4.9 UTILITIES AND SERVICE SYSTEMS

INTRODUCTION

The following sections address water supply and sewage conveyance, collection, and treatment. The 2005 Urban Water Management Plan, as amended, prepared by the Glendale Water and Power Department provided information on domestic water supply referred to in this section. Information on sewage conveyance and treatment referred to in this section was collected from public agencies providing service to the City of Glendale.

4.9.1 Water Service

ENVIRONMENTAL SETTING

Existing Conditions

Water Supply

The Glendale Water and Power Department provides water service for domestic, irrigation, and fire protection purposes to the City of Glendale. The City has four sources of water to meet existing and projected water demands. These sources consist of water imported from the Metropolitan Water District (MWD), groundwater from the San Fernando Groundwater Basin, groundwater from the Verdugo Groundwater Basin, and recycled water.

Glendale consumed approximately 32,700 acre-feet of water during fiscal year 2004–05. Of this total, the MWD provided approximately 69 percent (22,700 acre-feet), about 20 percent (6,500 acre-feet) was pumped from the San Fernando Basin, 7 percent (2,200 acre-feet) was pumped from the Verdugo Basin and the remaining 4 percent (1,300 acre-feet) was supplied by the City's water reclamation system.[1] Each of the City's four water sources is described below.

Metropolitan Water District

MWD was created in 1928 by vote of the electorates of 11 Southern California cities, including Glendale, under authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended [herein referred to as the Metropolitan Act]). The Metropolitan Act authorizes MWD to levy property taxes within its service area; establish water rates; impose charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes, and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, MWD's Board of Directors (MWD's Board) is authorized to establish terms and conditions under which additional areas may be annexed to MWD's service area.

The MWD provides supplemental water from Northern California via the State Water Project (SWP) in the Sacramento–San Joaquin Delta and the Colorado River via the Colorado River Aqueduct (CRA) to the coastal area of Southern California and distributes this water to its member agencies. The MWD serves 27 member agencies comprised of 14 cities, 12 municipal water districts, and 1 County water authority.

1 Glendale Water & Power, 2005 Urban Water Management Plan, adopted December 2005, Table II-3, 12.

All member agencies use and develop as much of their local water supplies as possible, and purchase the remainder from the MWD to meet local demands. Glendale is a member agency of the MWD. If additional water is available, such water may be sold for other beneficial uses.

Based on projected growth, MWD expects that water demand in its service area will rise from a current demand of 3.6 million acre-feet per year to 4.8 million acre-feet per year by 2020. To accommodate this projected growth, MWD developed an integrated resources program (IRP) in 1996. The IRP is a 25-year comprehensive water resources plan for Southern California and was last updated in 2003. The plan is a multifaceted approach towards the development and maintenance of reliable water supplies that are necessary to meet an increasing demand. The IRP proposes to combine water conservation, surface and groundwater storage, water transfers and exchanges, water recycling and water imports as a managed and integrated strategy to provide a stable and reliable source of water to its customers. The MWD's objective is to ensure reliability, affordability, quality, diversity, and adaptability of the regional water supply. Implementation of plans and programs identified in the IRP will allow the MWD to provide water to all the firm's wholesale water demands of its member agencies through 2025.[2]

For the five fiscal years ended June 30, 2008, Glendale received an average of approximately 19.38 million gallons per day (approximately 21,705 acre-feet per year) of MWD supplies, which constituted approximately 64 percent of Glendale's total water supply. Metropolitan supplies are delivered to Glendale through three service connections with capacities of 48, 10, and 20 cubic feet per second, respectively.

State Water Project

One of MWD's two major sources of water is the State Water Project (SWP), which is owned by the state and operated by the State Department of Water Resources. The SWP is a water storage and delivery system that is composed of reservoirs, aqueducts, power plants, and pumping plants that extends for more than 600 miles. Its main purpose is to divert and store surplus water during wet periods and distribute it via the California Aqueduct to service areas in Northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California. Other project purposes include flood control, power generation, recreation, fish and wildlife protection, and water quality management in the Sacramento–San Joaquin Delta.[3]

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2 Metropolitan Water District of Southern California, *Integrated Water Resources Plan, 2003 Update*, (2004).

3 State of California, The Resources Agency Department of Water Resources, The State Water Project Delivery Reliability Report 2007, (2008).

MWD has a long-term contract, State Water Contract, with the California Department of Water Resources (DWR). Water received from the SWP by MWD from 2001 through 2006 varied from a low of 1,126,981 acre-feet in calendar year 2001 to a high of 1,801,000 acre-feet in 2004. Recent court decisions restrict deliveries from the SWP beginning in 2008, as described below. Record dry conditions in MWD's service area in 2006–2007, below average rainfall in the northern Sierra watershed for the SWP and a multi-year drought in the Colorado River Basin have further affected water deliveries by MWD. MWD participates in groundwater banking programs, including the Arvin-Edison Water Storage Program and the Semitropic Water Storage Program.

The keystone of the SWP is Lake Oroville, which conserves water from the Feather River watershed. Lake Oroville is the SWP's largest storage facility with a capacity of about 3.5 million acre-feet (maf). Releases from Lake Oroville flow down the Feather River into the Sacramento River, which drains the northern portion of California's Central Valley. The Sacramento River flows into the Sacramento–San Joaquin Delta, comprised of 738,000 acres of land interlaced with channels that receive runoff from about 40 percent of the state's land area. The SWP and the Central Valley Project (the CVP is the federal government's water program to compliment the SWP in the State of California) rely upon Delta channels as a conduit to move water from the Sacramento River inflow to the points of diversion in the south Delta. Thus, the Delta is actually part of the SWP conveyance system, making the Delta a key component in SWP deliveries. The significance of the Delta to SWP deliveries is described in more detail below.

From the northern Delta, the Barker Slough Pumping Plant diverts water for delivery to Napa and Solano Counties through the North Bay Aqueduct. In the southern Delta, the SWP diverts water into Clifton Court Forebay for delivery south of the Delta. The Banks pumping plant lifts water from Clifton Court Forebay into the California Aqueduct, which channels the water to Bethany Reservoir. Water delivered to Bethany Reservoir from Banks Pumping Plant either is delivered into the South Bay Aqueduct for use in the San Francisco Bay area or continues down the California Aqueduct, which transports water to O'Neil Forebay, Gianelli Pumping-Generating Plant, and San Luis Reservoir.

San Luis Reservoir is jointly operated by DWR and the Bureau of Reclamation (Reclamation) and has a storage capacity of more than 2 maf. DWR's share of gross storage in the reservoir is about 1.062 maf. Generally, water is pumped into San Luis Reservoir during late fall through early spring, and is temporarily stored for release back to the California Aqueduct to meet summertime peaking demands for SWP and CVP contractors.

SWP water not stored in San Luis Reservoir and water eventually released from San Luis continues to flow south through the San Luis Canal, a portion of the California Aqueduct jointly owned by DWR and Reclamation. As water flows through the San Joaquin Valley, deliveries of CVP supply are made through

numerous turnouts to farmlands within the service areas of the CVP. Near Kettleman City, the Coastal Branch Aqueduct splits off from the California Aqueduct for water delivery to agricultural areas to the west and municipal and industrial water users in San Luis Obispo and Santa Barbara Counties. The remaining water conveyed by the California Aqueduct travels further in the San Joaquin Valley to agriculture users such as Kern County Water Agency before reaching Edmonston Pumping Plant, which raises the water up high enough to travel across the Tehachapi Mountains and into Antelope Valley. In Antelope Valley, the Aqueduct divides into the East and West Branches. The East Branch carries water into Silverwood Lake and Lake Perris. Water in the West Branch flows to Quail Lake, Pyramid Lake, and Castaic Lake.

Twenty-nine SWP Contractors have signed long-term water supply contracts with DWR for a total of 4,173 thousand acre-feet (taf) per year. Signed in the 1960s, all contracts are in effect to at least 2035 and are essentially uniform. Each contract contains a schedule of the maximum amount of water the contractor may receive annually. The annual amount was designed to increase each year, with most SWP Contractors reaching their ultimate maximum amount in 1990. In most cases, SWP water is an important component of local water supplies. Five SWP Contractors use SWP water primarily for agricultural purposes and the remaining 24 SWP Contractors use SWP water primarily for municipal purposes. All available water is allocated annually in proportion to each contractor's annual amount.

The Sacramento–San Joaquin Delta

The Sacramento–San Joaquin Delta is a network of natural and artificial channels and reclaimed islands at the confluence of the Sacramento and San Joaquin Rivers. The Delta forms the eastern portion of the San Francisco estuary, receiving runoff from over 40 percent of the state's land area. It is a low-lying region where sediment from the Sacramento, San Joaquin, Mokelumne, Cosumnes, and Calaveras Rivers commingle with organic matter deposited by marsh plants. Covering 738,000 acres interlaced with hundreds of miles of waterways, much of the land is below sea level and relies on more than 1,100 miles of rather fragile levees for protection against flooding.

Because the SWP and the CVP use Delta channels to convey water to the southern Delta for diversion, the Delta is the focal point for water distribution throughout the state. In fact, the Delta is one of the few estuaries in the world that is used as a major source of drinking water supply: about 25 percent of California's drinking water comes from the Delta; two-thirds of Californians get some portion of their drinking water from the Delta. The Delta also provides a unique estuarine habitat for many resident and migratory fish and birds, some of which are listed as threatened or endangered. Most of the native fish either migrate through the Delta or move into it for spawning. Resident native fish are mainly present in areas strongly influenced by the Sacramento River inflows.

The CVP pumps at Jones Pumping Plant have a capacity of 4,600 cubic feet per second (cfs) and divert water directly from Old River. The CVP has contracts to divert 3.3 maf annually from the Delta for primarily agricultural use south of the Delta. The SWP pumps at Banks Pumping Plant have a combined pumping capacity of 10,300 cfs; however, diversions into the buffering Clifton Court Forebay are restricted to 13,870 acre-feet daily and 13,250 acre-feet per day over a three-day average. A rate of 13,250 acre-feet per day equates to an average pumping of 6,680 cfs.

CVP and SWP reservoir releases and Delta exports are coordinated according to the Coordinated Operating Agreement (COA), which sets guidelines for the sharing of supply and responsibility for meeting water quality standards in the Delta. The majority of the water exported by the SWP is dependent upon water rights derived from Lake Oroville storage; however, the SWP can also divert water considered in excess in the Delta. These excess conditions in the Delta usually result when there is sufficient inflow to meet all beneficial needs and the SWP is not required to make supporting releases from Lake Oroville. Diversions during excess Delta conditions are still governed by various determinations and rules.

In addition to the state and federal projects' diversions, irrigation water for use in the Delta is taken from channels and sloughs through approximately 1,800 diversions, which can total over 5,000 cfs in July and August.

Delta water quality is primarily governed by the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta (1995 Bay-Delta Plan). This plan established beneficial uses, associated water quality objectives, and an implementation program. The State Water Resources Control Board (SWRCB) in Water Rights Decision 1641 assigned primary responsibility for meeting many of the Delta water quality objectives to the SWP and CVP. Key factors in determining water quality in the western Delta are the quality of important Delta inflows and the intrusion of ocean-derived salts associated with daily tides. The extent of this intrusion is primarily determined by the magnitude of Delta inflows, export pumping rates, and operation of the Delta Cross Channel. Delta inflows are normally at least partially regulated by upstream reservoir operations.

The water flowing in Delta channels are constrained by an extensive levee system that protects Delta islands from flooding. This protection is critical because land subsidence in the Delta, primarily due to the consuming oxidation of aerated peat soils, has placed most of the land in the Delta below sea level. In fact, the elevation of Delta islands can be more than 20 feet below sea level. The resulting difference between the elevations of Delta lands and the water surface in adjacent channels makes Delta levees vulnerable to failure. Land subsidence in the Delta is expected to continue in the future, which will increase the vulnerability of levees to failure and subsequent island flooding.

SWP Water Delivery Reliability

In the *Final State Water Project Delivery Reliability Report 2007*, DWR presents its method for calculating SWP delivery reliability, the factors affecting SWP delivery reliability, and the limitations to estimating future water delivery reliability. In the report, "water delivery reliability" is defined as the annual amount of water that can be expected to be delivered with a certain numeric frequency. SWP delivery reliability is calculated using CALSIM II, a computer model jointly developed by DWR and Reclamation, which simulates operation of the CVP/SWP system based upon 82 years of historic data. The annual amounts of SWP water deliveries are ranked from smallest to largest and a probability is calculated for each amount. These results are then displayed graphically as an exceedances plot, and presented in tabular format.

The amount of SWP water supply delivered to the SWP Contractors in a given year depends on the demand for the supply, the amount of rainfall, snowpack, runoff, water in storage, pumping capacity from the Delta, and legal constraints on SWP operation. According to DWR, more generally, water delivery reliability depends on three general factors: (1) the availability of water at the source; (2) the ability to convey water from the source to the desired point of delivery; and (3) the magnitude of demand for the water.

SWP Availability of Source Water

As to availability of source water, the factors of uncertainty include the inherent annual variable location, timing, amount, and form of precipitation in California. The second source of uncertainty is due to global climate change. Current literature suggests that global warming is likely to significant impact the hydrological cycle, changing California's precipitation pattern and amount from that shown by the historical record. According to DWR, there is evidence that some changes have already occurred, such as an earlier beginning of snowmelt in the Sierras, an increase in water runoff as a fraction of the total runoff, and an increase in winter flooding frequency. More variability in rainfall, wetter at times and drier at times, would place more stress on the reliability of existing flood management and water supply systems, such as the SWP.

SWP Ability to Convey Source Water

As to ability to convey source water to the desired point of availability, DWR reports that an uncertainty factor exists with respect to SWP operations, because they are closely regulated by Delta water quality standards established by the State Water Resources Control Board and set forth in Water Rights Decision 1641. DWR also reports other factors of uncertainty due to the continuing unexplained decline in many pelagic (open water) fish species, including the Delta smelt since the early 2000s, and the legal challenges to SWP operation and ongoing planning activities related to the Delta. Other uncertainties include future

sea level rise associated with global climate change, which could increase salinity in the Delta and the risk of interruptions in SWP diversions from the Delta due to levee failures. The referenced litigation challenges are described in more detail below.

Demand for System Water

As to estimating future demand for SWP water, DWR has identified uncertainty factors, including population growth, water conservation, recycling efforts, other supply sources, and global climate change. In addition to the above-identified factors affecting water delivery reliability, DWR has reported other limitations and assumptions, all of which are explained in the *Final State Water Project Delivery Reliability Report 2007*. This report has also identified the status of four major concurrent Delta planning efforts that are underway with objectives related to providing a sustainable Delta over the long term. These planning efforts may propose changes to SWP operations, which in turn could affect SWP delivery reliability. The planning efforts are the Delta Vision, the Delta Risk Management Strategy, the CALFED Ecosystem Restoration Program Conservation Strategy, and the Bay-Delta Conservation Plan. According to DWR, each planning effort could affect SWP and CVP operations in the Delta and each are explained in detail in the *Final State Water Project Delivery Reliability Report 2007*.

Local Groundwater Supplies

Glendale receives its groundwater supply from the San Fernando and Verdugo Groundwater Basins. The rights of the City to San Fernando and Verdugo Basin groundwater supplies are defined by the decision of the California Supreme Court in *The City of Los Angeles vs. The City of San Fernando, et al.* (1975). In addition, a 10-year agreement between the Cities of Glendale, Burbank and Los Angeles, effective October 1, 2007, also affects the parties' pumping rights in the San Fernando Basin. In the stipulated 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 20 percent "Return Flow Credit" from the San Fernando Basin. The 20 percent figure is based on the assumption that 20 percent of the water used by the City percolates into the groundwater table and ranges from 5,000 to 5,400 acre-feet per year, depending on the overall municipal use each year. This return flow credit is the City's primary water right in the San Fernando Basin. Glendale also has the right to extract additional water subject to payment to the City of Los Angeles at a cost generally equivalent to the cost of MWD supplies.

Due to groundwater contamination in the San Fernando Basin, San Fernando Basin production has been limited over the past 20 years and was eventually eliminated for a time. The entire San Fernando Valley is part of a US Environmental Protection Agency (USEPA) Superfund cleanup program. Over the past

10 years, many water treatment plants have been constructed in the San Fernando Valley to remove VOCs from the groundwater. USEPA has focused on the construction of cleanup facilities in Glendale. Significant production from the basin and delivery to Glendale started in January 2002.[4]

As a result of the limited production, the City has accumulated approximately 61,833 acre-feet of unused return flow credits in the basin. Under the stipulated judgment, Glendale could extract all of these accumulated stored water credits. Pursuant to the 10-year agreement, Glendale, in any one year, may extract a limited portion of these accumulated stored water credits. The amount that can be extracted is determined annually by the watermaster based upon a formula that ensures that the parties' combined pumping does not cause water levels in the San Fernando Basin aquifer to drop below a defined level (-655,370 acre-feet). The agreement also provides that Los Angeles will invest in capital projects to improve the recharge of groundwater into the San Fernando Basin. The agreement further provides that the parties will agree upon the scope of a study to reevaluate 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.

In addition to extracting accumulated stored water credits, Glendale may, in any one year, extract from the San Fernando Basin an amount not to exceed 10 percent of its last annual credit for import return, subject to a requirement that the water be underpumped in the following year, or a payment be made to Los Angeles for the water.

Water in the San Fernando Basin is currently available for municipal use. The City currently uses approximately 6,500 acre-feet from the basin annually. The Glendale Water Treatment Plant and eight extraction wells pump, treat, and deliver water from the basin to Glendale via its Grandview Pumping Station. The plant, with a capacity of 5,000 gallons per minute, can reliably provide a maximum of 7,200 acre-feet per year for municipal use in Glendale.[5]

As for the Verdugo Basin, the judgment described above also gives Glendale the right to extract 3,856 acre-feet per year from this basin annually. The City currently utilizes approximately 2,200 acre-feet per year from the basin. Production of water has been highly variable in the past due to rainfall conditions and past contamination from septic tanks in the area. The Verdugo Park Water Treatment Plant and five extraction wells pump, treat, and deliver water to the City for municipal use. Two pumps at the treatment plant currently extract approximately 370 acre-feet per year from the basin while the remaining three wells located north of the treatment plant, groundwater from the pickup system, and

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4 City of Glendale Water & Power, *Water Supply Evaluation for Downtown Specific Plan*, August 2006, 3-4.

5 Metropolitan Water District of Southern California, *Integrated Water Resources Plan, 2003 Update*, 2004, 20.

make-up water from potable water system extract the remaining 1,930 acre-feet.[6] The plant, with a capacity of 1,150 gallons per minute, can reliably produce a maximum of about 2,300 acre-feet per year. However, due to extraction problems, additional extraction capacity will need to be developed in order for the City to utilize its full rights to the basin.[7] Glendale is actively working to increase its extraction capacity in the Verdugo Basin, so that the City's full adjudicated water rights can extracted to the greatest extent possible, given hydrological limitations.

Recycled Water System

The Los Angeles/Glendale Water Reclamation Plant provides recycled water to Glendale for non-potable uses such as irrigation. The reclamation plant has a capacity of 61.38 acre-feet per day and has been delivering recycled water to the City since the late 1970s. Based on a contract between the Cities of Los Angeles and Glendale, the City is entitled to 50 percent of any effluent produced at the plant, or 10 million acre-feet per year. In 2005, the City utilized approximately 1,300 acre-feet of water from the reclamation plant for non-potable uses such as irrigation. Treated wastewater not utilized by either Glendale or Los Angeles is discharged into the Los Angeles River.

Glendale currently has a "backbone" recycled water distribution system consisting of 20 miles of mains, 6 pumping plants, and 5 storage tanks to deliver recycled water to users. The objective of this system is to eventually increase the use of recycled water to meet 10 percent of Glendale's total water demands.[8]

Water Distribution System

Potable Water System

The main water distribution system in the Glendale includes 378 miles of water mains, 28 pumping plants and 30 reservoirs and water tanks. Together, the Glendale Water Treatment Plant and the Verdugo Park Water Treatment Plant provide treatment for up to 9 million gallons of water per day. Of the approximately 33,173 acre-feet of water consumed by users in fiscal year 2007–08, residential customers used about 88 percent, commercial customers used about 11 percent, industrial customers used less than 1 percent, and less than 1 percent was used for other sources.[9]

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6 Leo Chan, Glendale Water and Power, Water Resources Division, Written Communication with Impact Sciences, Inc., January 27, 2009.

7 Glendale Water & Power, 2005 Urban Water Management Plan, adopted December 2005, 54.

8 Ibid., 49.

9 Glendale Water and Power, *2007–2008 Annual Report: Operating Statistics: Water Utility*, http://www.glendalewaterandpower.com/pdf/annual_reports/07-08/OperatingStatistics.pdf.

There are seven water pressure zones in the City's water system. The project site is located within the Elevation 724 service zone, which is served by the Western and Diederich Reservoirs. The Western Reservoir has a 14.6-million-gallon capacity and is located at 1705 Bel Aire Drive, approximately 3.5 miles northwest of the project site. The Diederich Reservoir has a 57.5-million-gallon capacity and is located at 1430 Campbell Street, approximately 2.5 mile northeast of the Project site.[10]

Water service to the project site is presently provided by existing water lines on and adjacent to the project site. A 4-inch and 12-inch water main is located in Fernando Court, and a 6- to 8-inch water main is located in Gardena Avenue. The 4-inch water line in Fernando Court currently supplies potable water to the site. Laterals presently extend from these lines to the structures on the Project site.

Recycled Water System

Glendale has an established recycled water system consisting of five reservoirs with a total capacity of 1.1 million gallons, 6 pumping plants, and 20 miles of recycled water lines. Recycled water derived from the Los Angeles/Glendale Water Reclamation Plant serves a number of public and private users that consume approximately 1.2 million gallons of recycled water per day.

Recycled water lines currently do not extend to the project site. The closest recycled water line is a 30-inch line located in Central Avenue, approximately 950 feet to the east

Existing Water Use

The project site is developed with four existing vacant structures, which were previously occupied by light industrial and warehouse uses. As such, the project site is not currently using any water.

Water mains exist along Fernando Court and along Gardena Avenue with the northern terminus located at the intersection of Los Feliz Road and Gardena Avenue. There is a 4-inch and 12-inch water main in Fernando Court, located north of the project site and a 6- to 8-inch water main in Gardena Avenue.

REGULATORY FRAMEWORK

A number of regulations and ordinances regarding water supply and water use apply to the project site and the proposed development. These regulations and ordinances are discussed below.

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10 Glendale Water and Power, *2007–2008 Annual Report: Operating Statistics: Water Utility*, http://www.glendalewaterandpower.com/pdf/annual_reports/07-08/OperatingStatistics.pdf, Figure 3.

Federal Level

The primary federal legislation concerning domestic water supply is the Safe Drinking Water Act (SDWA) of 1974. The SDWA provides the USEPA with the authority to regulate water supplies. The SDWA required USEPA to set interim primary drinking water regulations that establish recommended maximum contamination levels (RMCLs) for each contaminant that may have an adverse effect on human health. Since promulgation of the National Primary Drinking Water Regulations (NPDWR), USEPA has developed additional drinking water quality standards for volatile organic chemicals, fluoride, surface water treatment, total coliform bacteria, lead, copper, synthetic organic contaminants, and inorganic contaminants. All domestic water supplies are required to meet these standards.

State Regulations

The Project is required to comply with Title 20 (Sections 1604 and 1606) and Title 24 (Sections 2-5307 and 2-5352) of the California Administrative Code (CAC), which establish efficiency standards (i.e., maximum flow rates) for all new showerheads, lavatory faucets, and sink faucets. These regulations also prohibit the sale of fixtures that do not comply with the current regulations; prohibit the installation of fixtures unless the manufacturer has certified compliance with the flow rate standards; and address pipe insulation requirements that can reduce water used before hot water reaches fixtures. Other applicable state water conservation laws include the Health and Safety Codes.

State Senate Bills (SB) 610 and 221 were adopted in 2001. SB 610 and 221 require lead agencies to obtain an assessment from the local water supplier to determine the sufficiency of the water supply for a proposed development. SB 610 applies at the time an EIR is prepared; SB 221 applies at the time a Tentative Tract Map or other related project actions are approved.

As defined in Public Resources Code 10910, a city or county determines whether the projected water demand associated with a proposed project was included as a part of the most recently adopted urban water management plan. If the water demand associated with the Project was not accounted for in the most recently adopted urban water management plan, the water supply assessment for the Project must include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry and multiple dry water years during a 20-year projection would meet the projected water demand associated with the Project, in addition to the water systems' existing and planned future uses.

Urban Water Management Plan

All urban water suppliers, except for the smaller systems, are required by state law to prepare an Urban Water Management Plan (UWMP) by December 31 for years ending in 0 and 5. This planning document provides information on how suppliers will meet current and projected water demands for the next 20 years. The suppliers are also required to discuss their demand management programs (water conservation) including "Best Management Practices," such as recycled water use. The most recent UWMP was updated in 2007 and relevant information was incorporated by reference in this water supply evaluation. The 2005 UWMP, as updated in 2007, was prepared in coordination with the Regional UWMP prepared by MWD and the 2005 UWMP prepared by the City of Burbank and the Pasadena Water Departments. Information from MWD's Regional UWMP and the Burbank/Pasadena 2005 UWMP was used to prepare the City of Glendale's 2005 UWMP.[11] On July 16, 2007, the City issued a 2005 UWMP Amendment letter incorporated by reference regarding water reliability.

Water Supply Reliability

Reliability of water supplies is an important aspect of the UWMP, as amended. The MWD UWMP also provides significant information on providing a reliable supply of water to its member agencies such as Glendale. The MWD's Water Surplus and Drought Management (WSDM) Plan is the key document in MWD's effort to do so. MWD is the supplier of last resort in meeting the City's water needs. For this reason, the WSDM Plan is summarized below.

In April 1999, MWD's Board of Directors adopted the WSDM Plan. The WSDM Plan guides management of regional water supplies to achieve the reliability goals of Southern California's Integrated Resources Plan (IRP). Unlike MWD's previous shortage management plans, the WSDM Plan recognizes the link between surpluses and shortages, and it integrates planned operational activities with respect to both conditions. The WSDM Plan continues MWD's commitment to the regional planning approaches initiated in the IRP.

The guiding principle of the WSDM Plan is to manage MWD's water resources and management programs to minimize adverse impacts of water shortages to retail customers. From this guiding principle, the following supporting principles have been developed.

- Encourage efficient water use and economical local resource programs;
- Coordinate operations with member agencies to make as much surplus water as possible available for use in dry years;

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11 MWD's Regional UWMP and the Burbank/Pasadena 2005 UWMP are available for public inspection and review on MWD's website and the Burbank and Pasadena websites, respectively, and are incorporated by reference in this EIR.

- Pursue innovative transfer and banking programs to secure more imported water for use in dry years; and
- Increase public awareness about water supply issues.

The WSDM Plan also declared that, should mandatory imported water allocations be necessary, those allocations would be calculated on the basis of need, as opposed to any type of historical purchases. The WSDM Plan contains the following considerations that would go into an allocation of imported water:

- Impact on retail consumers and regional economy;
- Investments in local resources, including recycling and conservation;
- Population growth;
- Changes and/or losses in local supplies;
- Participation in MWD's non-firm (interruptible) programs; and
- Investment in MWD's facilities.

The WSDM Plan also defines five surplus management stages and seven shortage management stages to guide resource management activities. These stages are not defined merely by shortfalls in imported water supply, but also by the water balances in MWD's storage programs. Thus, a 10 percent shortfall in imported supplies could be a stage 1 shortage if storage levels are high. If storage levels are already depleted, the same shortfall in imported supplies could potentially be defined as a more severe shortage. Each year, MWD evaluates the level of supplies available and existing levels of water in storage to determine the appropriate management stage for that year.

When MWD must make net withdrawals from storage to meet demands, it is considered to be in a shortage condition. Under most of these stages, it is still able to meet all end-use demands for water. The following summaries describe water management actions to be taken under each of the seven shortage stages.

- Shortage Stage 1 MWD may make withdrawals from Diamond Valley Lake.
- Shortage Stage 2 MWD will continue Shortage Stage 1 actions and may draw from Semi-tropic and Arvin-Edison groundwater storage.
- Shortage Stage 3 MWD will continue Shortage Stage 2 actions and may curtail or temporarily suspend deliveries to Long-Term Seasonal and Replenishment Programs in accordance with their discounted rates.

- Shortage Stage 4 MWD will continue Shortage Stage 3 actions and may draw water from conjunctive use groundwater storage (i.e., the North Las Posas program) and the SWP terminal reservoirs.

- Shortage Stage 5 MWD will continue Shortage Stage 4 actions. MWD's Board of Directors may call for extraordinary conservation or market open water procedures and curtail Interim Agricultural Water Program deliveries in accordance with their discounted rates. In the event of a call for extraordinary conservation, MWD's Drought Program Officer will coordinate public information activities with member agencies and monitor the effectiveness of ongoing conservation programs.

- Shortage Stage 6 MWD will continue shortage 5 actions and may exercise water supply option contracts and/or buy water on the market either for consumptive use or for delivery to regional storage facilities.

- Shortage Stage 7 MWD will continue delivering to regional storage facilities, maintain extraordinary conservation effort and develop a plan to allocate available supply fairly and efficiently to full-service customers. MWD will enforce these allocations using rate surcharges ($175/acre-foot exceeding a member agency's allotment). If it exceeds 102 percent, surcharge will be equal to three times MWD full service charge.

In sum, significant planning efforts are being made to minimize the impacts of drought conditions. If MWD resources fail to provide needed supplies, Glendale will be requested to implement its Mandatory Conservation Plan, as discussed in the 2005 UWMP.

Glendale's water system is also interconnected with the City of Burbank and Crescenta Valley Water District for short-term/emergency water service (2005 UWMP, Figure 8). When the need arises, these connections can be opened to deliver water into the Glendale distribution system to supplement demands and vice versa. These should be viewed as only short-term transfer of water.

For the long term, MWD is engaged in "out-of-area" dry transfer and exchanges to improve local water supply reliability. These are discussed in MWD's Regional UWMP and is summarized in Chapter 3, Section B-3 Metropolitan Water District. Glendale does not have the basic capability to implement these types of programs; it relies on MWD to perform these activities.

The interconnection with Crescenta Valley Water District was recently completed. The preliminary design for an interconnection with Los Angeles has begun. Construction is expected to be started in 2010.

Glendale General Plan Policies

Goals and policies that relate to water services are set forth by the City of Glendale in the General Plan Community Facilities Element. The Project does not conflict with any applicable General Plan goals and policies relating to water services.

Glendale Water Conservation Policies

Glendale has adopted a mandatory water conservation plan. Section 13.36 of the Glendale Municipal Code describes programs the City is implementing to reduce 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. This section also prohibits landscape irrigation between 10:00 AM and 5:00 PM, failure to repair leaks of any sort, and water fountains without a recirculating water system.[12]

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 Glendale Water and Power.

The existing reclaimed water system is only available in limited sections of the City. Where recycled water use is feasible, the City requires its use in lieu of potable water. Service connections and extensions to areas outside of this system are subject to approval by the Director of Public Works. Recycled water facilities are required in new developments when it is determined that recycled water would be supplied in the future, regardless of whether or not the area is being served by the City's reclaimed water system during new construction.

ENVIRONMENTAL IMPACTS

Methodology

Existing and future water demand calculations were based on water use factors by land use provided by Glendale Water and Power. To demonstrate how water demand resulting from implementation of the Project would be accommodated, the evaluation was based on the conceptual development program described in **Section 3.0**, **Project Description**.

12 City of Glendale Municipal Code, Section 13.36.060

Thresholds of Significance

The following thresholds for determining the significance of impacts related to water resources are contained in the environmental checklist form contained in Appendix G of the most recent update of the *California Environmental Quality Act (CEQA) Guidelines*. Impacts related to water resources analyzed include whether the Project would:

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed; or
- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (issue is addressed in **Section 8.0, Effects Found Not To Be Significant**).

Impact Analysis

Each applicable threshold of significance is listed below followed by analysis of the significance of any potential impacts and the identification of mitigation measures that would lessen or avoid potential impacts. Finally, the significance of potential impacts after implementation of all identified mitigation measures is presented.

Threshold: **Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.**

Impact Analysis:

Short-Term Construction Water Demand – Demolition, grading, and construction activities associated with the Project would require the use of water for dust control and clean-up purposes. The use of water for construction purposes would be short-term in nature and the amount would be much less than water consumption during project operation. Therefore, construction activities are not considered to result in a significant impact on the existing water system or available water supplies.

Long-Term Operational Water Demand – New development on the project site would result in an increase in demand for operational uses, including landscape irrigation, maintenance and other activities on the site. As indicated in **Table 4.9.1-1, Mitaa Plaza Water Demand**, water demand at buildout would be approximately 66.5 acre-feet per year.

Table 4.9.1-1
Mitaa Plaza Water Demand

Use	Size of Use (sf)	Factor[1]	Daily Demand (gpd)	Annual Demand (gal./yr.)	Annual Demand (acre-ft./yr.)
Market	36,000	1 gpd/10 sf	3,600	1,314,000	4.0
Retail	26,880	1 gpd/10 sf	2,688	981,120	3.0
Restaurant	11,210	1.08 gpd/sf	12,107	4,419,055	13.6
Health Spa	25,000	1 gpd/sf	25,000	9,125,000	28.0
Professional Office	32,000	187.5 gpd/1,000 sf	6,000.0	2,190,000.0	6.7
Medical Office	32,000	312.5 gpd/1,000 sf	10,000.0	3,650,000.0	11.2
Total	**163,090**				**66.5**

Source: Impact Sciences, Inc., December 2009.
[1] *125 percent sewage generation loading factor*
gal. = gallons; yr. = year; ft = feet; gpd = gallons per day; sf = square feet.

Normal Weather Conditions

Glendale has identified an adequate supply of water to meet future City demands under normal conditions. As indicated in **Table 4.9.1-2, City of Glendale Current and Projected Water Supply and Demand,** a surplus exists that provides a reasonable buffer of approximately 3,000 to 4,000 acre-feet per year of water. Future water demand in the City is based on projected development contained in the General Plan. For purposes of this assessment, the demand of the Project was assumed not to have been included in this demand projection. However, even with the addition of 66.5 acre-feet per year of demand generated by the Project, there is ample supply to meet remaining City demand under normal conditions.

Table 4.9.1-2
City of Glendale
Current and Projected Water Supply and Demand (acre-feet)

	2005	2010	2015	2020	2025
Supply					
San Fernando Wells	6,466	7,625	7,625	7,625	7,625
Verdugo Wells	2,208	2,300	2,300	2,300	2,300
MWD	22,666	21,889	23,136	24,846	26,625
Recycled Water	1,298	2,010	2,030	2,050	2,050
Total Supply	**32,638**	**33,824**	**35,091**	**36,821**	**38,600**
Demand	**29,698**	**30,920**	**32,143**	**33,367**	**34,592**
Difference (Surplus)	**2,940**	**2,904**	**2,948**	**3,454**	**4,008**

Source: Glendale Water & Power 2005 Urban Water Management Plan, adopted December 2005, Tables II-3 and II-4.

Dry Weather Conditions

Table 4.9.1-3, City of Glendale Three-Year Drought Conditions Water Supply, provides a three-year water supply that Glendale has identified under average drought conditions. Water supply would remain the same during all three years due to the stability of these sources. If there is a need for significant demand reduction efforts, various voluntary or mandatory conservation efforts could be implemented.

Water supplies from the San Fernando and Verdugo Basins and recycled water would remain unaffected by drought conditions. If there is a shortage in water supply from MWD, the Glendale distribution system could be affected. However, MWD's completion of the Diamond Valley Reservoir near Hemet added to the reliability of MWD's supplies. This reservoir, plus other MWD storage/banking operations would be able to meet demands reliably. MWD is also proposing contracts with its member agencies to supply water, including supply during drought conditions. These contracts will define, by agreement, the MWD's obligation to provide "firm" water supply to the City.

It is anticipated that during any three-year drought, the City would have sufficient water supply to meet demand. According to the 2005 UMWP, the City would use less MWD water supplies in the future compared to its current use. With the City's reduction of dependency on imported MWD supplies, there would be a higher level of reliable water supplies to meet demand during drought conditions.

As indicated in **Table 4.9.1-3**, even with Project implementation, the City would continue to have adequate supply to meet citywide demand under drought conditions. Similar to normal weather conditions, even with the addition of 66.5 acre-feet per year of demand generated by the Project, there is sufficient supply to meet City demand under drought conditions.

Table 4.9.1-3
City of Glendale
Three-Year Drought Conditions Water Supply (acre-feet)

Source	Year 1	Year 2	Year 3
San Fernando Wells	8,056	8,056	8,056
Verdugo Wells	2,438	2,438	2,438
MWD	22,790	22,790	22,790
Total Supply	**33,284**	**33,284**	**33,284**

Source: Glendale Water & Power 2005 Urban Water Management Plan, December 2005, Table III-4.

As indicated above, even with implementation of the Project, the City would continue to have adequate supply to meet Citywide demand under normal and drought conditions. As a result, long-term impacts to water supply during operation of the Project under both normal and drought conditions would be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Cumulative Impacts

The following cumulative analysis evaluates the impact of the Project and related projects on water services. Each applicable threshold is listed below in bold, and is followed by an analysis of the cumulative impact of the Project and related projects and their potential significance.

Threshold: **Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.**

Impact Analysis: As indicated in **Table 4.9.1-4, Water Demand of Related Projects**, development of related projects would result in a demand of approximately 997 acre-feet per year. Combined with the increase of 66.5 acre-feet per year generated by the Project, the cumulative amount demanded by the Project and related projects would generate an overall future water demand of approximately 1,063.5 acre-feet per year.

Glendale has identified sufficient water supplies to meet additional demand associated with the Project and through General Plan buildout, which includes related projects. The City has identified local supplies that could be accessed to make up for any deficiency in imported (MWD) water. In addition, MWD water has been, and continues to become, a more reliable source through the construction of new water storage facilities and agreements with member agencies. Therefore, the cumulative impact of the Project and related projects to water supply is less than significant, and the Project's contribution to this impact would not be cumulatively considerable.

Table 4.9.1-4
Water Demand of Related Projects

Use	Unit	Factor[1]	Daily Demand (gal./day)	Annual Demand (gal./year)	Annual Demand (acre-feet/year)
Multifamily	2,682 du	200 gal./unit/day	536,400	195,786,000	601
Retail	540,373 sf	100 gal/1000 sf/day	54,037	19,723,615	61
Restaurant/Banquet Hall	111,812 sf	100 gal/1,000 sf/day	11,181	4,081,138	13
Hotel	744 sf	162.5 gal/room/day	120,900	44,128,500	135
Cinema	3,500 seats	5 gal/seat/day	17,500	6,387,500	20
Community Center/Church/Museum	272,040 sf	75 gal/1,000 sf/day	20,403	7,447,095	23
School	3,120 students	15 gal/student/day	46,800	17,082,000	52
Office	375,394 sf	187.5 gal/1,000 sf/day	70,386	25,691,027	79
Medical	39,000 sf	312.5 gal/1,000 sf/day	12,188	4,448,438	14
Industrial	5,310 sf	100 gal/1,000 sf/day	531	193,815	1
Total					**997**

Source: Impact Sciences, Inc., March 2010.
[1] *125 percent sewage generation loading factor*
gal. = gallons; yr. = year; ft = feet; sf = square feet.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

4.9.2 Sewer

ENVIRONMENTAL SETTING

Existing Conditions

The City of Glendale Public Works Department provides sewer collection and treatment services in the City of Glendale. Sewage from Glendale and other jurisdictions is treated by the City of Los Angeles Hyperion System, which includes the Los Angeles/Glendale Water Reclamation Plant, located outside the Glendale City limits in Los Angeles, and the Hyperion Treatment Plant, located in Playa del Rey.[1] The City of Glendale and the City of Los Angeles jointly own and share operating capacity of the Los Angeles/Glendale Water Reclamation Plant. Glendale entered into an amalgamated treatment and disposal agreement (Amalgamated Agreement) with the City of Los Angeles, which eliminates entitlements and reduces limitations on the amount of sewage discharged into the Hyperion system. Any Glendale sewage not treated at the Los Angeles/Glendale Water Reclamation Plant is treated at the Hyperion Treatment Plant.

Sewage from the Project would be treated by the Hyperion Treatment Plant.[2] The Hyperion Treatment Plant has a dry-weather design capacity of 480 million gallons per day and is currently operating below its design capacity at 350 million gallons per day.[3] Glendale has access to this excess capacity upon payment of Amalgamated Sewerage System Facilities Charges to the City of Los Angeles.

Approximately 360 miles of underground sewer mains ranging in size from 8 inches to 36 inches in diameter are located throughout Glendale.[4] The City owns and maintains the sewer lines within its public rights-of-way. These sewer mains collect sewage and convey it to trunk lines and into regional interceptor sewers for conveyance to either the Los Angeles/Glendale Water Reclamation Plant or the Hyperion Treatment Plant for treatment. The sewer system uses the rolling topography in Glendale to allow gravity to convey the majority of its sewage with minimum pumping costs. Sewage from connections located north of the Los Angeles/Glendale Water Reclamation Plant generally flow to this facility, and connections located south of the Los Angeles/Glendale Water Reclamation Plant flow to the Hyperion Treatment Plant. However, if the Los Angeles/Glendale Water Reclamation Plant is at capacity

1 Glendale Water & Power, 2005 Urban Water Management Plan, adopted December 2005, 49.

2 Chris Chew, City of Glendale, Public Works Department, Engineering Division, written communication with Impact Sciences, Inc., January 6, 2009.

3 Glendale Water & Power, 2005 Urban Water Management Plan, adopted December 2005, 49; Chris Chew, City of Glendale, Engineering Division, written communication, 2009.

4 Ibid.

sewage generated in the northern portion of the City will be pumped to the Hyperion Treatment Plant.[5] Existing Glendale sewer lines within and adjacent to the Project site include 8-inch lines in Los Feliz Road, Fernando Court and along the western Project boundary.[6] Sewer laterals presently extend from these lines to the structures on the Project site.

The Project site is developed with four existing vacant structures, which were previously occupied by light industrial and warehouse uses. As such, the Project site is not currently generating any wastewater.

Planned Improvements

Glendale Public Works Division Department is currently designing upgrades to the sewer lines located in the Tyburn Flume, named the Tyburn Wastewater Capacity Improvement Project. This upgrade will involve upgrading the existing sewer lines two to four pipe sizes, removing existing manholes and constructing new lined concrete manholes, and installing a sewage-metering device and other appurtenances.[7] The limits of the proposed upgrades include Tyburn Street: from Tyburn Flume to Gardena Avenue; Gardena Avenue: from Tyburn Street to Central Avenue; Central Avenue: from Gardena Avenue to San Fernando Road; Mira Loma Avenue: from Gardena Avenue to San Fernando Road; and San Fernando Road: from Mira Loma Avenue to Cerritos Avenue. The Tyburn Wastewater Capacity Improvement Project is scheduled to begin construction in late 2010.[8] As this sewer improvement project is still in the design stage, the Project limits and the exact size of the proposed sewer lines are still being determined. Tentative Project limits for the Tyburn Wastewater Capacity Improvement Project include Tyburn Street–Tyburn Flume to Gardena Avenue; Gardena Avenue–from Tyburn Street to Central Avenue; Central Avenue–from Gardena Avenue to San Fernando Road; Mira Loma Avenue–from Gardena Avenue to San Fernando Road; and San Fernando Road–from Mira Loma Avenue to Cerritos Avenue.[9]

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5 Maurice Oillataguerre, Senior Environmental Program Specialist, City of Glendale, Public Works Department, personal communication with Impact Sciences, Inc., February 3, 2009.

6 Dennis Ambayec, Senior Civil Engineer, City of Glendale, Public Works Department, Engineering Division, personal communication with Impact Sciences, Inc., October 14, 2009.

7 Dennis Ambayec, Senior Civil Engineer, City of Glendale, Public Works Department, Engineering Division, personal communication with Impact Sciences, Inc., January 6, 2009.

8 Chris Chew, City of Glendale, Engineering Division, written communication, 2009.

9 Dennis Ambayec, Senior Civil Engineer, City of Glendale, Public Works Department, Engineering Division, personal communication with Impact Sciences, Inc., January 6, 2009.

REGULATORY FRAMEWORK

Goals and policies that relate to the City's sewage collection and treatment system are set forth by the City in the General Plan Community Facilities Element. The Project does not conflict with applicable general plan goals and policies relating to the City's sewage collection and treatment system.

ENVIRONMENTAL IMPACTS

Methodology

The impact of the Project on the existing sewage collection and treatment system was determined by evaluating existing sewage treatment and sewage conveyance capacity. To perform this evaluation, estimates of both existing and future sewage amounts were calculated. The projected increase in sewage from the Project site was then compared against existing system capacity to determine if sufficient capacity would be available to serve the Project.

Thresholds of Significance

The following thresholds for determining the significance of impacts related to sewage are contained in the environmental checklist form contained in Appendix G of the most recent update of the *California Environmental Quality Act (CEQA) Guidelines*. The impact analysis addresses whether the Project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (issue is addressed in **Section 8.0, Effects Found Not To Be Significant**).
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- 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.

Impact Analysis

Each applicable threshold of significance is listed below followed by analysis of the significance of any potential impacts and the identification of mitigation measures that would lessen or avoid potential impacts. Finally, the significance of potential impacts after implementation of all identified mitigation measures is presented.

Threshold: **Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

Impact Analysis: As discussed above, sewage from the Project site goes to the Hyperion Treatment Plant, which Glendale has access to through the Amalgamated Agreement. With the Hyperion Treatment Plant currently operating 130 million gallons per day below capacity, adequate capacity exists to treat Project-generated effluent of 47,515 gallons per day (see **Table 4.9.2-1**, below). Therefore, the Project would not require the expansion or construction of sewage treatment facilities, the construction of which could cause significant environmental effects. No significant impact would result with regard to impacts to the available sewage treatment capacity.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: **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.**

Impact Analysis: As shown in **Table 4.9.2-1**, the Project would, on average, generate 47,515 gallons of sewage per day

Table 4.9.2-1
Projected Project Sewage Generation

Use	Units	Loading Factor	Daily Generation (gpd)
Market	36,000 sf	80 gpd/1,000 sf	2,880
Retail	26,880 sf	80 gpd/1,000 sf	2,150
Restaurant	11,210 sf	864 gpd/1,000 sf	9,685
Health Spa	25,000 sf	800 gpd/1,000 sf	20,000
Professional Office	32,000 sf	250 gpd/1,000 sf	4,800
Medical Office	32,000 sf	250 gpd/1,000 sf	8,000
Total	**163,090 sf**		**47,515**

Source: Impact Sciences, Inc., March 2010.
Generation rates provided by Chris Chew, City of Glendale, Department of Public Works, Engineering Division, written communication with Impact Sciences, Inc. January 7, 2008.

gpd = gallons per day; sf = square feet.

Sewage generated on the project site would be conveyed to the Hyperion Treatment Plant for treatment, as discussed above. With the Hyperion Treatment Plant currently operating 130 million gallons per day

below capacity, the addition of approximately 47,515 gallons of sewage per day generated by the Project would not result in the plant exceeding capacity. Therefore, adequate capacity exists to treat the sewage increase generated by the Project, and the impact of the Project on the sewage treatment system is less than significant.

The Project would be served by the existing 8-inch lines in Los Feliz Road, Fernando Court and adjacent to the western Project boundary, all of which are located in the Tyburn Flume and would be upgraded as part of the City's Tyburn Wastewater Capacity Improvement Project. Laterals would connect the Project to these lines.

The City imposes a sewer capacity increase fee on new developments, based on a computer modeling assessment of Glendale's sewer system's hydraulic capacity. The fee is charged when development of a parcel leads to an increase in the volume of wastewater discharged to the collection system. The City has elected to calculate these fees based on proportional increases in wastewater flow, in order to impose the fee in an equitable manner.

The City's methodology for assessing the fee began with dividing Glendale's sewer system into seven drainage basins, and then determining the capital budget required to expand the capacity of each basin over the next 20 years, and the corresponding future peak flow for each basin.[10] The Project would increase flows within the Tyburn Wastewater Capacity Improvement Project, which has an estimated cost of $3,856,500 and projected future flows of 2.31 million gallons per day. As stated above, the Project is expected to create an increase to the sewer system of 47,515 gallons per day. The City applies a credit for the former uses at the Project site, which equated to 3,736 gallons per day. As such, the net increase in sewage flow from the Project is 43,779 gallons per day, which equates to a peak flow of 100,692 gallons per day when multiplied by a 2.3 peak-flow factor. The Project's peak flow is then calculated as a percentage of the total future flow for which the Project would be required to mitigate. Based on the City's methodology, the Project would be responsible for approximately 4.4 percent of the total capital budget for the Tyburn Flume, which results in $169,686 sewer capacity increase fee assessed to the Project.

The collected fees, which would be charged for each proposed development, will be deposited into a specially created account to be used to fund capacity improvements of the specific drainage basin. The City will undertake a new hydraulic analysis of the specific drainage basin every five years from the date of the first deposit into the special account. In the event the City receives proposals for new developments not considered in the current hydraulic analysis, intermediate and more frequent hydraulic analyses will

10 City of Glendale Municipal Code, Chapter 13.40 Sewer System, Article II,

be performed to evaluate capacity in the given drainage basin. As part of the City's annual Capital Improvement Program, the Public Works Director will request consideration from the City Council to budget the funds for the balance of the cost of increasing the sewer capacity for any of the drainage basins. The City's Public Works Engineering Department will then be able to design and construct the necessary improvements. As part of the City's Tyburn Wastewater Capital Improvement Project, sewer lines in the vicinity of the Project would be upgraded. The Project's sewage increase to the lines in the Tyburn Flume would be mitigated through payment of the sewer capacity increase fee, which would provide the Project's proportionate share of the funds for the City to upgrade the system.

Level of Significance Before Mitigation: Significant.

Mitigation Measures: The following mitigation measure would reduce Project-related sewer impacts to less than significant:

4.9.2-1 The project applicant shall pay a sewer capacity increase fee for the project's sewage increase to the lines in the Tyburn Flume area to alleviate sewer impacts. The fee, as estimated under the City's methodology, would be $169.686. These collected fees shall be deposited by the City of Glendale into a specially created account to be used to fund capacity improvements to the Tyburn Flume drainage basin.

Level of Significance After Mitigation: Less than significant**.**

Cumulative Impacts

The following cumulative analysis evaluates the impact of the Project and related projects on sewage in the City of Glendale. Each applicable threshold is listed below in bold, and is followed by an analysis of the cumulative impact of the Project and related projects and their potential significance.

Threshold: **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.**

Impact Analysis: As discussed above, when the Los Angeles/Glendale Water Reclamation Plant reaches capacity, the Hyperion Treatment Plant, which Glendale has access to through the Amalgamated Agreement, would treat a majority of the waste generated by the Project and related projects. With the Hyperion Treatment Plant currently operating 130 million gallons a day below capacity, adequate capacity exists to treat the 768,028 gallons per day of effluent generated by cumulative development (see **Table 4.9.2-2**, below). Therefore, the Project and related projects would not require the expansion or

construction of sewage treatment facilities, the construction of which could cause significant environmental effects. The cumulative impact of the Project and related projects is less than significant.

Development of the related projects may also require relocation/upgrades of existing sewer lines. These relocations/upgrades could result in short-term service interruptions for service area users, representing a significant impact as well. However, the City would require capacity upgrades to the sewer conveyance system prior to occupancy to avoid overloading the system on a project-by-project basis. Similarly, the City would also require that temporary sewer lines be installed and operational prior to construction to avoid service interruptions on a project-by-project basis. The inclusion of these requirements would reduce the related project impact to less than significant. As the Project would require the provision of temporary replacement sewer lines, the Project's contribution would not be cumulatively considerable and, therefore, is less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: **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.**

Impact Analysis: As shown in **Table 4.9.2-2**, development of related projects would add 712,261 gallons per day to the Hyperion Treatment Plant or the City's sewage conveyance system. Combined with the increase of 47,515 gallons per day generated by the Project, the Project and related projects would generate an overall cumulative sewage demand of 759,776 gallons per day.

As discussed above, when the Los Angeles/Glendale Reclamation Plant reaches capacity, the Hyperion Treatment Plant would treat the remaining generated sewage. Therefore, a majority of the waste generated by the Project and related projects would be treated by the Hyperion Treatment Plant. With the Hyperion Treatment Plant currently operating 130 million gallons per day below capacity, the additional 759,776 gallons of sewage per day generated by cumulative development would not exceed the plant's capacity. With excess capacity available to Glendale upon payment of fees to the City of Los Angeles, adequate capacity exists to treat sewage generated by the Project and related projects. Therefore, the cumulative impact of the Project and related projects on available sewage treatment capacity is less than significant.

Table 4.9.2-2
Generation of Sewage by Related Projects

Use	Unit	Loading Factor[1]	Daily Generation (gpd)
Multifamily	2,682 du	160 gal./unit/day	429,120
Retail	540,373 sf	80 gal/1000 sf/day	43,230
Restaurant/Banquet Hall	111,812 sf	80 gpd/1,000 sf	8,945
Hotel	744 sf	130 gal./room/day	96,720
Cinema	3,500 seats	4 gal/seat/day	14,000
Community Center/Church/Museum	272,040 sf	60 gal/1000 sf/day	16,322
Schools	3,120 sf	12 gal/student	37,440
Office	375,394 sf	150 gal/1000 sf/day	56,309
Medical	39,000 sf	250 gal/1000 sf/day	9,750
Industrial	5,310 sf	80 gal/1000 sf/day	425
		Total	**712,261**

Source: Impact Sciences, Inc., March 2009
gpd = gallons per day; d.u. = dwelling units; sf = square feet.
[1] *City of Los Angeles, Bureau of Sanitation Sewage Generation Factors.*

Development of the related projects would place additional demand on the City's sewage conveyance system. Sewage conveyance infrastructure serving the individual related projects may not have adequate capacity to handle additional sewage loads, and such lack of capacity represents a significant impact. It should be noted, planned upgrades to the City's sewage conveyance system include the Tyburn Flume Wastewater Capacity Improvement Project, which would upgrade the sewer lines in Tyburn Street, Gardena Avenue, Central Avenue, Mira Loma Avenue, and San Fernando Road. Additionally, in an effort to alleviate sewer impacts, the City will impose a sewer capacity increase fee on all future developments adding demand for sewer system capacity. The fee will be charged when development of a parcel leads to an increase in the volume of wastewater discharged to the collection system. The City has elected to calculate these fees based on proportional increases in wastewater flow. The collected fees will be deposited into a specially created account to be used to fund capacity improvements of the specific drainage basin. The City will undertake a new hydraulic analysis of the specific drainage basin every five years from the date of the first deposit into the special account. In the event the City receives proposals for new developments not considered in the current hydraulic analysis, intermediate and more frequent hydraulic analyses will be performed to evaluate capacity in the given drainage basin. The Public Works Director will request consideration from the City Council to budget the funds for the balance of the cost of increasing the sewer capacity for any of the drainage basins, as part of its annual Capital Improvement Program when it determines such action to be appropriate and justifiable. The City's Public Works

Engineering Division will then be able to design and construct the necessary improvements. Since the payment of the sewer capacity increase fee is available to reduce the severity of the impact of the Project and related project's on sewer capacity, the impact of Project and related project's on the existing sewage conveyance system would be reduced to less than significant.

Level of Significance Before Mitigation: Significant.

Mitigation Measures: The following mitigation measure would reduce potential cumulative sewer impact to less than significant:

4.9.2-2 Each project shall contribute sewer capacity increase fees for improvements and upgrades to alleviate sewer impacts within the specific drainage basin where the particular project is located. Fees would be determined based on the City's sewer capacity increase fee methodology. These collected fees would be deposited into a specially created account to be used to fund capacity improvements of the specific drainage basin.

Level of Significance After Mitigation: Less than significant.

4.9.3 Solid Waste

ENVIRONMENTAL SETTING

Existing Conditions

Regional Facilities

Over 250 private waste haulers and several City governments collect solid waste in Los Angeles County. The City of Glendale Integrated Waste Management Division is the only hauler located in Glendale.[1] 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 (MRF). 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 California Code of Regulations, Title 23, Section 2554. Transformation facilities incinerate municipal solid waste in order to generate energy. MRFs recover recyclable materials from other waste to provide for the efficient transfer of the residual waste to permitted landfills for proper disposal.

The *Los Angeles County Integrated Waste Management Plan 2007 Annual Report*, prepared by the Los Angeles County Department of Public Works, indicates that residents and businesses in Los Angeles County (both incorporated cities and unincorporated areas) disposed of approximately 10 million tons of solid waste in landfills in and out of Los Angeles County and at waste-to-energy facilities in 2007. Of this amount, approximately 8.90 million tons were disposed of at Class III landfills within Los Angeles County; approximately 115,000 tons were exported to out-of-County Class III landfills; approximately 137,000 tons were disposed of in Unclassified (Inert) landfills; and approximately 587,000 tons were disposed of at waste-to-energy facilities.[2]

The estimated remaining capacity of permitted Class III landfills at the end of 2007 in Los Angeles County was approximately 91.43 million tons.[3] Based on the 2007 average disposal rate of 28,889 tons per day (6 days a week), including waste being imported to the County, local permitted Class III landfills will

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1 City of Glendale, *Commercial Refuse Bin Service for the City of Glendale Brochure*, June 2008.

2 County of Los Angeles Department of Public Works, *Los Angeles County Integrated Waste Management Plan, 2007 Annual Report on the Countywide Summary Plan and Countywide Siting Element*, 2009.

3 Ibid.

be at capacity in the year 2018. However, ultimate landfill capacity would be determined by several factors, including (1) expiration of various permits (e.g., Land Use Permits, Waste Discharge Requirements Permits, Solid Waste Facilities Permits, and air quality 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 Unclassified landfills are affected by these same factors, but they are not affected to the same extent. The total estimated remaining capacity of Unclassified landfills at the end of 2007 in Los Angeles County was approximately 51.1 million tons.[4] Based on a 2007 average disposal rate of 440 tons of inert waste per day (6 days per week), there is remaining capacity for approximately 373 years.

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 do and 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.

According to the 2007 Annual Report on the Countywide Summary Plan and Countywide Siting Element, there will be a shortage of permitted solid waste disposal capacity in the County. This is due to a lack of suitable sites for developing new landfills, limited potential expansion of existing landfills, and strong public opposition to the siting of proposed solid waste management facilities. To address this issue, several landfills in the County have been recently expanded, including the Antelope Valley, Chiquita Canyon, Lancaster, Puente Hills, and Sunshine Canyon Landfills. In addition, the County will soon begin transporting solid waste out-of-county to the Mesquite Regional Landfill in Imperial County. The Mesquite Regional Landfill, which would accept up to 20,000 tons per day from the County, was operational at the end of 2008.[5] However, the County of Los Angeles' solid waste cannot not be transported to Mesquite Landfill until 2011/2012 when the waste by rail system is complete.[6]

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4 Ibid.

5 County of Los Angeles Sanitation District, *Future Solid Waste Management Activities*, http://www.lacsd.org/info/publications_n_reports/fiscal04_05/futureactivities.asp, March 2010.

6 County of Los Angeles Sanitation District, Mesquite Regional Landfill Project, http://www.lacsd.org/civica/filebank/blobdload.asp?BlobID=2901, March 2010.

Local Facilities

In 1989, residential and non-residential uses in Glendale disposed of approximately 345,000 tons of solid waste.[7] Glendale has reduced the amount of disposed solid waste by approximately 53 percent in 2006.[8] Similar to the disposal patterns Countywide, the decline can be attributed primarily to waste diversion programs, including waste reduction, recycling, and composting.

As shown in **Table 4.9.3-1,** residential and non-residential uses generated approximately 45 percent and 55 percent of disposed solid waste generated in Glendale, respectively.[9] Private companies hauled a majority of the waste; Glendale's Public Works Division and numerous self-haulers hauled the rest.

Table 4.9.3-1
Waste Disposal Tonnage by Hauler and Source

	Residential	Non-Residential	Total Tons (%)
Glendale Public Works	34,439	42,092	76,531 (39.8%)
Private Haulers	27,000	33,000	60,000 (31.2%)
Self-Haul Vehicles	25,000	30,000	55,000 (29.0%)
Total	**86,440**	**105,650**	**192,090**
Percent of Total	**45.0%**	**55.0%**	**100.0%**

Source: Mario Nunez, Integrated Waste Administrator, Glendale Public Works Department, Integrated Waste Management Division, written communication with Impact Sciences, Inc., August 2008.

Table 4.9.3-2 provides the annual disposal quantity, annual capacity, remaining capacity, and permit status for the five landfills that received the majority of the City's waste. As shown in **Table 4.9.3-2** the combined remaining capacity of the six landfills was approximately 50 million tons.[10]

7 City of Glendale, Source Reduction and Recycling Element, June 1991, ES-2.

8 CIWMB, *Jurisdictional Profile for the City of Glendale*, http://www.ciwmb.ca.gov/Profiles/Juris/JurProfile1.asp?RG=C&JURID=176&JUR=Glendale, March 2010.

9 Mario Nunez, Integrated Waste Administrator, Glendale Public Works Division, Integrated Waste Management Section, communication with Impact Sciences, Inc., December 2008.

10 County of Los Angeles Department of Public Works, Los Angeles County Integrated Waste Management Plan 2006 Annual Report – Part II: Siting Element Assessment, Revised June 2008, Appendix E-2.1.

Table 4.9.3-2
Disposal Capacities of Primary Landfills Serving the City of Glendale

Landfill Site	Location	Annual Permitted Capacity (million tons)[1]	Annual Disposal (million tons)[1]	Remaining Permitted Capacity (million tons)[1]	Remaining Capacity (Years)[1]
Scholl Canyon	Glendale	1.06	0.4	6.0	15
Puente Hills	Near City of Industry	4.12	3.76	24.77	6.5
Sunshine Canyon	Valencia	2.06	1.17	8.49	7.3
Chiquita Canyon	Valencia	1.87	1.54	9.52	6.2
Nu-Way Live Oak	Irwindale	2.34	0.02	4.5[2]	225
Total Remaining Capacity				**53.28**	

Source:

[1] *County of Los Angeles Department of Public Works, Los Angeles County Integrated Waste Management Plan 2007 Annual Report – Part II: Siting Element Assessment, Revised May 2009, Appendix E-2.1.*

[2] *Mario Nunez, Integrated Waste Administrator, Glendale Public Works Division, Integrated Waste Management Section, communication with Impact Sciences, Inc., August 2009.*

Scholl Canyon Landfill, which is located at 3100 Scholl Canyon Road, is the main facility that receives the City's solid waste; however, other landfills in Los Angeles County may accept solid waste from Glendale's private haulers.[11] This site consists of 530 acres of which Los Angeles County owns 25 acres, Southern California Edison owns 30 acres, and the City of Glendale owns the remaining 475 acres. According to Glendale Municipal Code Chapter 8.56, only solid waste generated by residential and non-residential uses in the Scholl Canyon Wasteshed can be disposed at the Scholl Canyon Facility. The Project site is within the Scholl Canyon Wasteshed, which includes the entire City of Glendale. Approximately two-thirds, or about 287,000 tons, of the solid waste disposed of at the Scholl Canyon landfill came from outside sources. This landfill had a remaining permitted capacity of 6.0 million tons, or an estimated remaining life of approximately 15 years. The City, if needed, would have access to all the remaining capacity of the landfill by no longer accepting solid waste from other jurisdictions, extending the life of the landfill.

Another local facility that the City of Glendale owns is the Brand Park Landfill, which is located at 1602 West Mountain Street in Glendale. This facility is a Limited Volume Transfer Operation and is limited in use to City work crews and is not open to the public. The remaining permitted capacity of the

11 Mario Nunez, Integrated Waste Administrator, Glendale Public Works Division, Integrated Waste Management Section, written communication with Impact Sciences, Inc., December 2008.

landfill was approximately 700,000 tons for an estimated remaining life of approximately 27 years.[12] The annual disposal rate at the Brand Park Facility is currently zero since all inert waste has been stockpiled for recycling.

Project Site Generation

The project site is developed with four existing vacant structures, which were previously occupied by light industrial and warehouse uses and, therefore, does not currently generate solid waste.

REGULATORY FRAMEWORK

California Integrated Waste Management Act

As many of the landfills in the state are approaching capacity and the siting of new landfills becomes increasingly difficult, the need for source reduction, recycling, and composting has become readily apparent. In response to this increasing solid waste problem, in September 1989 the state assembly passed Assembly Bill 989, known as the California Integrated Waste Management Act. This statute emphasizes conservation of natural resources through the reduction, recycling and reuse of solid waste. Assembly Bill 989 required cities and counties in the state to divert 25 percent of their solid waste stream from landfills by 1995 and 50 percent by year 2000, or face potential fines of millions of dollars per year. On June 30, 2008, State Assembly Amended Senate Bill 1252 to include further waste diversion goals of 60 percent by the year 2015 and 75 percent by the year 2025.[13]

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 Assembly Bill 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 Recycling Element in 1991 to describe how it has attained the diversion goals established by Assembly Bill 939 through source reduction, recycling, and composting. The following describes each of the Source Reduction Recycling Element's components.

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12 Mario Nunez, Integrated Waste Administrator, Glendale Public Works Division, Integrated Waste Management Section, communication with Impact Sciences, Inc., August 2008. (Based on an annual permitted capacity of 26,000 tons).

13 CWIMB, *Senate Bill 1252 Amendment*, June 30, 2008.

Source Reduction

The City identified five programs to reduce waste at the source: (1) in-house local government programs, such as purchasing preferences and specifications for durable and reusable products, waste evaluation and employee education, increased use of electronic mail, and low-maintenance landscaping; (2) encouraging source reduction in the private sector through technical assistance, business evaluation, education, and promoting backyard and institutional composting; (3) use of recycled materials that would require waste reduction planning through the business license process and ban of products that cannot be recycled or reused; (4) rate structure modifications; and (5) economic incentives to encourage waste reduction.

Recycling

Recycling programs include (1) development of materials recovery facilities; (2) continuation and expansion of commercial recycling activities; (3) development of a municipal buy-back center and drop-off center; (4) expansion of the Civic Center office paper recycling program; (5) increasing the frequency of the curbside recycling program; and (6) implementation of a salvaging program at Scholl Canyon for white goods (e.g., paper), metals, and woods.

Composting

The City has developed its own yard waste composting facility, which will potentially involve neighboring cities. The City is also investigating the feasibility of composting mixed solid waste. The City currently has an active backyard composting effort underway. City collected yard trimmings are not composted but are ground and used as alternative daily cover at the Scholl Canyon Landfill.

Local Regulations

Section 30.30.030 of the Glendale Municipal Code provides the minimum requirements for trash collection areas to be developed in conjunction with any new project in the mixed-use zones.

Chapter 8.58 of Glendale Municipal Code requires that 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, which 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.[14] In addition, project applicants must pay a diversion security deposit and prepare a waste reduction and recycling plan. The diversion security deposit is refundable

14 *Glendale Municipal Code 8.58.010*, amended October 23, 2008.

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.

ENVIRONMENTAL IMPACTS

Methodology

Solid waste generation resulting from construction of the Project was estimated based on demolition volumes and compared with available landfill capacity. Solid waste generation associated with Project operation was estimated using California Integrated Waste Management Board factors, determined by land use type. The factors are provided in pounds of solid waste generated per 1,000 square feet. The increase associated with operation of the Project was then compared with landfill capacity in order to evaluate potential impacts on solid waste disposal capacity.

Thresholds of Significance

The following thresholds for determining the significance of impacts related to solid waste are contained in the environmental checklist form contained in Appendix G of the most recent update of the *California Environmental Quality Act* (*CEQA) Guidelines*. The impact analysis addresses whether the Project would

- be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and
- comply with federal, state, and local statutes and regulations related to solid waste.

Impact Analysis

Each applicable threshold of significance is listed below followed by analysis of the significance of any potential impacts and the identification of mitigation measures that would lessen or avoid potential impacts. Finally, the significance of potential impacts after implementation of all identified mitigation measures is presented.

Threshold: **Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.**

Impact Analysis:

Construction – Construction of the Project would involve site preparation activities (e.g., demolition and building) that would generate waste materials. Approximately 4,000 cubic yards of demolition material would be generated. The Project applicant would be required to take all the construction and demolition debris to a certified mixed debris recycling facility, which recycles a minimum of 50 percent of all waste received, or a recycler must divert all accepted waste from the landfill. The City's Integrated Waste Management Division recommends six certified mixed debris recycling facilities, including American Waste Transfer Facility in Sun Valley, California Waste Services in Los Angeles, Community Recycling in Sun Valley, Looney Bins/Downtown Diversion in Los Angeles, Interior Removal Specialist in South Gate, Direct Disposal in Los Angeles, and Looney Bins/East Valley Diversion in Sun Valley.[15] Construction debris generated on the Project site would be disposed of at one of the recommended facilities or at a recycling facility that diverts all construction and demolition waste, in accordance with Chapter 8.58 of the Municipal Code. As shown in **Table 4.9.3-3**, the permitted annual capacities at the six certified mixed-debris recycling facilities can accept a range of annual permitted capacity from 4,680 to 300,000 tons. The one-time disposal of 4,000 cubic yards of demolition debris generated by the Project would be served by the certified facilities; therefore, the impact of the Project on the certified facilities would be less than significant.

Table 4.9.3-3
Annual Permitted Capacities of Certified Recycling Facilities

Landfill Site	Location	Annual Permitted Capacity (tons)
American Waste Industries-Pendleton Facility	Sun Valley	4,680
California Waste Services	Los Angeles	300,000
Community Recycling[1]	Sun Valley	620,500
Looney Bins – Downtown Diversion	Los Angeles	525,000
Interior Removal Specialist	South Gate	**
Direct Disposal[2]	Los Angeles	40,000
Looney Bins – East Valley Diversion	Sun Valley	273,750

Source: California Integrated Waste Management Board, Facility/Site Search, http://www.ciwmb.ca.gov/SWIS/Search.aspx, March 2010.
[1] Based on 1,700 Tons/day x 365 days/year = 620,500.
[2] In cubic yards.
*** Information was not available on the California Integrated Waste Management Board's Web site.*

15 City of Glendale, Permits Services Center, *Certified Mixed Debris Recycling Facilities*, 2009

In addition, construction of the proposed structure would generate waste materials. A majority of the construction waste would be readily recyclable materials such as wood, concrete, metals and soil. This material will be collected on site in accordance with the City's Construction and Demolition Debris Recycling Ordinance and sent to commercial facilities located in Los Angeles County. Therefore, the impact of waste generated during the construction of the proposed structure is less than significant.

Operation – Project implementation would result in an increase in commercial development on site. **Table 4.9.3-4** provides the projected amount of solid waste that would be generated at buildout. A total of approximately 59.7 tons of solid waste per year is projected to be disposed of into landfills at Project buildout.

Table 4.9.3-4
Projected Solid Waste Generation (Annual Tons)

Land Use	Quantity (square feet)	Generation Rate (lbs/sf/day)[1]	Waste Generated (ton/year)	Waste Material Diverted[2] (ton/year)	Waste Disposed of in Landfill (ton/year)
Market	36,000	3.12 lb/1,000 sf/day	20.5	10.9	9.6
Retail	26,880	2.5 lb/1,000 sf/day	12.3	6.5	5.8
Restaurant/Foodcourt	11,210	0.005 lb/sf/day	10.2	5.4	4.8
Health Spa	25,000	3.12 lb/1,000 sf/day	14.2	7.5	6.7
Professional Office	32,000	6 lb/1,000 sf/day	35.0	18.6	16.4
Medical Office	32,000	6 lb/1,000 sf/day	35.0	18.6	16.4
Total	**163,090**		**127.2**	**67.5**	**59.7**

Source Impact Sciences, Inc.

[1] *Spa and market factors based on Guide to Solid Waste and Recycling Plans for Development Projects (Santa Barbara County Public Works Department), 1997.*
Retail and Office factors based on Stevenson Ranch Draft EIR (Phase IV), LA County, 1992.
Restaurant factor based on Draft EIR for North Hills Development, 1991.

[2] *Based on a 53 percent diversion rate.*

Solid waste generated on the project site could be deposited at the Scholl Canyon Landfill, which is owned by the City of Glendale, or one of the landfills located within the County of Los Angeles. As indicated in **Table 4.9.3-2**, the annual disposal rate at the Scholl Canyon facility is 400,000 tons per year. Combined with the increase of approximately 59.7 tons per year in solid waste generated by the Project, the annual disposal amount would increase to approximately 400,060 tons per year. With a total annual disposal amount of 400,060 tons, and a remaining 6.0 million ton capacity, the Scholl Canyon facility would meet the needs of the City and the Project for approximately 15 years. Because the Project would

be required to implement a waste-diversion program aimed at reducing the amount of solid waste disposed in the landfill, the amount of solid waste generated would likely be less than the amount estimated. Examples of waste diversion efforts would include recycling programs for cardboard boxes, paper, aluminum cans, and bottles through the provision of recycling areas within garbage disposal areas.

The Scholl Canyon facility would have sufficient capacity to continue to accommodate the demand for Class III disposal facilities generated by the Project site. As such, the increase in solid waste generation associated with the operation of the Project would not exacerbate landfill capacity shortages in the region to the point of altering the projected timeline of any landfill to reach capacity. Therefore, the impact of the Project on permitted landfill capacity is less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Threshold: Comply with federal, state, and local statutes and regulations related to solid waste.

Impact Analysis: As part of the Project, the applicant would implement a waste diversion program in an effort help the City meet its waste diversion goal of 50 percent as mandated by Assembly Bill 939. In addition, the Project would enclose trash collection areas. No federal statutes apply to the Project. Therefore, the impact of the Project on compliance with federal, state, and local statues and regulations is less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.

Cumulative Impacts

The following cumulative analysis evaluates the impact of the Project and related projects as defined in **Section 4.0, Environmental Impact Analysis**, on solid waste in the City. Each applicable threshold is listed below in bold, and is followed by an analysis of the cumulative impact of the Project and related projects and their potential significance.

Threshold: **Not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.**

Impact Analysis: As shown in **Table 4.9.3-5**, development of related projects would dispose of a projected 4,864 tons of solid waste into landfills every year. Combined with the additional annual tonnage of solid waste generated by the Project, the cumulative amount generated by new projects would be approximately 4,924 tons of solid waste per year.

The current capacity of the Scholl Canyon and Puente Hills Landfills are adequate to accommodate solid waste disposal needs of the Project, and development of all related projects, for at least 10 years, if not longer. The City also utilizes four additional landfills, all of which are still currently accepting materials.

The County of Los Angeles landfills are a part of the County Sanitation Districts of Los Angeles County (CSDLAC). The CSDLAC provides solid waste management for over half the population in Los Angeles County. CSDLAC's service area covers approximately 800 square miles and encompasses unincorporated County territory, as well as 78 cities, including Glendale. CSDLAC operates a comprehensive solid waste management system, which includes landfills, recycling centers, transfer/materials recovery facilities, and gas-to-energy facilities.

Although there is insufficient permitted disposal capacity within the existing system serving Los Angeles County to provide for its long-term disposal needs, there is additional capacity potentially available within Los Angeles County through the expansion of local landfills, and outside of Los Angeles County with a regional waste-by-rail system and remote landfills. As currently proposed by CSDLAC, this regional system would utilize disposal capacity at the planned Mesquite Regional Landfill (MRL) in Imperial County.

CSDLAC entered into Purchase and Sale Agreements in August 2000 for the MRL landfill, which is one of the only fully permitted rail-haul landfills in California. MRL has received all required permits, including the Land Use and SWF permits. CSDLAC closed escrow on the MRL in December 2002, and is currently in the planning and development process for that landfill. Closing escrow on the MRL has allowed work to begin on a comprehensive master plan for the development of the site, including the landfill and rail infrastructure. Following completion of the master plan, CSDLAC intends to pursue concurrent final design and construction of the facilities necessary to begin operation.

Table 4.9.3-5
Projected Solid Waste Generation of Related Projects (annual tons)

Land Use	Quantity	Generation Rate (lb/sf/day)	Waste Generated (lb/day)	Waste Generated (ton/year)	Waste Material Diverted[1] (ton/year)	Waste Disposed of in Landfill (ton/year)
Multifamily	2,682 du	4	10,728	3,915,720	1,958	1,038
Retail	540,373 sf	0.046	24,857	9,072,863	4,972	2,635
Restaurant/Banquet Hall	111,812 sf	0.005	559	204,057	104	55
Hotel	744 rm	2	1,488	543,120	272	144
Cinema	70,000 sf	0.046	3,220	1,175,300	588	311
Community Center/Church/Museum	272,040 sf	0.007	1,904	695,062	539	286
School	3,120 sf	0.5 lb/student/day	1,560	569,400	285	151
Office	375,394 sf	0.006	2,252	822,113	411	218
Medical	39,000 sf	0.006	234	85,410	43	23
Industrial	5,310 sf	0.006	32	11,629	6	3
Total			**46,835**	**17,094,674**	**9,177**	**4,864**

Source Impact Sciences, Inc, .March 2010.
[1] *Based on a 53 percent diversion rate.*

The operation of MRL can provide approximately 100 years of disposal capacity for Los Angeles County.[16] MRL opened in late 2008, and is permitted to accept up to 20,000 tons of waste each day from Los Angeles County and has a capacity of 600 million tons.[17,] However, waste from Los Angeles County would not be permitted until rail infrastructure to the landfill is completed, which is expected to occur in 2011/2012. CSDLAC intends to utilize a regional waste-by-rail system to transport municipal solid waste approximately 210 miles to MRL via the Union Pacific Railroad main line, which extends from the Metropolitan Los Angeles to Glamis, California. From Glamis, a 4.5-mile dedicated rail spur would be built to the site.

Although CSDLAC is in the process of increasing the capacity to accommodate future increases in solid waste, these improvements are not yet in place and will not be completed until at least 2009. Further,

16 Sanitation Districts of Los Angeles County, *Annual Report for the Puente Hills Landfill*, 2007.

17 Sanitation Districts of Los Angeles County, *Mesquite Regional Landfill* http://www.mrlf.org/index.php?build=view&idr=122&page2=&pid=32, October 2008; County of Los Angeles, *Draft Regional Comprehensive Plan: Solid Waste*, http://dpw.lacounty.gov/epd/tf/Attachments/Minutes_Attachments/June_19_2008_TF/Item_VIII_RCP_Solid_Waste.pdf, 2008; County of Los Angeles Sanitation District, *Future Solid Waste Management Activities*, http://www.lacsd.org/info/publications_n_reports/fiscal04_05/futureactivities.asp, March 2010.

there is presently insufficient permitted disposal capacity within the existing system serving Los Angeles County. The Project, in combination with other development, could contribute to insufficient permitted disposal capacity by contributing additional solid waste to regional landfills. Development under the Project would also contribute construction debris to regional landfills, increasing the cumulative effect. Therefore, the Project's contribution to the cumulative impact would be considered cumulatively considerable, and would be a significant and unavoidable impact.

Level of Significance Before Mitigation: Significant.

Mitigation Measures: None feasible.

Level of Significance After Mitigation: Significant and unavoidable.

Threshold: **Comply with federal, state, and local statutes and regulations related to solid waste.**

Impact Analysis: As with the Project, related projects would be required to implement waste diversion programs in an effort to help the City meet its goal of reducing the amount of solid waste generated by 50 percent. In addition, related projects are also required to comply with applicable municipal codes. As a result, the cumulative impact of the Project and related projects regarding compliance with applicable state and local solid waste statutes and regulations is less than significant.

Level of Significance Before Mitigation: Less than significant**.**

Mitigation Measures: None are required.

Level of Significance After Mitigation: Less than significant.