator would be required to provide a portable toilet for temporary employees on the permitted premises, within 200 feet of the derrick. These facilities are temporary and would not require a connection to the sewer system. Impacts would be less than significant to wastewater treatment requirements for temporary facilities.

Section 19 of the Specific Plan also requires sanitary toilet and washing facilities be installed at any site where personnel are permanently stationed. Based on information provided in the *Baldwin Hills Community Standards District Final Environmental Impact Report*, future development in the Inglewood Oil Field would not include the construction of any new structures requiring sanitary sewer connections (LACDRP 2008). However, if a new habitable structure is proposed within the City IOF, a sanitary toilet and washing facilities would be required.

Any additional connections or upsized facilities required to serve the City IOF would ultimately be served by the Sanitation Districts of Los Angeles County, and permits to connect, upsize, or alter the type of wastewater disposal would be required. The Sanitation District do not allow for any connections to the County's sanitary sewer system for the purpose of handling industrial wastes from oil or gas wells until a sewer connection permit has been obtained. Regulatory Requirement (RR) UTIL-2 would require that the Oil Field Operator complete the necessary paperwork and pay the appropriate fees to obtain the proper permits to construct, connect, and/or upsize any sewer facilities, as required by the Sanitation Districts (LACSD 2017a). Compliance with RR UTIL-2 would ensure that impacts would be less than significant for wastewater treatment requirements. The addition of one habitable structure would not increase the demand for additional capacity at either Sanitation Districts of Los Angeles County facilities. Impacts to wastewater treatment provider capacities would be less than significant. No mitigation is required.

Threshold 15-2: Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As discussed under Threshold 15-1, increases in the volume of produced water during routine oil and gas production operations, as well as water produced during well stimulation activities, would not be discharged into the sewer system and would instead be reinjected back into the oil and gas producing formations for waterflooding purposes to address subsidence. Therefore, produced water from routine oil and gas operations as well as from well stimulation activities would not require or result in the construction of new or the expansion of existing off-site water and wastewater treatment facilities.

However, the former Operator (FM O&G) has indicated that additional facilities, improvements, replacements and/or additions to all three water plants (including two water plants located within the County IOF and the one water plant located within the City IOF) will be necessary to handle projected volumes from new wells and to ensure efficient operation (FM O&G 2016). Details for these additional facilities, improvements, replacements and/or additions such as, but not limited to, physical size (square footage), capacity, and number are not known at this time.

The Maximum Buildout Scenario assumes a number of individual activities that have the potential to emit air contaminants, including well pad clearing and grading, vehicle travel on unpaved roads, and operation of work trucks (e.g., delivery trucks, water trucks, cement trucks, dump trucks), as detailed in Section 4.2, Air Quality. These assumptions include the possibility of constructing new tanks, pipelines, or other above-ground facilities on the Project Site, as allowed within the Specific Plan. If additional facilities, improvements, replacements and/or additions are required at the water plant located within the Project Site, the construction and operation of these facilities would be conducted in compliance with applicable rules and regulations designed to reduce environmental impacts, as discussed in Sections 4.1 through 4.15 of this Draft EIR. Therefore, impacts related to the construction of additional facilities, improvements, replacements and/or additions would be less than significant and no mitigation would be required beyond what has been evaluated in Sections 4.1 through 4.15 of this Draft EIR.

Threshold 15-3: Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

This topic is further discussed under Threshold 8-5 in Section 4.8, Hydrology and Water Quality.

There are no storm drains on the Project Site. Storm water runoff from developed/graded areas within the Project Site is directed into the Dabney Lloyd Retention Basin – Basin 002, located on the eastern portion of the Project Site. Under the Maximum Buildout Scenario, grading and earth moving would be required for proposed well pads, pipelines, and storage tanks to support the new wells allowed under the Project, which would result in a slight increase in impervious surfaces (e.g., paved areas). The increased development within the City IOF, as allowed under the Specific Plan, would result in a slight increase in storm water runoff into Dabney Lloyd Basin – Basin 002.

Section 20.F of the Specific Plan requires that all retention basins used in Oil Field Operations shall be adequately sized, sited, inspected, maintained and operated to handle a 100-year storm event to the satisfaction of the Public Works Director/City Engineer. Storm water management must comply with all applicable federal, State, regional and local agency requirements for water quality (see Section 4.8, Hydrology and Water Quality) and development standards per the City's Municipal Code. Any potential for necessary expansion or resizing of the existing retention basin is unknown at this time. However, if the retention basin does need to be expanded or resized, the activities associated with the expansion or resizing would follow applicable rules and regulations designed to reduce environmental impacts, as discussed in Sections 4.1 through 4.15 of this Draft EIR. Therefore, impacts related to the possible expansion of the Basin 002 would be less than significant and no mitigation would be required beyond what has been evaluated in Sections 4.1 through 4.15 of this Draft EIR.

Threshold 15-4: Would the project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?

Water Supply Assessment Determination

Under SB 610, cities or counties approving certain projects subject to CEQA are required to identify any public water system that may supply water and request those water systems to prepare a Water Supply Assessment (WSA). A WSA is required for any project that is subject to CEQA and that proposes various development scenarios, the most applicable include:

- An industrial development that has 1,000 employees, occupies more than 40 acres of land, or has more than 650,000 sf of floor space.
- A project that would require water that is equal to or more than the water demand of 500 dwelling units.

The proposed Project would not require an addition of 1,000 employees. To determine whether a project's water demand is equivalent to, or greater than, the water demand of a 500 dwelling unit development, the DWR assumes an average household of 3.5 people requires 0.5 acre-foot per year (afy). This average demand results in a threshold of 250 afy for an equivalent water use of a 500 dwelling unit development, based on a statewide average.

Under the Maximum Buildout Scenario for the Project, which would require the highest water demand for the Project, the water demand is less than 250 afy. As discussed below, the Maximum Buildout Scenario after full buildout of the 30 new wells within the City IOF is estimated at

approximately 2.10 million gallons per year (6.44 afy), which is well below the 250 afy threshold. Therefore, a WSA is not required.

Estimated Water Demand for the Project

The Specific Plan would allow the drilling of new wells, redrilling, rework, and maintenance on new and existing wells at the Project Site, and would require water for landscaping and dust suppression. Well stimulation activities are also anticipated as part of the Maximum Buildout Scenario. All of these activities would require additional water beyond current water usage at the Project Site. In order to estimate the probable water demand during the Maximum Buildout Scenario, the data sources described below regarding water use within the Inglewood Oil Field, or other areas, as noted were utilized.

According to the Baldwin Hills Community Standards District (CSD) EIR, the Inglewood Oil Field used an average of 3,812 barrels of water per day (160,000 gpd) between February 2006 through March 2008 (LACDRP 2008). This water was used for general operations, drilling, injection, dust control, and landscaping. The Baldwin Hills CSD EIR stated that there were a total of 436 active producing wells; 207 active water injection wells (i.e., 643 active wells) at that time. Other wells included 177 shut-in wells (i.e., capable of producing but not active) and 643 abandoned wells, for a total of 1,463 wells as of 2006 within the Inglewood Oil Field. For the purposes of determining an average water use per active well, 160,000 gpd divided by 643 active wells would result in an approximate 249 gpd of water use per well.

Table 4.15-1 below show the estimated water use within the Inglewood Oil Field, including the Project Site, as reported by the former Oil Field Operator from 2010 through 2015. The reasons for the substantial reduction in daily water use over these years is not known, but anticipated to be attributable to the reduction in oil production activities, and possibly influenced by the fact that there was no drilling of new wells within the City IOF in 2014 or 2015. As shown in Table 4.15-1, operations in the Inglewood Oil Field in 2015 used approximately 84,000 gpd of water, which is considerably less than the 160,000 gpd reported between 2006 and 2008 in the Baldwin Hills CSD EIR. Also notable is the high usage in 2010 and 2011 when compared with other years. Therefore, it is noted that the amount of water usage at the Inglewood Oil Field is highly variable from year to year.

**TABLE 4.15-1
WATER USAGE HISTORY OF THE INGLEWOOD OIL FIELD**

Year	Water Usage		
	Daily (bbls/day)	Daily (gpd)*	Annual (mgy)
2010	7,000	294,000	107.31
2011	5,000	210,000	76.65
2012	4,000	168,000	61.32
2013	3,500	147,000	53.66
2014	3,500	147,000	53.66
2015	2,000	84,000	30.66
bbls: barrels; gpd: gallons per day; mgy: million gallons per year			
* There are 42 gallons in one barrel.			
Source: FM O&G 2016			

Using 2015 data only, as discussed previously, in order to achieve a general water use per well amount, it can be estimated that activities on the Inglewood Oil Field result in a use of approximately 109 gpd per active well in 2015.

Because information in the Baldwin Hills CSD EIR and information provided by FM O&G are equally representative of activities within the Inglewood Oil Field but at different points in time that reflect the high variability in the water demands for Oil Field operations, an average of the two will be used for the purposes of this analysis. As such, general water use (excluding well stimulation) within the City IOF is anticipated to require approximately 179 gpd for active wells (i.e., the average of 249 gpd in 2006-08 and 109 gpd in 2015). Using 179 gpd for 30 new active wells allowed under the Specific Plan within the City IOF, it is estimated that approximately 5,370 gpd would be required for additional operations allowed under the Specific Plan at the City IOF. It is assumed that well drilling activities are captured within this water use estimate, as well as landscaping irrigation, as was the case described in the Baldwin Hills CSD EIR for 2006 to 2008.

Hydraulic fracturing operations at 2 wells in the County IOF required from 94,248 to 123,354 gallons of water per well over a 2-day period in 2011 and 2012. High-rate gravel packs required 33,357 to 55,247 gallons of water per well over a two-day period in 2012. This water may either be produced water or fresh water, with the hydraulic fracturing operations using fresh water and the high-rate gravel packs using produced water (Cardno Entrix 2012). However, the average water usage of 140,000 gallons per well (total for the 2-day period) for hydraulic fracturing activities throughout the state of California was used in this analysis. This value was determined to be more conservative because it is not known at this time to what depth or to what length wells may be stimulated within the City IOF (CCST 2015). Stimulation of no more than three new wells per year over a two day period for each well has been estimated. Therefore, these activities would require up to 420,000 gpd² over 6 days per year.

As discussed in Section 3.0 Project Description, the maximum total number of 30 wells that may be drilled (i.e., new wells) or redrilled (i.e., work on existing wells) on the Project Site is directed by the Specific Plan. This Draft EIR assumes that, in the Maximum Buildout Scenario, the allowable maximum of 30 wells are “new” wells, with no redrilled wells, because that is the most environmentally impactful assumption. Also, the Maximum Buildout Scenario assumes only one well is hydraulically fractured per year. Based on the assumptions described above, the estimated peak water use within the City IOF under the Maximum Buildout Scenario is provided in Table 4.15-2.

² 140,000 gpd for 2 days x 3 wells = 420,000 gallons over 6 (3 x 2) days

**TABLE 4.15-2
ESTIMATED WATER USE FOR MAXIMUM BUILDOUT SCENARIO**

	Existing		Maximum Buildout		Cumulative Total	
	Daily (gpd)	Annual (mgy)	Daily (gpd)	Annual (mgy)	Peak Daily (gpd)	Peak Annual (mgy)
Operations, Drilling, Maintenance, Landscaping (36 active existing wells)	6,444 ^a	2.35	–	–	6,444	2.35
Operations, Drilling, Maintenance, Landscaping (30 new wells)	–	–	5,370 ^a	1.96	5,370	1.96
Well stimulation	–	–	70,000 ^b	0.14 ^b	70,000 ^a	0.14 ^c
Total	6,444	2.35	75,370	2.10	81,814	4.45
gpd: gallons per day; mgy: million gallons per year						
^a assumes 179 gpd/well						
^b assumes 140,000 gallons (0.14 million gallon) over 2 days						
^c assumes only one well is stimulated per year						

As shown in the “Maximum Buildout” columns of Table 4.15-2, up to 75,370 gpd of water would be used for all activities on the City IOF during the peak day (including a hydraulic fracturing event), based on the metric of 179 gpd/well for 30 new wells. This equates to an estimated annual water use of approximately 2.10 million gallons per year (mgy) (i.e., 6.44 afy³) associated with the implementation of the Specific Plan. As shown in the “Totals” column of Table 4.15-2, considering both the 36 existing, active wells and the Project’s Maximum Buildout Scenario, the total water use in the City IOF would be approximately 81,814 gpd on the peak day with a hydraulic fracturing event, or 4.45 mgy (i.e., 13.65 afy). However, the focus of the analysis is on the additional, or new, demand for water that would be required with Project implementation (i.e. 75,370 gpd or 2.10 mgy). This analysis assumes all well stimulation activities use potable water, as a conservative assumption, although some well stimulation activities would be expected to use produced water.

Analysis of Water Supplies

As discussed above, the Project does not trigger the requirement to prepare a WSA. Therefore, the sufficiency of water supplies for the Project has been determined based on consultation with the affected water agency and review of their Urban Water Management Plan.

The 2015 California American UWMP included the existing use of water in the Inglewood Oil Field at the time of the preparation of the 2015 UWMP (California American 2016b). This use was not divided between City IOF and County IOF, and includes the total use. Table 4.15-3 provides the current (2015) and projected total, and industrial sector, water use for the Baldwin Hills service area through the UWMP horizon year of 2035.

³ There are 325,851 gallons in 1 acre-foot of water.

**TABLE 4.15-3
CURRENT AND PROJECTED WATER USE
FOR THE BALDWIN HILLS SERVICE AREA**

Year	Total Water Use (afy)	Industrial Sector Water Use (afy)
2015	2,600	302
2020	3,250	248
2025	3,348	255
2030	3,450	261
2035	3,555	268
afy: acre-feet per year Note: Projected values are listed for the years 2020 through 2035. Source: California American 2016a		

Based on Table 4.15-3, the incremental demand for up to approximately 75,370 gpd or 2.10 mgd (i.e., 6.44 afy) represents approximately 2.4 percent of the 2035 UWMP's anticipated water use for the industrial sector for 2015, which includes activities within the Inglewood Oil Field, and approximately 0.18 percent of the total water use for 2035. In summary, the most conservative estimate of water use for the implementation of the Specific Plan represents less than one-quarter of one percent of California American's total projected water use through the UWMP horizon year.

Table 4.15-4 provides the current and projected water supplies (i.e., groundwater and WBMWD water) for the Baldwin Hills Service Area through the UWMP horizon year of 2035. As shown, the projected water supplies from the WBMWD, which is the primary supply source, are expected to increase from 2015 through 2035, while supplies from the Central Basin are expected to decrease.

**TABLE 4.15-4
CURRENT AND PROJECTED WATER SUPPLIES
FOR THE BALDWIN HILLS SERVICE AREA**

Water Supply Source	2015 (afy)	2020 (afy)	Percent Change from 2015 to 2020	2025 (afy)	Percent Change from 2020 to 2025	2030 (afy)	Percent Change from 2025 to 2030	2035 (afy)	Percent Change from 2030 to 2035
WBMWD	215	1,407	554%	1,513	8%	1,621	7%	1,733	7%
Central Basin	2,558	2,067	-19%	2,067	0%	2,067	0	2,067	0
Totals	2,774	3,474	25%	3,580	3%	3,688	3%	3,800	3%
WBMWD = West Basin Municipal Water District; afy = acre-feet per year Note: Projected values are listed for the years 2020 through 2035. Source: California American 2016a									

The 2015 UWMP concludes that California American would have adequate and reliable water supplies to meet demand during average year, single-dry year, and multiply-dry years (California American 2016a). Based on this finding combined with the low incremental demand of the Project as a proportion of total demands (i.e., less than one quarter of one percent), it is concluded that California American would be able to provide sufficient water supplies to meet the demands of the Project, in addition to other entitlements. As such, implementation of the Maximum Buildout

Scenario pursuant to the Specific Plan is not anticipated to have a significant impact on water supplies, and no mitigation is required.

However, mitigation is incorporated to further the statewide goal of reducing the use of potable water and increasing drought-resiliency. MM UTIL-1 requires written assurance of sufficient water supplies from the supplier prior to the commencement of a well stimulation treatment. In addition, as discussed above, DOGGR will implement new regulations consistent with SB4 GW-1a (interim MM UTIL-2), which requires DOGGR to work with the Oil Field Operator to determine the quantity of water to be used, and the source and supplier(s) of the water. DOGGR will consider recycled water and saline water to be the preferred water sources for well stimulation treatments, and will require an applicant for a well stimulation permit to conduct a feasibility study to determine if recycled water or alternative water sources (including produced water, flowback water, or saline groundwater) may effectively be used for well stimulation. These DOGGR requirements will further the goal of reducing demands on potable water supplies.

Threshold 15-6: Would the project be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?

Future oil and gas development allowed by the Project would generate solid waste. As discussed in Section 3.0, Project Description, the major source of solid waste during drilling operations is the cuttings. Wastes related to oil and gas well drilling consist of earth formation materials (drill cuttings) mixed with the drilling fluid consisting of water and bentonite clay and other additives. Additionally, biocides, anti-corrosives, clarifiers, heavy metals, petroleum hydrocarbons, and brine can be found in the produced water associated with drilling operations. Occasionally, a barite additive is used to increase the weight of the fluid, or a polymer is added to enhance other fluid characteristics. These polymer additives are degradable. These wastes are tested for toxicity against the *California Assessment Manual for Hazardous Wastes*. Non-hazardous waste would be recycled or disposed of at an appropriate landfill or recycling facility. All hazardous waste materials, including contaminated soil, would be handled and disposed of by a licensed waste disposal contractor and transported to an appropriate disposal or recycling facility to meet federal, State, and local requirements.

The next largest source of solid waste, by volume, during well drilling activities, is employee-generated waste. As discussed in Section 3.0, an additional 14 workers for a maximum of 90 days per year (up to 3 new wells may be drilled with 30 days of drill time for each new well) are expected with the increase in oil and gas production allowed under the Specific Plan.

The City of Culver City had an annual per capita per employee disposal rate of 4.6 pounds per day in 2014 (CalRecycle 2016a). Los Angeles County had an annual per capita per employee disposal rate of 11.8 pounds per day in 2014 (CalRecycle 2016b). Using an average of 8.2 pounds per day per employee, the 14 employees would generate approximately 114.8 pounds per day (lbs/day) or 0.057 tpd of solid wastes that would contribute to the Inglewood Oil Field waste stream. The solid waste generation from the additional employees would represent less than 0.00047 percent of the daily permitted capacity of Sunshine Canyon Landfill (12,100 tpd). This solid waste generation would occur over the course of approximately 90 days per year, and therefore would represent a negligible amount of the landfill's daily capacity. Impacts would be less than significant to permitted landfill capacity.

New wells also generate non-hazardous oil debris. Based on PXP's (the previous Operator's) anticipated increase of approximately 0.7 ton per week of oil debris (based on drilling an average of 53 wells per year) (LACDRP 2008), each new well generates approximately 1,375 lbs of non-

hazardous waste.⁴ Based on the total of up to 30 new wells allowed under the Specific Plan, these new wells would generate a total of approximately 41,250 lbs (20.6 tons) of oil debris. In any given year, a maximum of 2 or 3 new wells could be drilled, which would generate approximately 2,750 to 4,125 lbs, respectively, of non-hazardous oil debris waste. This would represent, at most, approximately 0.017 percent of the Sunshine Canyon Landfill's daily permitted capacity. This waste volume would be disposed over the 30-day drilling operation and would represent a negligible amount of the landfill's daily capacity. Impacts would be less than significant to permitted landfill capacity.

During the production water processing, solids settle while in settling tanks. Once these solids have settled to the bottom of the tanks, the solids are removed from the tanks, dewatered and then transported off-site to an appropriate disposal facility.

Any contaminated/hazardous soils or waste materials that would be generated through the drilling process would be shipped to a Class I and/or Class II landfill for treatment and ultimate disposal. For the Project, disposal could occur at Kettleman Hills Landfill (Kings County); McKittrick Waste Treatment Site (Kern County); and/or Clean Harbors Buttonwillow (Kern County). These three facilities have a cumulative daily maximum capacity of 19,600 tpd. It is unknown how much potentially hazardous waste products would require disposal from City IOF operations; however, the proportion of hazardous to non-hazardous waste is typically low. Non-hazardous drilling wastes include mud and cuttings. Daily average generation of mud and cuttings is estimated to be up to 11,340 gallons and 2,520 gallons respectively, per well. Well cuttings in the Inglewood Oil Field have historically been used on-site for fill and/or road base material (LACDRP 2008). As such, well cuttings may be shipped off-site as solid waste or may be used on-site, if confirmed to be non-hazardous and appropriate for reuse. The muds are shipped offsite and recycled (LACDRP 2008).

If the volume of hazardous waste required for off-site disposal during drilling activities was equal to all of the non-hazardous waste stream, then approximately 4,309.1 lbs (184.1 lbs employee generated waste plus 4,125 lbs of non-hazardous oil debris waste) would represent approximately 0.01 percent of the total daily permitted Class I and/or Class II waste disposal capacity of the three hazardous waste landfills. This will only occur for 60 days (with two wells) to 90 days (with 3 wells) out of the year. At other times, minimal hazardous waste volume would be generated. Thus, there is capacity to serve the hazardous waste disposal needs of the Project. Impacts would be less than significant to permitted landfill capacity.

In summary, the additional non-hazardous and hazardous waste generation expected from maximum buildout allowed under the Specific Plan would not exceed the daily or total capacity of the Sunshine Canyon Landfill or the three hazardous waste landfills in the region. There would be a less than significant impacts to permitted landfill capacity and no mitigation would be required.

Threshold 15-7: Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The California Integrated Waste Management Board operates under the authority of the Integrated Waste Management Act of 1989, which mandates that local cities and counties divert 50 percent of waste from area landfills. As discussed in Threshold 15-6, impacts on permitted landfill capacity would be less than significant. Specific Plan Section 28.C requires a Recycling

⁴ Calculated as follows: 0.7 tons/week * 52 weeks = 36.4 tons; 36.4 tons * 2,000 lbs/ton = 72,800 lbs; 72,800 lbs / 53 wells = 1,373.58 lbs/well.

and Removal Plan that identifies how recycling will be incorporated into Oil Operations, including debris generated during construction, drilling and other Oil Operations; the use of mulching, composting, and grass-cycling on landscaped areas; the design and allocation of recycling collection and storage space; employee participation and education on the recycling program; and identification of methods of loading, transport, and receiving locations for all waste from the Inglewood Oil Field.

By following Section 28.B.4 and 28.C of the Specific Plan, and with compliance with RR UTIL-1, the Project will comply with federal, State, and local statutes and regulations related to solid waste. There would be a less than significant impact to permitted landfill capacity and no mitigation is required.

4.15.7 CUMULATIVE IMPACTS

The cumulative projects listed on Table 2-6 in Section 2.0, Environmental Setting of this Draft EIR would generate wastewater, solid waste, and would increase potable water demand. All of the cumulative projects would be required to go through an approval process where their utility needs would be evaluated against the available capacity of their respective utility providers.

Cumulative development would increase the demand on wastewater conveyance and treatment facilities. The Project would allow for potential future oil and gas production, and additional produced water would be generated as a result of these activities. However, produced water is anticipated to be reinjected back in the reservoir through waterflooding. As such, the Project would not contribute cumulatively to wastewater treatment facility impacts and no mitigation is required.

Future development of oil and gas extraction operations at the Inglewood Oil Field and other development near the Inglewood Oil Field would increase demands for water. California American has projected future water demand and available supplies to 2035 in their UWMP and determined that they would have adequate supplies for normal year, single-dry year, and multiple-dry year scenarios. The Settlement Agreement that applies to activities within the County IOF capped the maximum number of new wells that may be drilled at the Inglewood Oil Field to 500 wells (Community Health Councils et al. 2011), which is less than what was originally approved through the CSD EIR. That EIR stated that the anticipated growth in the Inglewood Oil Field (up to 1,000 new wells) would have adequate water supplies. As mentioned above, it is estimated for the purposes of this Draft EIR that approximately 179 gpd of water would be required for use within the City IOF for each new active well. Assuming each of the new 500 wells are “active” within the County IOF, approximately, 89,500 gpd of water would be required for operations within the County IOF (i.e., 100.25 afy). This increase in water usage is approximately 3.8 percent of the total water available for California American in 2015 and 2.8 percent in 2035. Thus, cumulative water demands for active wells would be less than significant and no mitigation is required.

Future well stimulation activities are unknown at this time. As such, the volume of water required to conduct well stimulation activities at the Inglewood Oil Field is unknown. However, there is a mitigation measure in DOGGR’s Draft Mitigation Policy Manual prepared pursuant to the SB4 EIR, which is included in Appendix B-2 of this Draft EIR, and are applicable to this analysis. DOGGR encourages Lead Agencies to include mitigation measures in their CEQA documentation that are feasible and meet or are substantially consistent with the Draft Mitigation Policy Manual, where such measures are relevant and applicable (DOC 2015). Therefore, this Draft EIR includes corresponding MM UTIL-1 (see SB4 SWR-3a) to implement the requirements of the applicable SB4 measure, revised to reflect site-specific conditions and impacts while being the same or substantially consistent with DOGGR’s measure. This MM addresses the needs of the City IOF in a manner that can be implemented by the City of Culver City and does not adhere to the exact

wording set forth by DOGGR. MM UTIL-1 requires written assurance of sufficient water supplies from the supplier prior to the commencement of a well stimulation treatment, and interim MM UTIL-2 requires an applicant for a well stimulation permit to conduct a feasibility study to determine if recycled water or alternative water sources (including produced water, flowback water, or saline groundwater) may effectively be used for well stimulation. With implementation of MM UTIL-1 and interim MM UTIL-2, cumulative impacts to water supplies associated with well stimulation activities throughout the Inglewood Oil Field would be less than significant.

Cumulative development would increase the amount of solid waste being disposed of in local landfills. These projects would also be subject to the California Integrated Waste Management Board mandate that local cities and counties divert 50 percent of waste from area landfills. Activities allowed by the Project would generate solid waste. However, the major source of solid waste generated (i.e., cutting) would be reused onsite and not exported to landfills. The Operator of the Inglewood Oil Field has implemented a recycling plan to further reduce the amount of solid waste generated at the Inglewood Oil Field, including the Project Site. As such, the Project would not contribute cumulatively to solid waste disposal impacts and no mitigation is required.

4.15.8 MITIGATION MEASURES

MM UTIL-1 (see **SB4 SWR-3a**) Prior to the commencement of any well stimulation activities, the Oil Field Operator shall determine the quantity of water to be used, and to identify the source and specific supplier(s) of the water. The Oil Field Operator shall provide written assurance that the identified supplier(s) have a sufficient supply throughout the duration of the proposed well stimulation treatment. In the event that an assured supply cannot be obtained, alternate feasible means of obtaining a water supply, including recycled water that meets all applicable federal, State, and local water quality standards, may be considered, subject to the review and approval of the City of Culver City.

MM UTIL-2 The following measure is an interim MM to be implemented and enforced by the City until such time as DOGGR adopts the equivalent measure listed as a Regulatory Requirement in this Draft EIR (SB4 GW-1a Use Alternative Water Sources to the Extent Feasible). This MM shall become inapplicable when DOGGR enacts this measure as a formal regulation; the regulation shall then become applicable as part of approving a well stimulation treatment permit.

The City and DOGGR shall work with the applicant to determine the quantity of water to be used, and the source and supplier(s) of the water. DOGGR shall in general consider recycled water and saline water to be the preferred water sources for well stimulation treatments, and shall require an applicant for a well stimulation permit to conduct a feasibility study to determine if recycled water or alternative water sources (including produced water, flowback water, or saline groundwater) may effectively be used for well stimulation. The feasibility study shall be incorporated into the applicant's proposed Water Management Plan, as required by Title 14, Section 1783.1(a)(23) of the California Code of Regulations.

Based on the results of the final version of the feasibility study, prepared to DOGGR's satisfaction, the well owner/operator/service provider shall be required, through the final version of the Water Management Plan, to use recycled or saline water to the maximum extent feasible, as determined by DOGGR. The source of water for the well stimulation treatment permit, including groundwater, shall also be included in the Water Management Plan.

The primary objective of the draft study on the feasibility of using recycled water or saline water submitted with the permit application is to demonstrate all of the following: that the applicant has made good faith efforts to identify any produced water, flowback water, saline groundwater, or other source of recycled water potentially available for use in well stimulation treatment; that the proposed well stimulation treatment will use any such available source(s) to the maximum extent feasible; and that the proposed strategy would not cause adverse effects on drinking water sources, protected groundwater, or the environment. At a minimum, the draft Study must identify: (1) the amount of produced water, flowback water, saline groundwater, or other source of recycled water that the applicant has determined could be feasible to use for well stimulation; (2) whether the produced water, flowback water, saline groundwater, or other source of recycled water under consideration would likely be used for future drinking water supplies; and (3) whether any saline groundwater aquifer being considered as a source is connected to freshwater aquifers. The draft Study shall be integrated into the proposed Water Management Plan, which is required by DOGGR's permanent regulations for well stimulation treatments under Title 14, Section 1783.1(a)(23) of the California Code of Regulations. The Study shall be finalized after review and input by DOGGR as part of the process by which DOGGR considers issuance of a well stimulation treatment permit.

In making its own determinations regarding how much recycled or saline groundwater may feasibly be used for well stimulation, and the availability of any non-recycled water intended to be used for the well stimulation, DOGGR shall consider all relevant economic, legal, social, and technological factors, consistent with the concept of "feasibility" as it occurs in CEQA, the State CEQA Guidelines, and CEQA case law. DOGGR may also consider such information as: adopted urban water management plans; an assessment of whether the intended water supply system has projected water supplies available during the intended period of use that will meet the demand associated with the well stimulation project in addition to the water system's existing and planned uses, including municipal, agricultural and manufacturing uses; written contracts or other proof of entitlement to an identified water supply; and any capital outlay program for financing the delivery of a water supply.

In the event that DOGGR receives well stimulation treatment permit applications for which recycled water, saline water, or an assured non-recycled supply as described above cannot be feasibly obtained, DOGGR shall either deny the permit or require the Oil Field Operator to identify a feasible alternative means of obtaining a substitute water supply.

After the issuance of a well stimulation treatment permit and completion of well stimulation treatment, the permittee shall document and report the actual amount of recycled water or saline groundwater used and the reasons for any deviation from the conditions of approval derived from the final Study. The permittee shall integrate this information into the Post-well Stimulation Treatment Report, as required by Title 14, Section 1789 et. seq. of the California Code of Regulations. Prior to approving an Annual Drilling Plan, the Oil Field Operator shall provide evidence to the City that the actions prescribed in this measure have been completed, including but not limited to an approved well stimulation permit from DOGGR for the well(s) addressed in the proposed Annual Drilling Plan.

4.15.9 LEVEL OF SIGNIFICANCE

Impacts related to storm drainage infrastructure, wastewater infrastructure, and solid waste disposal would be less than significant. Impacts to water supplies are less than significant with implementation of MMs UTIL-1 and UTIL-2. Table 4.15-5 below summarizes the significance finding of each threshold addressed in this section before and after mitigation, where applicable.

**TABLE 4.15-5
SIGNIFICANCE SUMMARY**

Threshold		Project Level of Significance	Mitigation Measure(s)	Level of Significance after Mitigation
15-1	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Less than Significant	N/A	Less than Significant
15-2	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less than Significant	N/A	Less than Significant
15-3	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less than Significant	N/A	Less than Significant
15-4	Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	Less than Significant	MM UTIL-1 MM UTIL-2	Less than Significant
15-5	Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	Less than Significant	N/A	Less than Significant
15-6	Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	Less than Significant	N/A	Less than Significant
15-7	Comply with federal, state, and local statutes and regulations related to solid waste?	Less than Significant	N/A	Less than Significant
N/A: not applicable				

4.15.10 REFERENCES

California American Water, Los Angeles County District, Southern Division (California American). 2016a (June 30). *Final 2015 Urban Water Management Plan for the Southern Division – Los Angeles County District*. Coronado, CA: California American.

———. 2016b (November 2). Personal communication Email communication between Mark Reifer (California American) and Jillian Neary (Psomas).

California Council on Science and Technology (CCST). 2015 (January). *An Independent Scientific Assessment of Well Stimulation in California, Volume 1, Well Stimulation Technologies and their Past, Present and Potential Future Use in California*. January.

- California Department of Conservation (DOC). 2015 (July). *Draft Mitigation Policy Manual for Well Stimulation Treatment Permits* (Prepared Pursuant to Senate Bill 4 (2013 Pavley)). Sacramento, CA: DOC. ftp://ftp.consrv.ca.gov/pub/oil/CEQA/Oil%26Gas/Mitigation_Policy_for_WST-Draft.pdf.
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). 2016 (June). Well Search. Records for the Inglewood Oil Field address. Sacramento, CA: DOGGR. <https://secure.conservation.ca.gov/WellSearch>.
- California Department of Resources Recycling and Recovery (CalRecycle). 2016 (June, access date). Countywide, Regionwide, and Statewide Jurisdiction Diversion/Disposal Progress Report (Search for Los Angeles County, 2014, All Disposal Rates; Culver City). Sacramento, CA: CalRecycle. <http://www.calrecycle.ca.gov/LGCentral/Reports/jurisdiction/diversiondisposal.aspx>.
- . 2015a (November 19, access date). Facility/Site Summary Details: Sunshine Canyon City/County Landfill (19-AA-2000). Sacramento, CA: CalRecycle. <http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-2000/Detail/>.
- . 2015b (November 19, access date). Facility/Site Summary Details: Kettleman Hills B18 Nonhaz Codisposal (16-AA-0023). Sacramento, CA: CalRecycle. <http://www.calrecycle.ca.gov/SWFacilities/Directory/16-AA-0023/Detail/>.
- . 2015c (November 19, access date). Facility/Site Summary Details: McKittrick Waste Treatment Site (15-AA-0105). Sacramento, CA: CalRecycle. <http://www.calrecycle.ca.gov/SWFacilities/Directory/15-AA-0105/Detail/>.
- . 2015d (November 19, access date). Facility/Site Summary Details: Clean Harbors Buttonwillow LLC (15-AA-0257). Sacramento, CA: CalRecycle. <http://www.calrecycle.ca.gov/SWFacilities/Directory/15-AA-0257/Detail/>.
- Cardno Entrix. 2012 (October 10). *Hydraulic Fracturing Study – PXP Inglewood Oil Field*. Los Angeles, CA: Cardno Entrix.
- Community Health Councils, Inc., Natural Resources Defense Council, Mark Salkin, the City of Culver City, Citizens Coalition for a Safe Community, Concerned Citizens of South Central Los Angeles, the County of Los Angeles, and the Plains Exploration & Production Company. 2011 (July 15). Settlement Agreement and Mutual Release.
- Culver City, City of. 2017 (September). *Oil Drilling Regulations for the Culver City Portion of the Inglewood Oil Field* ("Inglewood Oil Field Specific Plan"). Culver City, CA: the City.
- . 2016 (current through). *The Municipal Code of the City of Culver City, California*. Cincinnati, OH: American Legal Publishing Corporation for the City. [http://library.amlegal.com/nxt/gateway.dll/California/culver/themunicipalcodeofthecityofculvercitycal?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:culvercity_ca](http://library.amlegal.com/nxt/gateway.dll/California/culver/themunicipalcodeofthecityofculvercitycal?f=templates$fn=default.htm$3.0$vid=amlegal:culvercity_ca).
- . 2015 (October). *Initial Study Inglewood Oil Field Specific Plan Project*. Culver City, CA: the City.

Freeport McMoRan Oil and Gas Inc (FM O&G). 2016 (December 27). Personal communication. Email correspondence occurring from November 2015 to December 2016 between FM O&G and Psomas regarding the Inglewood Oil Field.

Los Angeles, County of, Department of Public Works (LACDPW). 2015 (May). *County of Los Angeles Countywide Integrated Waste Management Plan, 2013 Annual Report*. Los Angeles, CA: LACDPW. <https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=3490&hp=yes&type=PDF>.

Los Angeles, County of, Department of Regional Planning (LACDRP). 2008 (October). *Final Environmental Impact Report, Baldwin Hills Community Standards District*. Los Angeles, CA: LACDRP. http://www.inglewoodoilfield.com/res/docs/baldwin_hills_community_standards_district_final_eir%20.pdf.

Los Angeles County Sanitation District (LACSD). 2017a (March, access date). Connection Fee, Service Charge and More . . . Whittier, CA: LACSD. http://www.lacsd.org/wastewater/wastewater_services/default.asp.

———. 2017b (November 19, access date). Joint Water Pollution Control Plant (JWPCP). Whittier, CA: LACSD. <http://www.lacsd.org/wastewater/wwfacilities/jwpcp/>.

———. 2016 (September 26). Personal communication between L. Chandler (LACSD) and Aly Smith (BonTerra Psomas).

———. 1998 (July, last amended). Wastewater Ordinance. Whittier, CA: LACSD. http://lacsd.org/wastewater/industrial_waste/iwordinances/wastewater_ordinance.asp.

Republic Services. 2017 (March, access date). About: Sunshine Canyon Landfill – About. Sylmar, CA: Republic Services. <http://sunshinecanyonlandfill.com/about/>.

This page intentionally left blank