

4.16 UTILITIES AND SERVICE SYSTEMS

This section of the EIR analyzes the potential environmental effects on utilities and service systems from implementation of the proposed project. Data for this section were taken from Glendale Urban Water Management Plan UWMP), the Glendale Water & Power (GWP) Water Supply Assessment, Water Utility Operating Statistics, and Electric Utility Operating Statistics. Full reference-list entries for all cited materials are provided in Section 4.16.5 (References).

4.16.1 Environmental Setting

■ Water Supply, Storage and Distribution

The Glendale Water & Power (GWP) department provides water services for domestic, irrigation, and fire protection purposes to Glendale. Currently, Glendale has four sources of water to meet demands: two local groundwater sources (the San Fernando Basin and Verdugo Basin), imported water from the Metropolitan Water District (MWD), and recycled water from the Los Angeles/Glendale Water Reclamation Plant (LAGWRP).

Groundwater

Glendale receives its groundwater supply from 14 groundwater wells that pump water from the San Fernando and Verdugo Basins (GWP 2016a). Rights to San Fernando Basin and Verdugo Basin groundwater supplies are defined by the 1975 Judgment of the California Supreme Court in *City of Los Angeles vs. City of San Fernando, et al.* (14 Cal. 3d 199), as further discussed (below) within the context of South Glendale water supplies.

San Fernando Basin

In the aforementioned judgment, the Court found that under “pueblo” water rights, the city of Los Angeles owns all San Fernando Basin surface and groundwater supplies, and that Glendale is entitled to an annual 21 percent “return flow credit” of all delivered water (including recycled water) in the San Fernando Basin and its tributary hill and mountain area (GWP 2016a). This return flow credit, ranging from 5,000 to 5,400 acre-feet per year (AFY), is Glendale’s primary water right in the San Fernando Basin. In addition to current extractions of return flow water, Glendale, in any one year, extracts from the San Fernando Basin an amount not to exceed 10 percent of its last annual credit for import return water. In the event of over extraction, Glendale would be obligated to replace any over extracted amount by reducing extraction the following year (GWP 2016a). This practice provides important year-to-year flexibility in meeting water demands. In the 2011 water year, Glendale had accumulated approximately 53,823 acre-feet of unused return flow credits in the San Fernando Groundwater Basin (GWP 2016a). Much of this accumulation was a result of Glendale not being able to pump from the basin because of groundwater contamination. Furthermore, Glendale also has an agreement to extract excess water (5,000 AFY) chargeable against the rights of the city of Los Angeles upon payment of specified charges generally tied to MWD’s water rates (GWP 2016a). The right to produce water in excess of the return flow credit and the accumulated credits are significant to the operation of the Glendale Water Treatment Plant (GWTP), which is part of an EPA Superfund cleanup site. The GWTP was established to remove VOCs, such as trichloroethylene and tetrachloroethane, in the groundwater supplies along San Fernando Road within the City and along Goodwin Street within the city of Los Angeles. GWTP is permitted to deliver up to 5,250 gallons per minute, and together with nine wells, forms the Glendale Operable Unit. This unit provides approximately 7,700 AFY to Glendale and accounts for approximately 28 percent of the water demand. The agreement also requires the city of Los Angeles to invest in capital projects to

improve the recharge of groundwater into the San Fernando Basin. The agreement further provides that the parties will agree on the scope of a study to re-evaluate the amount of water that can safely be extracted without harming the San Fernando Basin. In the future, this may affect the parties' groundwater rights.

Verdugo Basin

Within the Verdugo Basin, the City has rights to extract 3,856 AFY of the approximate 160,000 acre-feet groundwater storage capacity; however, full use of this resource has been limited due to water quality problems, declining groundwater levels, and limited extraction capacity. Currently, the five wells within the Verdugo Basin produce approximately 2,000 AFY (GWP 2016a).

Metropolitan Water District

Imported water from the MWD comes from the Colorado River and the Sacramento-San Joaquin River Delta in Northern California via the State Water Project. The potable water facilities that provide service to meet existing demands within the Glendale service area include three MWD imported water connections, 14 active wells, 28 water storage reservoirs and tanks, 26 booster pumping stations, six pressure-reducing stations, and approximately 380 miles of pipeline. Approximately 69 percent of the total water supply between 2005 and 2014 was imported water from MWD (GWP 2016a).

Recycled Water System

The LAGWRP provides recycled water to Glendale for non-potable uses, such as irrigation. The reclamation plant has a capacity of 20 million gallons per day (MGD) and has been delivering recycled water to the City since the 1970s. Based on a contract between the cities of Los Angeles and Glendale, Glendale is entitled to 50 percent of any effluent produced at the plant. In 2014, Glendale used approximately 1,721 acre-feet from the reclamation plant for non-potable uses. Treated wastewater not used by either Glendale or Los Angeles is discharged into the Los Angeles River. Glendale's existing recycled water system consists of approximately 22 miles of pipeline, five storage facilities, and six pump stations (GWP 2016a). The Glendale Heights Pump Station and the Glendale Heights Tank are located within the SGCP area (Glendale 2016). Glendale has developed a future recycled water system layout that will serve new customers and shift usage from potable water supplies to the recycled water system (GWP 2016a).

Water Demand and Supply

Water supply during Fiscal Year 2015-2016 was approximately 23,393 acre-feet (GWP 2016b); 7,844 acre-feet, or 33.5 percent, of which was pumped from local groundwater basins; approximately 13,992 acre-feet, or 59.8 percent was provided by the MWD; and approximately 1,557 acre-feet, or 6.7 percent was supplied by the Glendale recycled water system.

Of the approximately 22,932 acre-feet of water sold in Fiscal Year 2015-2016, residential customers used approximately 73 percent, commercial customers used approximately 18 percent, and industrial consumers used approximately two percent; the remaining approximately 7 percent was used for other uses, such as irrigation (GWP 2016b). According to the South Glendale Water Supply Assessment (GWP 2016a), Appendix H to this EIR, 2015 potable water demand was 22,154 acre-feet. Water demand has been trending downward in Glendale, due to increased conservation efforts and stricter regulations.

■ Wastewater

The City owns, operates, and maintains one wastewater pumping station (Doran Street Wastewater Pumping Plant) that lifts sewage from a low point in the collection system to a maintenance hole at a higher elevation. The pumping plant is equipped with four 1,150 gallons per minute, 25-horsepower submersible pumps (one emergency standby), and one 3-horsepower sump pump.

Collection System

The existing wastewater collection system within the City consists of approximately 360 miles of underground wastewater pipelines. These pipelines range from 8 inches to 42 inches in diameter, and approximately 87 percent of them are 8-inches in diameter. Vitrified clay pipes are the most commonly used material in wastewater collection.

The existing wastewater system collects sewage at the point of origin and conveys wastewater in a south/southwest direction to the Los Angeles North Outfall Server, located along the Los Angeles River. Similar to most wastewater systems, Glendale's collection system uses the natural topography to allow gravity to convey wastewater to its point of final discharge into the North Outfall Server.

Wastewater flows are measured at prescribed locations prior to final discharge. Glendale, in cooperation with the city of Los Angeles, constructed six flume facilities, one site with in-line telemetering equipment, and installed a flow meter at the pump station to measure the flows.

The major drainage basins were further divided into smaller tributary areas or sub-basins. These sub-basins distribute wastewater flows throughout the system and were based on existing pipeline connectivity, unique demand patterns, isolation of areas within known hydraulic constraints, and integration of facilities downstream of significant dischargers (GWP 2016b).

Treatment System

Wastewater generated by residents and businesses is collected and conveyed by Glendale's sewer infrastructure and discharge to either the Los Angeles Hyperion Treatment Plant or the LAGWRP. Most solids are separated from the wastewater during the primary and secondary treatment processes at the LAGWRP. The resulting sludge is returned from the Los Angeles North Outfall Server to the Hyperion Treatment Plant. The remaining wastewater is then further treated to eliminate any remaining impurities. The final product is used in recycled water programs or discharged to the Los Angeles River.

■ Solid Waste

Regional Facilities

Over 250 private waste haulers and several city governments collect solid waste in Los Angeles County, and 34 of the 250 permitted haulers are located within Glendale (Glendale 2017a). The Glendale Integrated Waste Management Division is the primary hauler for single-family residences (1-4 units) and multi-family properties (5 or more units). Additionally, the Glendale Integrated Waste Management Division provides waste hauling service to approximately 15 percent of businesses in Glendale (Zero Waste Associates 2010). The majority of the waste is disposed of at various landfills within the county; however, some of the waste is delivered to waste-to-energy transformation facilities or to intermodal facilities for transport to facilities outside of Los Angeles County.

Within Los Angeles County, there are four classifications of solid waste disposal facilities: (1) Class III landfills, (2) unclassified landfills, (3) transformation facilities, and (4) materials recovery facilities. Class

III landfills accept all types of non-hazardous solid waste, while unclassified landfills accept only inert waste, including soil, concrete, asphalt, and other construction and demolition debris, as defined by CCR Title 23, Section 2554. Transformation facilities incinerate municipal solid waste to generate energy. Materials recovery facilities recover recyclable materials from other waste to provide for the efficient transfer of the residual waste to permitted landfills for proper disposal.

The Countywide Integrated Waste Management Plan: 2015 Annual Report (LADPW 2016) indicates that residents and businesses in Los Angeles County (both incorporated cities and unincorporated areas) disposed of 9,721,311 million tons of solid waste in landfills and in transformation facilities in 2015. Approximately 4,772,823 million tons were disposed of at Class III landfills within Los Angeles County, approximately 4,127,261 million tons were exported to out-of-county landfills, approximately 263,933 tons were disposed of in unclassified (inert) landfills, and approximately 557,294 tons were disposed of at waste-to-energy facilities.

The estimated remaining capacity of permitted Class III landfills at the end of 2015 in Los Angeles County was approximately 114 million tons. Based on the 2015 average disposal rate of 15,298 tons per day (6 days a week), including waste being imported by the county, all local permitted Class III landfills will be at capacity by the year 2055 (LADPW 2016). Ultimate landfill capacity would be determined by several factors, including: (1) expiration of various permits (e.g., land use permits), (2) restrictions to accepting waste generated only within a landfill's particular jurisdiction and/or watershed boundary, and (3) operational constraints.

The capacities of inert landfills are affected by these same factors, but not to the same extent. The total estimated remaining capacity of inert landfills at the end of 2015 in Los Angeles County was approximately 57.56 million tons. Based on a 2015 average disposal rate of 846 tons of inert waste per day (6 days per week), there is remaining capacity for approximately 189 years (LADPW 2016).

Currently, most solid waste collected within Los Angeles County by private haulers is disposed of within the county; however, it is likely that independent solid waste haulers will continue to take solid wastes to facilities outside the county. Greater inter-county transfer of solid waste may occur in the near future if landfills outside of Los Angeles County provide greater economic advantages to haulers, or if landfills within the county reach capacity.

Local Landfills

The Countywide Integrated Waste Management Plan: 2015 Annual Report (LADPW 2016) indicates that the City disposed of 169,754 tons of solid waste in 2015. In 2015, according to the California Department of Resources Recycling and Recovery (CalRecycle), the population of Glendale was 199,182. The per capita disposal rate was 4.7 pounds per person per day (PPD). The per-resident disposal target rate is 5.5 PPD. The per-employment disposal rate is 9.4 PPD. The per-employment disposal target rate is 14.3 PPD (CalRecycle 2017). The Los Angeles County Department of Public Works Solid Waste Information Management System indicates that in calendar year 2016, Glendale landfilled 177,815 tons of Municipal Solid Waste, 13,201 of inert waste, and 957 tons of designated waste (Los Angeles 2017).

Table 4.16-1 provides the maximum permitted daily capacity, yearly equivalent, remaining permitted capacity, and remaining years for the five landfills that receive the majority of City waste (Los Angeles 2017). As shown in Table 4.16-1, the combined remaining capacity of the existing five landfills was approximately 99,986,749 million tons.

Table 4.16-1 Disposal Capacities of Primary Landfills Serving the City of Glendale

<i>Landfill Site</i>	<i>Location</i>	<i>Maximum Permitted Daily Capacity (tons per day)</i>	<i>Yearly equivalent (tons)</i>	<i>Remaining Permitted Capacity (tons)</i>	<i>Remaining Capacity (Years)⁽¹⁾</i>
Antelope Valley Recycling and Disposal Facility	Palmdale	1,800	561,600	12,513,283	23
Chiquita Canyon Landfill	Castaic	6,000	1,560,000	758,146	1
Lancaster Landfill	Lancaster	3,000	924,000	10,572,915	26
Scholl Canyon Landfill	Glendale	3,400	1,060,800	3,531,433	158
Proposed Scholl Canyon Landfill Expansion		3,400 (proposed)	1,060,800 (proposed)	5,500,000 – 8,000,000	5-28 (depending on variation)
Sunshine Canyon City/County Landfill	Sylmar	12,100	3,775,200	72,610,972	22
Total remaining capacity (not including proposed)				99,555,316	--

(1) As of December 31, 2015

(2) Capacity provided by County Sanitation Districts of Los Angeles County (2017)

Source: Los Angeles County Countywide Integrated Waste Management Plan, 2015 Annual Report, Appendix E-1 Solid Waste Facility Fact Sheets

Scholl Canyon Landfill, located at 3100 Scholl Canyon Road in Glendale, receives the majority of Glendale's solid waste. The Scholl Canyon Landfill is a cooperative effort of the City, the County of Los Angeles, and the County Sanitation Districts of Los Angeles County. The landfill is operated by the Sanitation Districts pursuant to a Joint Powers Agreement (JPA) between the City, County, and Sanitation Districts on lands owned by the City, County, and Southern California Edison Company. This site consists of 535 acres, 440 acres of which are designated for landfill operations and 95 acres of which are designated for related operations (site access). According to the Glendale Municipal Code Chapter 8.56, only solid waste generated by residential and non-residential uses in the Scholl Canyon Watershed can be disposed at the Scholl Canyon Landfill. Furthermore, the use of the landfill is restricted by City of Glendale Ordinance No. 4780 to the following cities within the County of Los Angeles: Glendale, La Cañada Flintridge, Pasadena, South Pasadena, San Marino, and Sierra Madre; the Los Angeles County unincorporated areas of Altadena, La Crescenta, Montrose; the unincorporated area bordered by the incorporated cities of San Gabriel, Rosemead, Temple City, Arcadia, and Pasadena; and the unincorporated area immediately to the north of the city of San Marino bordered by the city of Pasadena on the west, north, and east sides (Los Angeles 2017). The Sanitation Districts, as operators of the Scholl Canyon Landfill, have the responsibility for implementing this Ordinance.

According to the County of Los Angeles Countywide Integrated Waste Management Plan, 56 percent of the solid waste disposed of at the Scholl Canyon Landfill came from outside Glendale. The most recent quarterly Solid Waste Facility Operating Report for Scholl Canyon reported a remaining permitted capacity of approximately 3.1 million tons, or an estimated remaining life of approximately nine years as of March 2017.

Additional facilities used by Glendale include the Azusa Land Reclamation Disposal Facility for designated waste (957.96 tons in 2016), Commerce Refuse-to-Energy Facility (162.88 tons in 2016), and the Southeast Resource Recovery Facility (68.79 tons in 2016).

Waste Reduction Programs

According to the Zero Waste Action Plan (Zero Waste Associates 2010), four areas were identified to help the City move towards zero waste; namely, (1) adopting a Zero Waste Resolution to increase waste diversion, (2) adopting an Extended Producer Responsibility resolution and instigating mandatory commercial recycling, (3) recovering energy and compost from organic waste, and (4) commercial waste reduction initiatives.

■ Energy

Provision of adequate power and energy is a significant component of services. The following section describes the current power and energy resources serving the proposed SGCP area, which includes electricity and natural gas. GWP provides electricity to the proposed SGCP area.

Electricity

Electricity Supply

The City serves its power system through a combination of renewable energy imports, nonrenewable imports, and local generation. To meet retail power demand, GWP relies on a combination of both local and remote generation, as well as long-term power purchase agreements and spot market purchases from a variety of suppliers throughout the Western Electricity Coordination Council territory, which includes 14 western states, two Canadian provinces, and Northern Baja Mexico. GWP manages an electric service territory of 85,358 electric meters with an all-time peak load of 350 megawatts (GWP 2015). For Fiscal Year 2014-2015, Glendale had retail sales of 1,080,077 megawatt hour, which were split as follows: residential (34.5 percent), commercial (31.2 percent), industrial (33.5 percent), and street lighting (0.8 percent) (CMUA 2016). Glendale's Grayson Power Plant, located at 800 Air Way in Glendale, northwest of the proposed SGCP area, provides locally-generated power. GWP is undertaking a project that removes 238 megawatts gross (219 megawatts net) of existing old, inefficient, inflexible, and unreliable generation equipment that is past the end of its useful life, and will replace it with approximately 270 megawatts gross (262 megawatts net), state-of-the-art, efficient equipment that better fits the requirements and needs of the City, including the proposed SGCP area (GWP 2017).

Additionally, GWP provides more than 47 percent of its energy requirements from renewable resources (Glendale 2016). The type, capacity, and energy generated per year is indicated in Table 4.16-2. The current GWP Renewable Portfolio Standard set an initial goal of 20 percent of its annual energy requirements from renewable energy sources through 2015, with a goal of 25 percent in 2016 and 33 percent in 2020.

Energy Conservation

According to the Energy Efficiency in California's Public Power Sector 2016 Status Update (CMUA 2016), Glendale had one of the highest Gross Annual Energy Savings with 17,553,245 kilowatt hours saved in Fiscal Year 2014-2015.

Table 4.16-2 Glendale Water and Power Renewable Resources

<i>Resource</i>	<i>Type</i>	<i>Capacity (megawatt)</i>	<i>Max Energy (megawatt /hour/year)</i>
Hoover Dam	Hydro	20	58,000
High Winds Generation	Wind	3	26,000
Southwest Wyoming Wind	Wind	10	29,000
Heber South	Geothermal	3	17,500
Scholl Landfill	Landfill Gas	8	80,000
Pebble Springs Wind	Wind	20	58,000
Glendale College	Solar	0.3	400
Tieton Hydroelectric	Hydro	10	22,000

Source: Glendale 2017, Renewable Energy Development

Natural Gas

The proposed SGCP area receives its natural gas from the Southern California Gas Company (SoCalGas) through a series of steel and plastic pipe lines of various sizes and pressures. SoCalGas receives gas supplies from several basins throughout the western United States and Canada, primarily those in the Southwestern U.S. delivered via the El Paso Natural Gas and Transwestern pipelines. The 2016 California Gas Report projects the daily gas supply to SoCalGas' Southern California service area to remain stable between 2016 and 2035 at 3,875,000 cubic feet per day; demand from residential uses is projected to average an annual decline of 0.5 percent over the same period, while demand from commercial uses is projected to average an annual decline of 1 percent to 2035 (SoCalGas 2016).

4.16.2 Regulatory Framework

■ Federal

Clean Water Act (1972)

The federal CWA establishes regulatory requirements for potable water supplies, including raw and treated water quality criteria. The City is required to monitor water quality and conform to the regulatory requirements of the Act.

Safe Drinking Water Act (1974)

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. Amended in 1986 and 1996, the law requires a variety of actions to protect drinking water and its sources. The Act authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The federal EPA, Cal/EPA, State agencies, and water purveyors work together to ensure that safety standards are met.

Federal Pretreatment Regulations

CFR Part 403 establishes the responsibilities of federal, State, and local government, industry, and the public in implementing National Pretreatment Standards to control pollutants that pass through or

interfere with treatment processes in publicly owned treatment works, or that may contaminate sewage sludge.

National Pollution Discharge Elimination Permits

The NPDES system was established as a part of the CWA to regulate both point source discharges (a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (diffuse runoff of water from adjacent land uses) to surface waters of the U.S. For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge.

Disposal of Biosolids

CFR Title 40, Part 503, Title 23 and standards established by the Central Valley RWQCB regulate the disposal of biosolids. Also, the federal CWA and regulations set forth by the California Department of Health Services (DHS) and SWRCB are aimed primarily at discharges of effluent to surface waters and are addressed in Section 4.8 (Hydrology and Water Quality).

■ State

Safe Drinking Water Act (1976)

California enacted its own Safe Drinking Water Act in 1976. California DHS has been granted primary enforcement responsibility for this Act. California Administrative Code Title 22 establishes California DHS authority and stipulates drinking water quality and monitoring standards. These standards are equal to or more stringent than the federal standards.

California Code of Regulations Title 22

The California Water Code requires the California DHS to establish water reclamation criteria. In 1975, California DHS prepared Title 22 to fulfill this requirement. Title 22 regulates production and use of reclaimed water in California by establishing three categories of reclaimed water: (1) primary effluent, which typically includes grit removal and initial sedimentation or settling tanks; (2) adequately disinfected, oxidized effluent (secondary effluent) which typically involves aeration and additional settling basins; and (3) adequately disinfected, oxidized, coagulated, clarified, filtered effluent (tertiary effluent) which typically involves filtration and chlorination. In addition to defining reclaimed water uses, Title 22 also defines requirements for sampling and analysis of effluent and requires specific design requirements for facilities.

Urban Water Management Planning Act

The California Urban Water Management Planning Act (1983) (California Water Code Division 6, Part 2.6 Sections 10610-10656) requires urban water suppliers that provide water for municipal purposes to more than 3,000 customers, or more than 3,000 AFY of water, to prepare an UWMP. The intent of the UWMP is to assist water supply agencies in water resource planning given their existing and anticipated future demands. This Act requires water suppliers to develop water management plans every five years to identify short-term and long-term water resources management measures to meet growing water demands during normal, dry, and multiple-dry years.

Water Conservation Projects Act

California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (Water Code Sections 11950-11954), which declares that the intent of the act is to encourage local agencies and private enterprise to implement potential water conservation and reclamation projects.

Water Supply Assessments

In 2001, the California State Legislature approved SB 610, which amended PRC Section 21151.9 and Sections 10910 et seq. of the Water Code requiring the preparation of a Water Supply Assessment for large developments (e.g., more than 500 dwelling units or non-residential equivalent). These assessments, prepared by "public water systems" responsible for service, address whether adequate existing or projected water supplies are available to serve future development occurring under the proposed project, in addition to urban and agricultural demands and other anticipated development in the proposed project service area. State regulations do not specifically require the preparation of a water supply assessment for a general plan. Section 10910(c)(2) states that if the projected water demand associated with a proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan into the analysis. A Water Supply Assessment was prepared for the proposed project in 2016 (Appendix H to this EIR) and is discussed relative to Impact 4.16-4.

California Integrated Waste Management Act

In response to the growing solid waste problem, in September 1989, the State Assembly passed AB 939, known as the California Integrated Waste Management Act. This statute emphasizes conservation of natural resources through reduction, recycling, and reuse of solid waste. AB 939 required cities and counties within California to divert 25 percent of their solid waste stream from landfills by 1995 and 50 percent by 2000, or face potential fines of millions of dollars per year. On June 30, 2008, the State Assembly amended AB 939 to include additional waste diversion goals of 60 percent by the year 2015 and 75 percent by the year 2025.

The California Integrated Waste Management Act also requires that all cities conduct a Solid Waste Generation Study and prepare a Source Reduction Recycling Element. Glendale prepared a Solid Waste Generation Study in 1990 that established 1989 as the baseline for use in measuring diversion required under AB 939. The study measured current and projected quantities of waste that will be generated, disposed, and diverted from disposal in Glendale. In addition, the City also prepared a Source Reduction Element in 1991 to describe how it attained the diversion goals established by AB 939 through source reduction, recycling, and composting.

California Public Utilities Commission

California Public Utilities Commission Decision 95-08-038 contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. The decision requires permits for the construction of certain power line facilities or substations if the voltages would exceed 50 kilovolts or if the substation would require the acquisition of land or an increase in voltage rating above 50 kilovolts. Distribution lines and substations with voltages less than 50 kilovolt need not comply with this decision; however, the utility must obtain any nondiscretionary local permits required for the construction and operation of these projects. CEQA compliance is required for construction of facilities constructed in accordance with the decision.

California Code of Regulations Title 24

New buildings in California are required to conform to energy conservation standards specified in CCR Title 24. The standards establish “energy budgets” for different types of residential and non-residential buildings, which all new buildings must comply with. The energy budget has a space-conditioning component and a water-heating component, both expressed in terms of energy (British thermal units) consumed per year. The regulations allow for trade-offs within and between the components to meet the overall budget. Energy consumption of new buildings in California is regulated by the State Building Energy Efficiency Standards, embodied in CCR Title 24. The efficiency standards apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building or individual agency permit and approval processes. The City requires all new buildings to meet Title 24 standards.

■ **Regional**

Regional Water Quality Board National Pollution Discharge Elimination System

Under the RWQCB NPDES, all existing and future municipal and industrial discharges to surface waters within the City are subject to regulations. NPDES permits are required for operators of municipal separate stormwater systems (MS4s), construction projects, and industrial facilities. These permits contain limits on the amounts of pollutants that can be contained in each facility’s discharge.

The federal EPA Capacity, Management, Operations, and Maintenance Regulations are proposed to be adopted by the RWQCB, affecting the City’s capacity, management, operations, and maintenance of wastewater facilities. Future waste discharge requirements would have greater emphasis on the control of fats, oils, and grease in the City’s waste discharge. As part of the regulations, the RWQCB may require Glendale to complete a sewer system management plan which would address emergency spill response, preventative maintenance program, establish legal authority, and fats, oils, and grease mitigation measures.

■ **Local**

Glendale General Plan

The following Glendale General Plan outlines policies, plans, and goal and located in the Community Facilities Element are applicable to utilities and service systems.

Community Facilities Element

- **Goal:** Enhance the current level and quality of community facilities and services, and improve the accessibility to them.
 - **Policy:** Maintain the high standard of utility services.
 - **Policy:** Monitor future needs for the increase in utility services.
 - **Policy:** Utilize all relevant, technological advancements to provide for the improved quality and quantity of energy at the lowest possible cost within the constraints of environmental considerations.

Downtown Specific Plan

DSP Chapter 9 (Implementation & Review) outlines additional policies and programs necessary to implement the DSP. Section 9.3 Implementation Programs includes relevant policy/program #12: “Establish a fee to fund utility improvements required by the cumulative impacts of growth in the DSP area.”

Glendale Water Conservation Policies

Glendale has adopted a Mandatory Water Conservation Plan. During drought periods, or periods of mandatory water conservation and implementation of the Glendale Mandatory Water Conservation Plan, penalties are imposed on customers who do not comply with the water conservation provisions. Glendale Municipal Code Section 13.36 Water Conservation Ordinance describes programs the City is implementing to reduce the demand for water. For example, this section of the Code contains a “no water waste” policy, which outlines prohibited uses of water, such as hosing of sidewalks, walkways, driveways or parking areas.

An emergency regulation, approved on July 15, 2014, requested that all water agencies and customers increase water conservation. Effective August 1, 2014, City Council declared Phase II of the Water Conservation Ordinance and associated water use restrictions. Phase II of the mandatory Water Conservation Ordinance limits outside water use to three days a week. However, Governor Brown issued Executive Order B-40-17 on April 7, 2017, ending California’s drought state of emergency. As a consequence, City Council has implemented Phase I of the Glendale Water Conservation Ordinance (Glendale 2017c). Additionally, Glendale Municipal Code Chapter 13.36 contains a section entitled "No Water Waste Policy." This policy consists of 14 water use restrictions that are in effect at all times. All commercial and industrial customers of the Public Service Department using 25,000 billing units per year (1 unit equals 748 gallons) or more must submit a quarterly water conservation plan to the City Manager’s Office and the Director of GWP.

Glendale Municipal Code

Glendale Municipal Code Chapter 8.58 requires all construction and demolition debris be taken to a “certified mixed debris recycling facility” or a recycler must divert all accepted waste from the landfill. A certified mixed debris recycling facility is a processing facility that is certified as having obtained all applicable federal, State, and local permits and diverts a minimum of 50 percent of all incoming mixed construction and demolition debris. In addition, project applicants must pay a diversion security deposit and prepare a waste reduction and recycling plan. The diversion security deposit is refundable upon request within one year of the certificate of occupancy and upon the determination by the director that the applicant has complied with the diversion requirements and submitted a waste reduction and recycling plan.

Greener Glendale Plan

The Greener Glendale Plan for Municipal Operations was adopted by the City in November of 2011. This document addresses conservation efforts within internal government operations and assesses what actions have already been taken to be more sustainable, and recommends how it can build on these efforts. The sustainable achievements prior to 1990 through 2009 and strategies identified in the Greener Glendale Plan are outlined below.

Sustainability Achievements prior to 1990:

- Introduced hydro power into the City’s utility energy mix (1936).

- Began recapping vehicle tires for re-use (1954).
- Introduced propane vehicles into the fleet (1973).
- Began protecting native trees growing within City limits, under the Indigenous Tree Ordinance (1982).
- Maintenance yard began recycling fluids, such as oil and anti-freeze, separating oil from wastewater, and recycling oil filters in order to prevent oil from getting into waste stream or wastewater (1980s).
- Began purchase of open space for habitat and watershed protection and recreation (1980s).
- Completed inventory of existing street trees and potential sites for additional street trees (1980s).
- Installed Scholl Canyon landfill gas collection system (1986).

Sustainability Achievements 1990 through 2003:

- Provided subdivision standards for solar orientation and cluster development (1990s).
- Implemented public transit and ridesharing programs for City employees (1990).
- Incorporated pedestrian facilities into projects as routine accommodation (1990s).
- Introduced first compressed natural gas (CNG) vehicle into vehicle fleet (1990).
- Completed re-inventory of all City street trees (1992).
- Insulated all hot water heaters, converted all restroom and shower fixtures to low-flow devices (1993).
- Implemented the 9/80 work schedule for City employees, which allows employees to work 9 hours a day (80 hours in 2 weeks) in order to eliminate one day of driving every two weeks (1993).
- Developed recycled water system (early 1990's). The system currently supports 80 customers and 20 miles of piping. New multifamily residential buildings are required to have piping connections to recycled water.
- Began utilizing Scholl Canyon Landfill gas for energy production (1994).
- Began utilizing reclaimed water for landfill irrigation (1994).
- Installed drip irrigation demonstration project at City Hall (1990s).
- Conducted studies and adopted standards for protection of blueline streams and ridgelines (1990s).
- Modified the Glendale Metrolink Station for service as a transfer center (1990s).
- Grayson Power Plant switched from fuel oil to natural gas and landfill gas (1995).
- Adopted the Bikeway Master Plan (1995).
- Introduced first CNG vehicle into Beeline bus fleet (1996).
- Began utilizing rubberized asphalt (2.5 tires per ton of asphalt concrete) in street improvement projects (1997).

- Replaced hundreds of incandescent lamps with more energy-efficient compact fluorescent light bulbs and more energy efficient fixtures (1998).
- Adopted street standards for multi-modal users in the Circulation Element (1998).
- Began recycling Public Works inert material for re-use (1999).
- Obtained 52 percent diversion (recycling) rate (2000).
- Introduced hybrid vehicles into the fleet (2000)
- Installed LED lights in all traffic signals (2000).
- Began formal maintenance program for street trees (2000).
- Formally adopted annual street tree planting program (2000).
- Installed energy-saving lighting fluorescent lamps and electronic ballasts in all buildings maintained by Facilities Services. HVAC equipment was also replaced with more efficient systems with state-of-the-art control systems (2001).
- Began recycling batteries and electronic waste (2001).
- Began installation of trash capture devices on city-owned catch basins and storm drain pipes (2002). To date, the City has installed 523 devices.
- Began requiring Urban Stormwater Mitigation Plans for 13 categories of development projects (2002).
- Introduced wind power into the City's utility energy mix (2003).

Sustainability Achievements 2004 through 2009:

- Conducted energy efficiency upgrades on Grayson Power Plant resulting in 9 percent equipment efficiency increase, a 2 percent power plant efficiency increase, and reduction in water consumption (2004).
- Began utilizing up to 15 percent recycled asphalt concrete in street improvement projects (2004).
- Began using only Energy-Star certified copiers (2005).
- Achieved pavement condition index (PCI) of 73 (Higher PCIs reduce gas usage. State average is 68).
- Began using only ultra-low sulfur diesel instead of regular diesel for all vehicles (2006).
- Police Department began downsizing vehicles and filling tires with nitrogen instead of compressed air, resulting in improved tire life of 25 percent and increased fuel economy of 3.3 percent (2006).
- City began purchasing only CNG on-road vehicles instead of diesel on-road vehicles (except for emergency response vehicles and equipment) (2006).
- Installed native plant demonstration garden at the Integrated Waste Recycling Center (2006).
- Began formal effort to test water delivery pumps for energy efficiency and upgrade as needed (2007).
- Began installing drought tolerant landscaping in parks, mulching low use turf areas, shrub beds, planters, tree wells, etc. (2008).

- Began employing pest management practices that minimize use of toxic pesticides (2008).
- Eliminated seasonal planting and seasonal planting areas (2008).
- Achieved a 20 percent utility renewable energy portfolio (2008).
- Implemented a new cleaning schedule for City facilities that eliminated night cleaning and resulted in \$200,000 or more in energy savings (2008).
- Completed energy audits for 23 City buildings and identified opportunities for energy use reductions (2008).
- Eliminated all environmentally unfriendly cleaning products from custodial cleaning supplies (2008).
- Converted all Public Works water-using vehicles (e.g. street sweepers, tree watering tanks, etc.) from potable to reclaimed water (2008).
- Began incorporating bicycle infrastructure into projects as routine accommodation (2008).
- Began planting street trees in vacant spaces for projects as routine accommodation (2008).
- Upgraded 51 vending machines for improved energy efficiency (2009).
- Achieved 61 percent recycling diversion rate (2009).
- From 1990 to present, the Green Fleet has grown to a total of 23 electric vehicles, 12 hybrid vehicles, and 76 CNG vehicles; amounting to 9 percent of the entire fleet. To date, the entire Beeline fleet is CNG, except four older buses equipped with particulate traps that are scheduled for replacement with CNG vehicles in 2013. Over 75 percent of the City's computer devices are Energy Star compliant, and the majority of remaining models will likely be replaced with Energy Star compliant models within the next 5 years. (Glendale 2011a).

Greener Glendale Plan Strategies:

- 33 percent Renewable Energy Portfolio,
- Plant 3,400 trees by 2020,
- Water transport facilities - energy management system,
- Develop two local water wells,
- HVAC upgrades on 23 buildings,
- Retire underused/older vehicles,
- Water transport facilities - efficiency tests/upgrades,
- Improve water pumping efficiency,
- Downsizing vehicles,
- Vending misers,
- Brand Library remodel,
- Parks Department water efficiency efforts,
- Energy efficient computers,

- Idle control policy,
- Central Library - Energy Star computers,
- Utilize existing 12 exterior LED lights,
- Low maintenance landscaping on City property,
- Install LED exit signs,
- Smart Grid applications within City operations,
- Replaced underused/older vehicles,
- Green building for affordable housing projects,
- Green building for City projects,
- Reduce vehicle maintenance yard waste stream,
- Replace paper towels with blow dryers,
- Utilize recycle-in-place pavement,
- Re-use Parks Department green waste,
- Adopt Green Fleet Policy,
- Switch diesel to B10 biodiesel,
- Sustainability outreach/Smart Meter tech,
- Installation of bike lanes and roadway markings,
- Facility natural gas energy audit and upgrades,
- Green Purchasing Policy,
- Facility Energy Efficiency Policy,
- Implement Zero Waste Plan* Hybrid vehicles,
- Rideshare increased incentives/outreach,
- Solar panels on eight buildings,
- Reflective roofing Electric vehicles,
- Energy upgrades on eight buildings,
- Switch B10 biodiesel to B20 biodiesel,
- Additional facility energy efficiency upgrades,
- Additional sustainability outreach,
- Plant additional 7,750 trees by 2035, and
- LED street lights (Glendale 2011a).

4.16.3 Project Impacts and Mitigation

■ Analytic Method

The analysis in this section focuses on the nature and magnitude of change in the levels of water usage, wastewater generation and treatment, solid waste generation and landfill capacity, and energy consumption and generation. To determine impacts associated with the implementation of the proposed SGCP, this section includes an evaluation of consumption and production, of use and treatment rates, and whether anticipated growth can be accommodated by existing resources or infrastructure. This is achieved by comparing the existing condition to the condition following buildout of the proposed SGCP.

■ Thresholds of Significance

The following thresholds of significance are based on the 2017 CEQA Guidelines Appendix G and Glendale goals and policies. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on utilities and service systems if it would do any of the following:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- 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;
- 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;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs;
- Comply with federal, state, and local statutes and regulations related to solid waste; or
- Require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact.

■ Less Than Significant Impacts

Threshold	Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
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Impact 4.16-1 Implementation of the proposed project could increase the amount of wastewater needing treatment, but would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. Therefore, there would be a *less than significant* impact on wastewater treatment requirements.

The proposed project would allow for increased land use intensity within the proposed SGCP area and would result in an increase in dwelling units and population. The increase in dwelling units and population within the proposed SGCP area would increase wastewater treatment demand. The Wastewater Master Plan Update Report (Kennedy/Jenks Consultants 2007) prepared for the City indicates that the population is expected to grow to 225,000 by 2030. Based on information at the time of the update (2007), the report concludes that under buildout conditions, the City’s 2030 future wastewater flows will increase by 27 percent, from an average dry weather flow of 17.3 to 21.9 MGD. Implementation of the proposed SGCP would result in additional population not accounted for in the Wastewater Master Plan Update Report; therefore, the projected wastewater flows do not include growth associated with the proposed SGCP. The report identifies a series of measures that would improve the existing pipeline network and upgrade the Doran Street Wastewater Pumping Plant to provide additional capacity. The costs of the upgrades would be approximately \$38,500,000, and a series of actions to offset these costs are recommended, such as adoption of a Sewer Facility Charge. Additionally, the city of Los Angeles has an adopted Sewer System Management Plan for the Los Angeles Hyperion Treatment Plant (Los Angeles 2017), which Glendale also utilizes. This Management Plan evaluates the existing system and recommends management measures needed to ensure future capacity is sufficient. With these sewer network improvements, the augmented sewer and pump network would be able to accommodate future growth in the SGCP area.

Land use development allowable under the proposed SGCP would be required to continue to comply with all provisions of the NPDES program, as enforced by the RWQCB. Implementation of the proposed SGCP would not result in an exceedance of wastewater treatment requirements, as a condition of the NPDES permit. Future development under the proposed SGCP would require project-specific environmental review and would need City approval prior to implementation; the review and approval would include an analysis of wastewater treatment. Additionally, all future projects within the proposed SGCP area would be required to comply with all applicable wastewater discharge requirements issued by the SWRCB and RWQCB, particularly the Los Angeles Glendale Water Reclamation Plant Tentative Waste Discharge Requirements and NPDES Permit No. CA0053953 (RWQCB 2017). This impact is considered less than significant and no mitigation is required.

Threshold	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?
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Impact 4.16-2 Implementation of the proposed project would not require or result in the construction of a new or expanded water or wastewater treatment facilities, the construction of which could cause significant environmental effects. Therefore, there would be a *less than significant* impact.

Wastewater from the proposed SGCP area would be treated by the Hyperion Treatment Plant. The Hyperion Treatment Plant is able to operate at 450 MGD average dry weather capacity and 800 MGD peak wet weather flow (LA Sanitation 2017). Currently, it is operating at 275 MGD in dry weather and approximately twice this amount (550 MGD) in wet weather (LA Sanitation 2017). The plant is operating at 61 percent of capacity in dry weather and 69 percent of capacity in wet weather. The population currently using the plant is 4 million, with a per person per day average dry weather generation rate of 68.8 gallons of wastewater¹. Assuming the current generation rate would remain the same following the increase in population (27,910 people) associated with the proposed SGCP, the amount of wastewater generated would increase by 1.9 MGD². Therefore, the Hyperion Treatment Plant has the residual capacity to accommodate the projected population increase resulting from the proposed project.

As discussed in this section, the existing treatment facility would accommodate the additional treatment demands from buildout of the proposed project. If it is determined that new facilities would need to be constructed at a later date, a project specific environmental review would be required to analyze any potential adverse environmental effects that might result from such facilities. This impact is considered less than significant and no mitigation is required.

Threshold	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?
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Impact 4.16-3 Implementation of the proposed project would not 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 would be a *less than significant* impact.

As previously stated in Impact 4.8-5 (Hydrology and Water Quality), the majority of the proposed SGCP area is developed. Implementation of the proposed SGCP would increase the intensity of development, which would potentially increase the amount of runoff within the proposed SGCP area. However, future development projects would be required to comply with the Storm Water and Urban Runoff Pollution Prevention Control and SUSMP. Compliance with these regulations would reduce impacts associated with runoff and stormwater drainage systems to a level below significant. This impact is considered less than significant and no mitigation is required.

¹ Figure calculated as 275 MGD/4,000,000 population = 68.75 gallons per person, per day, rounded to 68.8 (LA Sanitation 2017)

² Figure calculated as 27,910 population x 68.8 gallons = 1,920,208 gallons, or 1.9 MGD (rounded down) (LA Sanitation 2017)

Threshold	Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
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Impact 4.16-4 Implementation of the proposed project would generate an additional demand for water, which would have sufficient water supplies available to serve the project area from existing entitlements and resources, or new or expanded entitlements would be needed. This is a *less than significant* impact.

According to the GWP UWMP (GWP 2016b), Glendale is expected to realize little change in the amount of water supply over the next 25 years. The water supply from the San Fernando Valley Basin is expected to remain similar to current supply; however, Glendale will be utilizing their full water rights in the Verdugo Basin with the addition of new wells, such as the Rock and Foothill Wells (GWP 2016a). The amount of recycled water is expected to remain relatively constant, although it is anticipated that planned recycled water projects would further reduce potable water demands. Table 4.16-3 indicates the projected water supply available.

Year	Imported Water (AFY)	Groundwater ⁽¹⁾ (AFY)	Recycled Water (AFY)	Total (AFY)
2020-2040	26,222	11,656	1,662	39,540

⁽¹⁾ Groundwater includes San Fernando Valley (7,800 AF) and Verdugo (3,856) Basins

Source: GWP 2016b,

As mentioned in the GWP UWMP, the MWD UWMP (2015) shows that the region can provide reliable water supplies under both the single driest year and multiple dry year scenarios. Glendale would benefit indirectly from regional water conservation plans and also through MWD's efforts to augment its supplies and improve storage capacities. Additionally, Glendale has developed a future recycled water system layout that will serve potential customers; although funding is uncertain for infrastructure improvements needed to distribute the recycled water from LAGWRP. Glendale is looking at diversifying its portfolio of water sources to supplement variable rainfall and meet the demands of population growth using a process known as Indirect Potable Reuse (IPR). IPR is one of the water recycling applications that has developed, largely as a result of advances in treatment technology, that enables the production of high quality recycled water at increasingly reasonable costs and reduced energy inputs. This high quality recycled water would then be allowed to percolate into the groundwater basins with the intent of augmenting drinking water supplies. Percolation is considered a worldly best practice, since the ground between the percolation system and the aquifer acts as environmental buffer to further purify water. Utilizing IPR would allow supplies of potable water to increase with population. As population increases, the amount of wastewater generated increases; thus, the more wastewater, the more water is available for recycling using IPR. IPR can therefore provide a stable, constant source of potable water (GWP 2016b).

According to historic water trends, from the period 1996-2009, water use remained constant, ranging from 28,095 acre-feet to 34,264 acre-feet (GWP 2016b). The period 2010-2015 had a figure of 126 gallons PPD. While population continued to increase during that period, water use did not rise with population. The most recent water use figure for 2015 was 22,154 acre-feet, although this was as a result of the mandated drought state of emergency declaration in 2014; however, Governor Brown issued Executive Order B-40-17 on April 7, 2017, ending California's drought state of emergency. Glendale's 'No Water Waste Policy' still imposes 14 water use restrictions in effect at all times (see Glendale

Municipal Code Chapter 13.36). It is projected that as population grows, only moderate increases in water usage would be experienced.

The projected water use as set-out in the UWMP, indicates that the projected population of Glendale (211,745 people in 2040) would give a total consumption of 29,896 AFY, although the Water Supply Assessment prepared in 2016 (see Appendix H to this EIR) estimates this to be 32,302 AFY (GWP 2016a). However, the 2040 estimated population of Glendale, according to SCAG projections, is 214,000 and the 10,337 dwelling units allowable under the proposed SGCP would potentially result in an additional 27,910 people in the proposed SGCP area (SCAG 2016). The increase of 27,910 people would amount to a 13.2 percent increase above the population considered in the UWMP. Assuming water usage increases 13.2 percent above the 32,302 AFY identified in the Water Supply Assessment, water usage within the City would increase to 36,566 AFY by 2040. Based on the Water Supply Assessment, the estimated water demand is beneath the anticipated supply figure of 39,540 AFY; therefore, the estimated population increase could be accommodated (GWP 2016a).

Additionally, future discretionary projects under the proposed SGCP would require project-specific environmental review and would require approval by the City prior to development; the environmental review would include an analysis of water usage. Based on this analysis, impacts associated with sufficient water supplies are considered less than significant and no mitigation is required.

Threshold	Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
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Impact 4.16-5 Implementation of the proposed project would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. This would be a *less than significant* impact.

As stated in Impact 4.16-2, the Hyperion Treatment Plant has the ability to accommodate the increased wastewater demands associated with implementation of the proposed SGCP. Additionally, future discretionary projects under the proposed SGCP would undergo project-specific environmental review and would require City approval prior to development; environmental review would include an analysis of wastewater generation and ability to accommodate increased wastewater flows. Therefore, the proposed project would not require the expansion or construction of wastewater treatment facilities. As discussed in Section 4.16 relative to Impact 4.16-1, new development under the proposed project would be required to continue to comply with all provisions of the NPDES program, as enforced by the RWQCB; therefore, existing infrastructure would accommodate growth associated with the proposed project. Based on this analysis, the proposed project's impact on waste water capacity is considered less than significant and no mitigation is required.

Threshold	Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
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Impact 4.16-6 Implementation of the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. This would be a *less than significant* impact.

Within the County of Los Angeles Countywide Integrated Waste Management Plan (Los Angeles 2017), seven scenarios have been modelled to assist the county in meeting the daily disposal demand. The analysis evaluates whether the county can expect a reserve or shortfall in the Class III Landfill disposal capacity, by assessing whether or not the daily disposal demand can be met for each year during the 15-year planning period. Only Scenario I Utilization of Permitted In-County Disposal Capacity Only results in a shortfall in disposal capacity during the planning period. Scenario I assumes that all disposed solid waste will be managed by existing permitted in-county disposal infrastructure. The results conclude that the county would be able to meet the disposal needs of all jurisdictions through the 15-year planning period, but reliance on existing permitted in-county landfill capacity alone is insufficient in meeting the county's long-term disposal needs.

Scholl Canyon Landfill in Glendale currently receives the majority of Glendale's solid waste. However, as illustrated in Table 4.16-1, together, the five primary landfill sites currently serving Glendale have an estimated 81 years and 99,555,316 tons capacity remaining. These figures do not include the proposed expansion of Scholl Canyon Landfill, which could increase the available capacity by 16.5 million cubic yards (or 8.0 million tons). Additionally, AB 341, signed into law by Governor Brown on October 6, 2011, establishes a statewide goal that no less than 75 percent of solid waste generated in the state be source reduced, recycled or composted by 2020. Therefore, landfill disposal rates should decrease over time.

As a condition of approval, all future development under the proposed SGCP would be required to comply with all federal, State, and local statutes and regulations related to solid waste handling, transport, and disposal during construction and long-term operation. Additionally, assessment of adequate waste collection services would also be required to ensure that sufficient waste provision is accounted for with future growth within the proposed SGCP area. The proposed project's impact on landfill capacity is considered less than significant and no mitigation is required.

Threshold	Would the project comply with federal, state, and local statutes and regulations related to solid waste?
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Impact 4.16-7 Implementation of the proposed project would comply with federal, state, and local statutes and regulations related to solid waste. This would be a *less than significant* impact.

Implementation of the proposed SGCP would not result in a substantial increase in the demand for solid waste services compared to existing conditions. Solid waste generated within the proposed SGCP area would be disposed of in accordance with all applicable federal, State, and local regulations related to solid waste, including AB 939, which requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000 and 75 percent by the year 2020. Glendale currently meets the requirements and is working to further reduce waste entering landfills to meet future mandates. Thus, because the proposed SGCP would adhere to all federal, State, and local statutes and regulations related to solid waste disposal, the proposed project

would result in a less than significant impact on compliance with solid waste requirements and no mitigation is required.

Threshold	Would the project require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact?
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Impact 4.16-8 Implementation of the proposed project would not require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact. This would be a *less than significant* impact.

Glendale aims to supply 33 percent of its 2020 energy demand by renewables, which is in line with State-wide targets set out under SB X1-2 in 2011. SB 350, signed in October 2015, requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030 (CEC 2017). Additionally, the California Independent System Operator indicates over 18,000 megawatts is currently provided by renewable energy, and they are expecting to generate an additional 15,000 megawatts of renewable resource beyond 2020 (CISO et al 2016).

Glendale adopted objectives within its Greener Glendale Plan for Municipal Operations (Glendale 2011a) in order to increase the percentage of electricity generated from renewable sources and improve energy efficiency. As mentioned in Section 4.16.1, Glendale achieved its energy reduction goals with 17,553,245 kilowatt hours saved in Fiscal Year 2014-2015. Implementation of the proposed SGCP would introduce an additional 10,337 dwelling units; however, targets to improve energy efficiency are already in place. Glendale Green Building Standards introduced in 2011 (Glendale 2011b) require newly constructed buildings to not only meet California Energy Code standards, but exceed them by at least 15 percent. Future development of land uses allowable under the proposed SGCP would have to undergo project-specific environmental review and incorporation of energy saving measures would be required prior to approval by the City.

The City currently serves its power system through a combination of renewable energy sources (both local and imports), non-renewable imports, and local generation. In an effort to meet current and future energy needs in Glendale, as well as SB X1-2 and SB 350 mandates, the City is undertaking the Grayson Repowering Project at its existing Grayson Power Plant. The project would increase the plant's generation capacity by 43 megawatts, for a net generation capacity of 310 megawatts. Consistent with SB X1-2 and SB 350, the Grayson Repowering Project would help the facility provide ancillary services necessary for GWP to integrate renewable energy into its energy portfolio, manage the intermittent energy at the interconnection with the Balancing Authority Area (the Los Angeles Department of Water and Power), and provide local system reliability. The ancillary services that are necessary for GWP to integrate renewables, manage the interconnection, and provide local system reliability include load-following, regulation up and down, spinning and non-spinning reserves, voltage regulation, reactive power support, and frequency stabilization.

The buildout of the proposed SGCP would result in an increase of 10,337 dwelling units and 3,765 thousand square feet of non-residential space within the proposed SGCP area. This new development would increase demand for natural gas over existing conditions. Analysis of additional connections for gas due to development under the proposed SGCP would be analyzed on a project-by-project basis; however, total buildout of the proposed project would mean an additional 319,441,402 kiloBritish Thermal Units per year demand for natural gas or approximately 0.84 cubic feet per day,

representing 0.00002 percent³ of the projected 2035 supply of 3,875 million cubic feet/day (SoCalGas 2016). Despite regional growth projections, SoCalGas projects that demand for natural gas in Southern California is likely to decline on average by 0.6 percent/year between 2016 and 2035, due to declines in use per meter offsetting increases in the number of new meters, “due to modest economic growth, [California Public Utilities Commission]-mandated energy efficiency standards and programs, renewable electricity goals, the decline in commercial and industrial demand, and conservation savings linked to Advanced Metering Infrastructure.” (SoCalGas 2016) The proposed SGCP will not directly require the construction of new energy production or transmission facilities, or expansion of existing facilities. This impact is considered less than significant and no mitigation is required.

4.16.4 Cumulative Impacts

Threshold	Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
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Regional cumulative projects, such as the development of 180 mixed use units at 515 West Broadway in Glendale, the 218 live-work units at 1100 East 5th Street in Los Angeles, and the 154 residential units and retail ground floor at 103 East Verdugo Avenue in Burbank would create additional residential and commercial units to accommodate and service future population growth. Cumulative projects such as these would have the potential to place extra demand on wastewater treatment facilities. However, new development would be required to comply with all provisions of the NPDES program, as enforced by the RWQCB. Therefore, cumulative projects would not result in an exceedance of wastewater treatment requirements. All future projects would be required to comply with all applicable wastewater discharge requirements issued by the SWRCB and RWQCB and existing local and regional plans would ensure that requirements of the RWQCB continue to be met. The proposed SGCP, in combination with other cumulative projects, would not contribute to a potentially significant cumulative impact and the impact would be less than significant.

Threshold	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?
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Regional cumulative projects, such as the five-story 44-unit multi-family residential building at 126 South Kenwood Street in Glendale, would create additional residential units to accommodate future population growth. Cumulative projects would have the potential to require the construction of new water or wastewater treatment facilities or new stormwater drainage facilities. Although there is the potential for a significant cumulative impact particularly for wastewater, the main wastewater treatment plant has a daily capacity surplus; thus, it is likely that existing capacity would be sufficient for cumulative projects in addition to the proposed project. Further, the City charges development impact fees to aid in accommodating new wastewater infrastructure needs, including a Local Sewer Development Fee for the incremental increase in flow to the City sewer system (fee depends on net increase of sewer discharge), a Sewer Facility Charge (fee pegged to Interim Fee Schedule from the City of Los Angeles), and a sewer connection fee that ranges from \$0.50/100 square feet to a flat \$38.20, depending on the project. Since modifications to the existing sewer system have already been identified, including ensuring stormwater runoff is captured, it is therefore not likely the proposed project in combination with related projects would result in construction of new water or wastewater treatment facilities or expansion of existing

³ Cubic feet/day natural gas consumption calculated as (319,441,402 kBTU / 1000 / 365 days / 1,037 cf = 0.84 cf/day) per <https://www.eia.gov/tools/faqs/faq.php?id=45&t=8>

facilities so as to cause a potentially significant cumulative impact. If the proposed project in combination with related projects did require expansion of existing or construction of new water or wastewater treatment facilities, those impacts would be mitigated through the payment of fees, which can be modified by City Council as needed. The cumulative impact would be less than significant.

Threshold	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?
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Regional cumulative projects, such as the 18 multi-family units at 370 Salem Street in Glendale, would create additional residential units to accommodate future population growth. Cumulative projects would have the potential to require the construction of new stormwater drainage facilities. Cumulative projects would be required to comply with the SUSMP and Storm Water and Urban Runoff Pollution Prevention Control. Compliance would require any cumulative project to retain the first 0.75-inch of rainfall during a 24-hour rainfall event. Adherence to these plans would reduce any cumulative project impacts associated with increased surface runoff to a level below significant. Additionally, modifications to the existing sewer system have already been identified, including ensuring stormwater runoff is captured. Most storm drains within the City are maintained by the County of Los Angeles. For other problem areas, the City has provided the County a “Drainage Deficiency Report” for their evaluation. It is anticipated that the Los Angeles County Department of Public Works will address these conditions as funds become available (ECI 2003). Therefore, a potentially significant cumulative impact would not occur and the impact would be less than significant.

Threshold	Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
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The cumulative context for water supplies is past, existing, and foreseeable development in areas surrounding the San Fernando Valley and Verdugo basins and additional development utilizing shared sources, such as water from the MWD and use of the LAGWRP. The 2016 Water Supply Assessment prepared for this plan (GWP 2016a) notes that existing water demand for the proposed SGCP area is 4,542 AFY. The projected water demand for the proposed SGCP area is 5,776 AFY. The proposed “new” water demand at buildout is projected to be 1,234 AFY. According to the 2015 Urban Water Management Plan, the City delivered 22,154 acre-feet of water throughout the City in 2015. The projected additional water demands of the proposed project represent approximately a 5.6 percent increase in total water use. The City currently has four sources of water available to meet its demands: the San Fernando Basin, the Verdugo Basin, MWD (imported water), and recycled water from the LAGWRP. The Water Supply Assessment concludes that GWP has enough water supplies (39,540 acre-feet) to meet the requirements of the City, including the proposed project. Currently, MWD has water supplies available to meet all projected water demands under various hydrological conditions. Additional sources of water, such as the emergency water service connections with neighboring cities Los Angeles and Burbank, will add to the reliability of the system and ensure that GWP will meet the future water demands of the proposed project. In addition, Glendale is committed to aggressively advocating the use of recycled water for irrigation and for the use of dual-plumbing in large commercial buildings located near existing and planned recycled water mains. GWP’s conservation education and outreach efforts, and the conservation related rebates provide by MWD, also help customers conserve. During MWD’s recent turf removal program, over 400 GWP customers received rebates and removed nearly 52 acres of ornamental turf. This one program is estimated to conserve up to 300 AFY of water. As a result, this will help increase the conservation of potable water and reduce the dependency on imported supplies. Further, to accommodate the increased demand for water resulting from increased development within

the City, water treatment facilities have been periodically expanded, and there are plans to expand the existing capability of Glendale to meet future demand. The No Water Waste Policy implemented by the City ensures that all present and future development is required to comply with conservation ordinances and mitigations, reducing individual water demand. Because of existing available water sources in excess of projected need and the extensive conservation efforts implemented citywide, implementation of the proposed project and cumulative projects would not likely make a cumulatively considerable contribution to the cumulative impact. The cumulative impact would be less than significant.

Threshold Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Refer to the cumulative issue regarding the expansion of wastewater treatment facilities above on pages 4.16-23 – 4.16-24, for a discussion regarding cumulative projects contributing to wastewater capacity, and the proposed project contribution to a cumulative significant impact. Implementation of the proposed project would not be cumulatively considerable, and cumulative impacts associated with wastewater capacity would be less than significant.

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

The cumulative context for landfill is past, existing, and foreseeable development within the region and particularly those landfills serving the same jurisdictions. As outlined in the Environmental Setting section, there are 81 years and 99,555,316 tons of landfill capacity remaining within the region, as well as plans to expand at least one existing landfill, Scholl Canyon, which would provide additional landfill capacity (up to approximately 16.5 million cubic yards or 8.0 million tons) to accommodate future growth. In addition, a number of recommendations are in place to target waste reduction (Zero Waste Associates 2010) and so cumulative impacts would not occur as both the cities and State look to reduce waste volumes, not increase them. Cumulative projects would continue to comply with federal, State, and local statutes and regulations related to solid waste; thus, the cumulative impact would be less than significant.

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

As discussed above under Impact 4.16-7, implementation of the proposed SGCP would not result in a substantial increase in the demand for solid waste services compared to existing conditions. Solid waste generated within the proposed SGCP area would be disposed of in accordance with all applicable federal, State, and local regulations related to solid waste, including AB 939, which requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000 and 75 percent by the year 2020. Glendale currently meets the requirements and is working to further reduce waste entering landfills to meet future mandates. Thus, implementation of the proposed project would not be cumulatively considerable, and cumulative impacts associated with compliance of solid waste requirements would be less than significant.

Threshold	Would the project require or result in the construction of new energy production or transmission facilities, or expansion of existing facilities, the construction of which could cause a significant environmental impact?
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The cumulative geographic context for energy production or transmission facilities is considered at a State-level, as these facilities are often not situated locally. However, in order to meet retail power load obligations, GWP relies on a combination of both local and remote generation, as well as long-term power purchase agreements and spot market purchases from a variety of suppliers throughout the Western Electricity Coordination Council territory, including the California Independent System Operator. The City is in the process of increasing capacity at its existing Grayson Power Plant through a repowering project that will increase energy production capacity to meet current and future needs, as well as regulatory mandates for renewable energy under SB X1-2 and SB 350 (GWP 2017). Cumulative projects would therefore not require the construction of new energy production or transmission facilities as the expansion of existing facilities is already underway to comply with targets set out in SB 350. The cumulative impact would be less than significant.

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