4.15 Utilities and Services

4.15.1 Introduction

This section presents an overview of the utilities and services that provide wastewater, water use, solid waste, and energy services for the Project site, which is located within the LAX property. The potential impacts of the proposed Project on these utilities and services are evaluated based on the adequacy of existing and planned facilities and personnel to meet any additional demand generated by the proposed Project.

4.15.2 Environmental Setting

4.15.2.1 Regulatory Framework

The following subsections present the regulatory framework, or laws, ordinances, and regulations that the proposed Project would be required to comply with in order to gain approval.

4.15.2.1.1 Federal

Wastewater

Clean Water Act of 1972

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the Clean Water Act of 1972 to regulate municipal and industrial discharges to surface waters of the U.S. The discharge of wastewater to surface waters is prohibited unless an NPDES permit has been issued to allow that discharge. Each NPDES permit includes the following provisions: effluent and receiving water limits of allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, and self-monitoring activities; and other regulatory requirements.

Section 403 of the Clean Water Act (CWA) requires dischargers to comply with specific Ocean Discharge Criteria established to address impacts on marine resources, including fisheries and endangered species. Under the CWA's NPDES program, EPA regulates discharges of pollutants from municipal and industrial wastewater treatment plants, sewer collection systems, and stormwater discharges from industrial facilities and municipalities.

Water Use

Energy Policy Act of 1992

The Energy Policy Act of 1992 (EPAct 1992) amended the National Energy Conservation Policy Act (NECPA) and established energy management goals and programs. Section 152 of EPAct 1992 amended NECPA by adding water conservation and the use of renewable energy to the energy efficiency requirements outlined in Section 542 of the NECPA. Section 152 of EPAct 1992 also amends Section 546 of NECPA to establish the Federal Energy Efficiency Fund to provide grants to agencies for meeting the mandated energy efficiency and water conservation

requirements. EPAct 1992 also mandates low-flush toilets (1.6 gallons per flush) for residential and commercial buildings.

Solid Waste

There are no federal solid waste regulations applicable to the proposed Project.

Energy

Public Utility Regulatory Policies Act of 1978

The Public Utility Regulatory Act of 1978 (PURPA) (Public Law 95-617) was passed in response to the unstable energy climate of the late 1970s. PURPA sought to promote conservation of electric energy. Additionally, PURPA created a new class of nonutility generators, small power producers, from which, along with qualified co-generators, utilities are required to buy power.

PURPA is in part intended to augment electric utility generation with more efficiently produced electricity and to provide equitable ratings to electric consumers. Utility companies are required to buy all electricity from qualifying facilities (Qfs) at avoided cost. PURPA expanded participation of nonutility generators in the electricity market, and demonstrated that electricity from nonutility generators could successfully be integrated with a utility's own supply. PURPA requires utilities to buy power, usually cogeneration or renewable energy that is produced by Qfs.

Energy Policy Act of 2005

On August 8, 2005, President George W. Bush signed the National Energy Policy Act of 2005 into law. This comprehensive energy legislation contains several electricity related provisions that aim to:

- Help ensure that consumers receive electricity over a dependable, modern infrastructure;
- Remove outdated obstacles to investment in electricity transmission lines;
- Make electric reliability standards mandatory instead of optional; and
- Give federal officials the authority to site new power lines in US Department of Energy designated national corridors in certain circumstances.

Energy Policy Act of 1992

As mentioned above, EPAct 1992 established several energy management goals and programs and amended NECPA to improve overall energy efficiency in the Unites States. EPAct 1992 details measures to reduce dependency on imported energy, incentivize clean and renewable energy, and promote energy conservation in buildings.

4.15.2.1.2 State

Wastewater

State Water Resources Control Board (SWRCB)

The SWRCB is comprised of nine State Regional Water Quality Control Boards (RWQCBs). The RWQCB that oversees water quality issues for the City of Los Angeles is the Los Angeles Regional Water Quality Control Board (LARWQCB). Together with the nine State RWQCBs, the LARWQCB sets statewide and regional laws and regulations pertaining to water quality. In addition, the LARWQCB continuously maintains its Water Quality Control Plan. The Sanitation Districts of Los Angeles County (LACSD) and the proposed Project are expected to comply with all regulations of the LARWQCB.

California Code of Regulations (CCR), Title 24, Part 11

The California Code of Regulations, Title 24, Part 11, also known as the *2010 California Green Building Standards Code* or CALGreen Code, is a comprehensive and uniform regulatory code that requires all new buildings in California to utilize environmentally advanced construction practices to achieve major reductions in greenhouse gas emissions, energy consumption, and water use. The CALGreen Code requires non-residential buildings to reduce wastewater by at least 20 percent. The maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code is set as the baseline.

Waste Discharge Requirements (WDR) Program

The Waste Discharge Requirements (WDR) Program regulates point discharges that are not subject to the Title 27 of the CCR and the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (including sewage and wastewater) that meet the preconditions listed for each specific exemption.

Water Use

California Water Code Section 10910

Section 10910 of the California State Water Code provides regulations relevant to land use planning and water supply availability. Provisions relevant to land use planning and water supply availability were codified into Section 10910 of the Water Code by the California State Senate Bill (SB) 610. Passed in 2001 by the State Senate, SB 610 requires the identification of any public water system that may supply water for a proposed project that is subject to CEQA. In addition, a water supply assessment would be required under the following circumstances:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A mixed-use project that includes one or more of the projects specified in this subdivision;

- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; and/or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Also, if a project requires a water supply assessment and is not included in a recently adopted public water system's Urban Water Management Plan (UWMP), then it 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 will meet the projected water demand associated with the proposed Project in addition to the public water system's existing and planned future uses, including agriculture and manufacturing uses.

California Administrative Code (CAC)

Title 20, CAC, Section 1604. Title 20 of the CAC, Section 1604, enforces efficiency standards, such as maximum flow rates, for all new showerheads, lavatory faucets, and sinks faucets and prohibits the sale of fixtures that do not comply with the regulations.

Title 20, CAC, Section 1606(b). This section of the CAC prohibits the sale of fixtures that do not comply with regulations such as those discussed above (i.e. fixtures with flow rates exceeding maximum permissible flow).

Title 22, CAC. The California Department of Health Services (DHS) Reclaimed Water Unit has developed the water reclamation criteria commonly known as Title 22 of the CAC, which prescribes treatment requirements for reclaimed water to be used for non-potable purposes and establishes standards for distribution and use.

Title 24, CAC, Section 2-5307(b). Fixtures cannot be installed unless the manufacturer has certified compliance with flow rate standards.

Title 24, CAC, Section 2-5352(i) and (j). This section of the CAC discusses requirements for insulation of pipes to improve water usage prior to hot water reaching fixtures.

Title 20, CCR, Section 1605.1. This section of the CCR provides State mandates to conserve water by establishing efficiency standards that give the maximum flow rate of all new shower heads, lavatory, sink faucets, and tub spout diverters.

Title 24, CCR, Part 11. The CALGreen Code requires both residential and non-residential buildings to reduce the overall use of indoor potable water by at least 20 percent. The maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code is set as the baseline.

Senate Bill 901

SB 901 requires that the development of the Conservation Element of the General Plan include discussion of any water supply and demand information submitted by a water agency to a city or county. SB 901 also requires a city or county to reference any UWMPs submitted by a water agency upon the adoption or revision of its general plan. Additionally, projects requiring an environmental impact report must identify water systems that would provide water supplies for the project and provide an assessment regarding water supplies, which must be approved by a water agency.

Senate Bill 221

SB 221, a companion bill to SB 610, modifies the California Government Code, the Subdivision Map Act, and the Business and Professions Code to focus on the link between water supply and land use planning, particularly for new large projects in non-urban areas.

Health and Safety Code Section 17921.3

All new buildings are required to install water conservation water closets (i.e. low-flush toilets and urinals) as defined by American National Standards Institute Standard A112.19.2, and urinals and associated flushometer valves that use less than an average of 1.5 gallons per flush.

Urban Water Management Planning Act of 1983

The California Urban Water Management Planning Act (CWMPA) was enacted in 1983 by the California Legislature and codified into Sections 10610 to 10656 of the California Water Code. The CWMPA requires every municipal water supplier who serves more than 3,000 customers or provides more than 3,000 acre-feet per year (AF/yr) of water to prepare and adopt a UWMP. UWMPs are required to include estimates of past, current, and projected potable and recycled water use, identify conservation and reclamation measures currently in practice, describe alternative conservation measures, and provide an urban water shortage contingency plan. The legal requirements for these UWMPs were last updated in 2010, under the 2009 SB 7. This bill requires a 20 percent reduction in urban per capita water usage by December 31, 2020, with an interim reduction of ten percent by December 31, 2015.[1]

Solid Waste

California Integrated Waste Management Act of 1989

Solid waste regulation in California is governed by the California Integrated Waste Management Act of 1989, or more commonly known as Assembly Bill (AB) 939. AB 939, codified into the California Public Resources Code, emphasizes a reduction of waste disposed in California landfills. To achieve a reduction of waste in California landfills, AB 939 requires all city and county plans to include a waste diversion schedule with the goals of diverting 25 percent of solid waste from landfills in 1995 and diverting 50 percent of solid waste from landfills by the year 2000. In addition, AB 939, as amended, requires every county and city in the State to prepare a Source Reduction and Recycling Element (SRRE) which identifies programs that the county or city will implement to achieve the solid waste disposal reduction goals as stated. AB 939 also requires each city and county to prepare a Household Hazardous Waste Element (HHWE) and Nondisposal Facility Element (NDFE), and each county to prepare a Countywide Siting Element and Summary Plan. The Aggregate of all the SRREs, HHWEs, NDFEs, the Siting Element, and Summary Plan constitutes a Countywide Integrated Waste Management Plan.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires each development project to provide an adequate storage area for collection and removal of recyclable materials. "Development project" means any of the following:

[1] California Department of Water Resources, Senate Bill No. 7. 2009, online at http://www.water.ca.gov/urbanwatermanagement/docs/sbx7_7_2009.pdf, accessed January 16, 2013.

- A project for which a building permit will be required for a commercial, industrial, or institutional building, marina, or residential building having five or more living units, where solid waste is collected and loaded and any residential project where solid waste is collected and loaded in a location serving five or more units; and
- Any new public facility where solid waste is collected and loaded and any improvements for areas of a public facility used for collecting and loading solid waste.

The California Solid Waste Reuse and Recycling Access Act also requires each local agency to divert 50 to 75 percent of construction and demolition waste materials.

State Assembly Bill 2020

AB 2020 is also known as The Bottle Bill. The Bottle Bill assists in the diversion of solid waste from landfills by establishing a goal of recycling 80 percent of all covered aluminum, glass, plastic and other metal beverage containers. The Bottle Bill also requires a redemption center for beverage containers to be located within a half-mile of nearly every supermarket in the State.

CCR, Title 24, Part 11

The CALGreen Code requires both residential and non-residential buildings to reduce construction waste by at least 50 percent or meet a local construction and demolition waste management ordinance, whichever is more stringent. The reduction of construction waste is determined by calculating the amount of non-hazardous materials diverted by weight or volume.

Energy

CCR, Title 24, Part 6

The California Building Energy Efficiency standards are found in Part 6 of Title 24 of the CCR. Title 24 of the CCR comprises the State Building Standards Code and Part 6 of CCR Title 24 is the California Energy Code, which includes the building energy efficiency standards. These standards are a means for buildings to achieve energy efficiency. They include provisions applicable to all buildings, and describe requirements for documenting and certifying that a building meets the standards. In addition, the standards include mandatory requirements for space conditioning, water heating, and indoor and outdoor lighting systems and equipment in non-residential, high-rise residential, and hotel or motel buildings.[2]

CCR, Title 24, Part 11

The CALGreen Code requires the California Energy Commission to continue to adopt mandatory building standards for both residential and non-residential buildings. The California Energy Commission believes that a green building should achieve at least a 15 percent reduction in energy usage when compared to the State's mandatory energy efficiency standards.

[2] International Code Council, 2010 California Energy Code, Title 24, Part 6, 2010, online at http://publicecodes.citation.com/st/ca/st/b1900v10/index.htm, accessed January 16, 2013

4.15.2.1.3 Local

Wastewater

LACSD Wastewater Ordinance

Enacted in 1972, the Wastewater Ordinance provides for the maximum possible beneficial public use of the LACSD wastewater facilities through adequate regulation of sewer construction, sewer use, and industrial wastewater discharges. Section 406 of the ordinance requires persons discharging wastewater directly or indirectly into LACSD facilities to obtain a separate permit to discharge industrial wastewaters into the LACSD sewerage system. The ordinance also requires applicants to have sewer connection plans approved by the LACSD Chief Engineer and all required fees and charges paid prior to obtaining a permit from the LACSD.

LACSD Sewer Allocation Ordinance

City Ordinance No. 166,060 adopted in 1990 (also known as the Sewer Allocation Ordinance) established sewer permit allocation regulations for projects that discharge in the Hyperion Treatment System. The Sewer Allocation Ordinance establishes an annual sewage allotment of five million gallons per day (gpd), of which 34.5 percent (1,725,000 gpd) is allocated for priority projects, eight percent (400,000 gpd) for public benefit projects, and 57.5 percent (2,875,000 gpd) for non-priority projects (of which 65 percent of this allocation is for residential and 35 percent to non-residential projects).

Before the Los Angeles Department of Building and Safety formally accepts a set of plans and specifications for a project for plan check, the Los Angeles Department of Public Works (LADPW) must first determine if there is allotted sewer capacity available for such project. LADPW will not make such a determination until the Department of Building and Safety has determined that the proposed Project's plans and specifications are acceptable for plan check.

LACSD Connection Fee Program

The LACSD is authorized by the California Health and Safety Code Sections 5400 to 5474 to charge a fee for connecting to the LACSD's Sewerage System or increasing the quantity and concentration of wastewater attributable to a specific parcel or operation already connected. The fee is a capital facilities fee in an amount sufficient to construct an expansion of the Sewerage System, if needed, to accommodate the proposed project.

Hyperion Sanitary Sewer System: Sewer System Management Plan

In accordance with the Statewide General Waste Discharge Requirements adopted by the State Water Resources Control Board, this Sewer System Management Plan prepared for the Hyperion Sanitary Sewer System to provide a proper plan for managing, operating, and maintaining all parts of the sanitary sewer system and help to reduce, prevent, and mitigate any sanitary sewer overflows (SSOs). The policies within the Sewer System Management Plan address the overall goals of the City of Los Angeles for its sanitary sewer systems: repair, rehabilitate, or replace system components as needed; provide sufficient sewage capacity; eliminate all preventable dry-weather and wet-weather overflows; maintain an effective SSO

response plan; control corrosion and minimize odor release; and improve operational reliability and flexibility.[3]

City of Los Angeles Municipal Code Section 64.12

Section 64.12 of the Los Angeles Municipal Code (LAMC) requires applicants to obtain a permit from the City of Los Angeles' Board of Public Works prior to the construction, alteration, or repair of a sewage connection to the City of Los Angeles' sewer system. Sewer connection permit applicants must comply with all requirements set forth in Section 64.12 of the LAMC.

City of Los Angeles Municipal Code Section 64.15

Section 64.15 of the LAMC requires applicants to pay a fee to the City of Los Angeles' Board of Public Works for each permit issued under the provisions of Section 64.15 of the LAMC. In addition, an inspection fee must be paid prior to obtaining a permit for each linear foot of connection laid, re-laid, or exposed when an application is submitted for a permit to excavate or tunnel for the purpose of laying, relaying, or exposing sewer housing connection or storm drain connection pipe in any public street, place, or right-of-way.

Section 64.15 also requires that the City of Los Angeles perform a Sewer Capacity Availability Review (SCAR) when an applicant is seeking a permit to connect one or more properties to the City of Los Angeles' sewer collection system. The SCAR is an analysis of the existing sewer collection system to determine if there is adequate capacity existing in the sewer collection system to safely take in the newly generated sewage.

City of Los Angeles Municipal Code Sections 123-125

The City of Los Angeles Ordinance No. 163,532, which was adopted in 1988, amended Sections 123 to 125 of the LAMC to effectively address potential problems concerning the City of Los Angeles' ability to handle ever-increasing wastewater flow in the sewage system. Section 123 establishes a sewage flow reduction of ten percent within five years of the effective date of the ordinance.

City of Los Angeles General Plan Framework Element

The General Plan Framework Element is a strategy for long-term growth that sets a citywide context to guide the update of the community plan and citywide elements. The General Plan Framework Element establishes objectives and policies intended to provide adequate wastewater collection and treatment capacity for the City of Los Angeles and in basins tributary to City-owned wastewater treatment facilities. Objectives include monitoring and forecasting demand based upon actual and predicted growth, maintaining and upgrading the wastewater collection and treatment system to keep pace with projected growth, reducing system demand through recycling and reclamation, and ensuring provision of wastewater collection and treatment after a natural disaster or emergency.

[3] City of Los Angeles, Department of Public Works, Bureau of Sanitation. Hyperion Sanitary Sewer System: Sewer Management Plan, 2011.

Water Use

LADWP 2005 Urban Water Management Plan

The Los Angeles Department of Water and Power (LADWP) UWMP was prepared in accordance to the CWMPA. Language of the CWMPA can be found in the California Water Code Division 6, Part 2.6, Section 10610-10656. The CWMPA requires that urban water suppliers develop water management plans, every five years, to actively pursue efficient use of available supplies. In accordance to the CWMPA, the LADWP prepared an UWMP that includes (1) a description of the existing and planned sources of water available to suppliers, (2) conservation efforts to reduce water demand, (3) activities to develop alternative sources of water, (4) an assessment of reliability and vulnerability of water supply, and (5) a water shortage contingency analysis.

LADWP Water Shortage Contingency Plan

The Water Shortage Contingency Plan is contained in the 1995 LADWP UWMP and summarizes the effort by LADWP to continue to provide a sufficient supply of water to meet the health and safety needs of the City of Los Angeles in case of a water supply shortage condition.

City of Los Angeles Emergency Water Conservation Plan

Executive Order (EO) S-06-08, issued in 2008, encourages local water districts and agencies to reduce water consumption locally and regionally to prepare for potentially worsening drought conditions. Since the issuance of EO S-06-08, the City of Los Angeles and the LADWP has amended its Emergency Water Conservation Plan outlined within Chapter XII, Article I of the LAMC.

City of Los Angeles General Plan Framework Element

The Element establishes objectives and policies intended to provide adequate water supply, storage facilities, and delivery system to serve the needs of existing and future residents and businesses. Objectives include monitoring and forecasting water demand based upon actual and predicted growth, maintaining and expanding the City of Los Angeles' water resources, storage facilities, and water lines to accommodate project growth, ensuring that water supply, storage, and delivery systems are adequate to support planned development, and ensuring provision of water capacity, quality and delivery after a natural disaster or emergency.

City of Los Angeles Municipal Code Sections 123-125

The City of Los Angeles Ordinance No. 163,532 and 164,093, which were adopted in 1988, amended Sections 123 to 125 of the LAMC to require new buildings to utilize ultra-low flush toilets and urinals in order to obtain building permits. Ordinance No. 163, 532 also contains provisions requiring xeriphytic (low-water consumption) landscaping and other water conservation measures. Ordinance No. 163,532 was superseded by Ordinance No. 170,978, which was approved in 1996. Ordinance Nol. 170,978 is a comprehensive landscape ordinance that applies to all projects except single-family dwellings that create 2,000 square feet or more of non-permeable surface. The ordinance replaces the blanket requirement for xeriscape with Water Management. Although a xeriscape point system chart is still used, it has been slightly augmented by increased choices so that projects have to propose and document substantive water conserving features and techniques.

Los Angeles World Airports (LAWA) Sustainability Plan

LAWA's Sustainability Plan details LAWA's current sustainability practices and outlines the goals set and actions to be taken by LAWA to implement the initiatives set forth by the Mayor, the City Council and the Board of Airport Commissioners for LAX, LA/Ontario International Airport (LA/ONT), LA/Van Nuys Airport (LA/VNY), and Palmdale Regional Airport (PMD).

The Sustainability Plan sets forth five initiatives to increase the use of reclaimed water and decrease overall water use by ten percent per passenger and/or cargo tonnage:

- LAWA will work with affected agencies to extend the reclaimed water line to Manchester Blvd. for use at the Westchester Golf Course;
- LAWA will work with affected agencies to extend the reclaimed water line to Sepulveda/Imperial gateway and the Central Terminal Area;
- LAWA will install centralized controls to monitor and regulate irrigation at LA/ONT and LA/VNY; and
- LAWA will evaluate the feasibility of installing waterless urinals in LAWA buildings.

Solid Waste

Los Angeles County Solid Waste Management Action Plan

The Los Angeles County Solid Waste Management Action Plan (Action Plan) is a comprehensive solid waste management study and implementation program adopted by the County Board of Supervisors in April 1988 and by the County Sanitation Districts of Los Angeles Board of Directors as well as the City of Los Angeles Board of Public Works in May 1988. The Action Plan is an integrated regional approach to managing solid waste, incorporated source reduction, recycling, and composting programs along with public education awareness programs. Recognizing that landfills will remain an integral part of the County's solid waste management system for the foreseeable future, the Action Plan reaffirms the policy of managing solid waste in the County through a reasonable balance of public and private operations and facilities, including a regional public/private landfill system relying on competitive market forces rather than government action to regulate waste flow.

Los Angeles County Source Reduction and Recycling Element

In accordance with the California Integrated Waste Management Act of 1989 and the City of Los Angeles Solid Waste Management Policy Plan, the SRRE is the strategic action policy plan for diverting solid waste from landfills. The source reduction, recycling, composting, special waste, and public education goals are defined by specific programmatic elements including tasks, roles, responsibilities, and an implementation schedule. The SRRE provides a 10-year programmatic plan for solid waste diversion objectives between 1990 and 2000, in accordance with the requirement of AB 939. The SRRE is updated annually and is based on an ongoing evaluation of programs and waste analysis.

City of Los Angeles Solid Waste Integrated Resources Plan (SWIRP)

The SWIRP is a long-range master plan for solid waste management in the City of Los Angeles. The SWIRP proposes an approach for the City of Los Angeles to achieve a goal to divert 70 and 90 percent of solid waste from landfills by 2013 and 2025, respectively. The SWIRP targeted diversion rates would be implemented by enhancing the City of Los Angeles' existing solid

waste reduction and diversion policies, the implementation of new policies and programs, and the development of future solid waste facilities to meet the City of Los Angeles' recycling and solid waste infrastructure needs over a 20-year planning period.

City of Los Angeles Solid Waste Management Policy Plan (CiSWMPP)

The CiSWMPP is the long-range solid waste management policy plan for the City of Los Angeles. The objective of the CiSWMPP is to reduce at the source or recycle a minimum of 50 percent of the City of Los Angeles' waste by 2000 and 70 percent by the year 2020. The CiSWMPP provides direction for the solid waste management hierarchy and integrates into all facets of solid waste management planning ensuring that disposal practices do not conflict with diversion goals. It also serves as an umbrella document for the City of Los Angeles' SRRE as well as other citywide solid waste management planning activities.

City of Los Angeles Recovering Energy, Natural Resources, and Economic Benefit from Waste for Los Angeles Plan

The City of Los Angeles Recovering Energy, Natural Resources, and Economic Benefit from Waste for Los Angeles (RENEW LA) Plan is a 20-year plan. The primary goal of the RENEW LA Plan is to reduce, reuse, recycle or conserve resources that are currently being disposed to achieve an overall diversion rate of 90 percent by 2025. Establishing a system of Conversion Technology to process the remaining residual material still disposed of at landfills is key to the RENEW LA Plan and can achieve significant additional diversion through traditional recyclables, compost, fuels, chemicals, or energy.

City of Los Angeles General Plan Framework Element

The Element addresses many programs the City of Los Angeles has implemented to divert waste from disposal facilities including source reduction programs such as home composting, recycling programs such as Curbside Recycling Program, and composting programs that produce the City of Los Angeles' TopGro soil amendment. The Element suggests that in order for these programs to succeed, the City of Los Angeles should site businesses at appropriate locations within its borders that handle, process, and/or manufacture recyclable commodities to allow a full circle recycling system to develop.

Los Angeles Municipal Code Section 12.21 A.19

LAMC Section 12.21 A.19 requires adequate areas for the collection and loading of recyclable materials that would be diverted from landfills and also addresses source reduction, recycling, and composting activities. Relevant development projects that are subject to the provisions of Section 12.21 A.19 include:

- Commercial, industrial, or institutional buildings where solid waste generated by the facility is collected and loaded;
- A new public facility or an improvement to an existing public facility where solid waste generated by the facility is collected and loaded;
- A residential building having four or more living units where solid waste generated is collected and loaded; and
- Four or more residential units, including single-family detached homes, where solid waste generated by the units is collected and loaded and serves all four or more units.

Los Angeles Municipal Code Section 66.32

In accordance with AB 939, LAMC Section 66.32 assists the City of Los Angeles in meeting the diversion goal of 70 percent by year 2020. Section 66.32 requires the construction and demolition of solid waste be hauled by City-certified construction and demolition solid waste haulers whom would transport the construction and demolition solid waste to City-certifies construction and demolition solid waste processors. Compliance with Section 66.32 of the LAMC will ensure that at least 50 percent of solid waste generated by the construction and demolition associated with a development be diverted from landfills.

LAX Plan

Subsection 3.3.2 of the LAX Plan states that resource efficiency will be promoted through good airport design and sound operational practices. LAWA is required to enhance and expand LAX's current waste reduction programs to promote recycling at terminals and enhance recycling procurement practices.

LAWA Sustainability Plan

As part of its on-going efforts to meet Los Angeles' goal to be a zero waste city by 2030, LAWA has committed to divert 70 percent of waste from landfill disposal. The Sustainability Plan also outlines seven initiatives to surpass its 70 percent waste diversion target:

- LAWA will develop an off-site composting facility for food waste.
- LAWA will develop new programs to collect recyclables from passenger areas.
- LAWA will work with airlines to expand airline recycling program.
- LAWA will continue its development of a database inventory to track all material flows.
- LAWA will educate employees to decrease use of disposable beverage containers and utensils.
- LAWA will increase recycling of batteries, toner cartridges, computers, light bulbs and other electronic equipment.
- LAWA will increase and encourage use of electronic documents.

Energy

City of Los Angeles Municipal Code Chapter IX, Division 13

LAMC Chapter IX, Division 13 contains the building regulations that pertain to energy conservation. Division 13 requires that all buildings be designed to comply with the requirements of the California Energy Code.

The City of Los Angeles Green LA Plan

On May 15, 2007, Los Angeles Mayor Antonio Villaraigosa released the Green LA – An Action Plan to Lead the Nation in Fighting Global Warming (Green LA Plan) that has an overall goal of reducing the City of Los Angeles' greenhouse gas emissions to 35 percent below 1990 levels by 2030. This goal exceeds the targets set by both California and the Kyoto Protocol, and is the greatest reduction target of any large United States city. The cornerstone of the Green LA Plan is increasing the City of Los Angeles' use of renewable energy to 35 percent by 2020.

LAX Plan

Subsection 3.3.2 of the LAX Plan promotes energy efficiency by requiring LAWA to design and provide new facilities to meet or exceed energy prescriptive standards required under Title 24.

City of Los Angeles General Plan Framework Element

The Element establishes objectives and policies intended to provide a supply of electricity that is adequate to meet the needs of Los Angeles Department of Water and Power electric customers located within the City of Los Angeles. Objectives include monitoring and forecasting electricity power needs, ensuring that all electric power customers will receive a dependable supply of electricity at competitive rates, providing adequate power supply transmission and distribution facilities to accommodate projected growth, and provide electricity in a manner that demonstrates commitment to environmental principles, customers, and industry standards.

LAWA Sustainability Plan

The Sustainability Plan establishes seven initiatives to reduce energy usage and increase usage of green power at all Airport facilities and in all operations:

- LAWA will purchase green power from DWP.
- LAWA will install energy efficient light fixtures when changing burned out bulbs.
- LAWA will install new or increase efficiency of heating and cooling equipment.
- LAWA will purchase more energy efficient computer servers and consolidate existing servers.
- LAWA will install energy efficient variable speed motor loads during replacement.
- LAWA will replace older building-related process energy systems and equipment with energy efficient systems.
- LAWA will install Variable Fan Drives, where needed.

4.15.2.2 Existing Conditions

This subsection is divided into discussions of wastewater, water use, solid waste, and energy. The estimated existing wastewater generation, water usage, solid waste generation, and energy usage were calculated by multiplying the number of existing employees or square footage (depending on the type of use), which are presented in **Table 4.15-1**, by usage or generation factors supplied by various City of Los Angeles reports. This methodology, which is identical to the methodology used for calculating the impacts of the proposed Project, is further described in Section 4.15.3.1, Methodology.

The Project site is mostly vacant but contains an animal quarantine facility, a fire station, a golf course, a child development center, and airport support uses. These existing uses were utilized to estimate the existing wastewater generation, water usage, solid waste generation, and energy usage.

Table 4.15-1

Square Footage & Employment of Existing Uses

Existing Business/Institution	Land Use Type	Square Footage	Number of Employees
First Flight Child Development Center	Commercial	125,700	21
Jet Pets Animal Quarantine Facility	Commercial	17,521	11
Los Angeles Fire Station No. 5	Public Facility	23,750	37
Airport Support	Industrial	273,500	525
Westchester Golf Course	Open Space	6,199[a]	34
Total		440,471	628

Note:
[a] The square footage only represents the amount of development on the Westchester Golf Course; this was obtained by using the LA County Department of Regional Planning's interactive GIS web mapping applications
Source: Jet Pets, 2012; LAFD Fire Station 5, 2012; Westchester Golf Course, 2012; First Flight Child Development Center, 2012; LAWA, 2014.

4.15.2.2.1 Wastewater

The City of Los Angeles operates the largest wastewater collection system in the United States, which includes approximately 6,500 miles of major interceptors and mainline sewers, 55 pumping plants, and various other support facilities. The City of Los Angeles' wastewater service area consists of two distinct drainage basin areas: the Hyperion Service Area (HSA) and the Terminal Island Service Area. The HSA covers over 500 square miles and serves the majority of the City of Los Angeles, including the Project site. There are five wastewater facilities within the HSA:

- Hyperion Treatment Plant (HTP);
- Donald C. Tilman Water Reclamation Plant;
- Los Angeles-Glendale Water Reclamation Plant;
- Burbank Water Reclamation Plant; and
- Los Angeles Zoo Wastewater Treatment Facility.

LAX and the entire Project site is served by the HTP.[4]

Wastewater Conveyance

Wastewater is delivered to the HTP by gravity flow through five major sewer lines: Coastal Interceptor Sewer (CIS), North Outfall Sewer (NOS), North Central Outfall Sewer (NCOS), North

[4] City of Los Angeles, LAX Final Master Plan EIS/EIR, 2004, p. 4-1508.

Outfall Relief Sewer (NORS), and Central Outfall Sewer (COS). All the outfalls except the CIS are scheduled to receive wastewater discharges from LAX. The NCOS, NORS, and COS pass under LAX. However, only the NCOS and NORS pass under the Project site (**Figure 4.15-1**). **Table 4.15-2** presents capacities and flow information for these two outfalls. The design capacities in **Table 4.15-2** present the volume of flow the outfalls were originally designed to convey. Through use and age, the interiors of the pipelines have deteriorated and debris has accumulated, reducing the effective capacities of the outfalls. As presented in **Table 4.15-2**, the outfalls have surplus effective capacity available.

Table 4.15-2

Capacity and Flow of Sewer Lines Serving the Project Site

Outfall Sewer	Design Capacity	Effective Capacity Range	Average Daily Dry Weather Flow	Percent Effective Capacity Available
NORS	557 mgd	251-381 mgd	129 mgd	64%
NCOS	353 mgd	232-259 mgd	220 mgd	15%

Note:
mgd = million gallons per day
Source: City of Los Angeles, Department of Public Works, Bureau of Sanitation, Integrated Plan for Wastewater Program, Tools Memorandum, June 2000 and Integrated Resources Program, Facilities Plan, December 2006.

Wastewater Treatment

The HTP, which is on a 144-acre site, is located adjacent to LAX and southwest of the Project site. The HTP is the City of Los Angeles' oldest and largest wastewater treatment facility in the City of Los Angeles' service area and is designed to provide full secondary treatment[5]. The HTP has a design capacity of 450 million gallons per day (mgd). In 2010, the average flow at the HTP was approximately 362 mgd, leaving an excess capacity of approximately 88 mgd.[6]

Policy 9.2.3 in the Los Angeles General Plan Framework calls for wastewater treatment plant capacity to be developed as necessary.[7] The City of Los Angeles has developed its Integrated Resources Plan (IRP), which in light of regional growth, and the associated wastewater generation, anticipated to occur by 2020, identifies numerous means of, and options for, providing increased wastewater treatment capacity by 2020. Such options include, but are not limited to, planned expansions of existing treatment plants. The IRP proposes four alternatives for expanding the existing treatment plants within the HSA. All alternatives propose adding secondary clarifiers and digesters and Alternative 1 proposes expanding the HTP to increase its maximum month flow capacity, which would be 500 mgd.[8]

[5] Secondary treatment is the process of removing contaminants from wastewater and household sewage. This involves physical, chemical, and biological processes to remove contaminants.
[6] City of Los Angeles, Department of Public Works, Bureau of Sanitation website, online at http://san.lacity.org/wastewater/factsfigures.htm, accessed January 10, 2013.
[7] Envicom Corp., City of Los Angeles Citywide General Plan Framework, December 1996, p. 2.5-26
[8] City of Los Angeles, Department of Public Works, Bureau of Sanitation, Integrated Resources Plan, Section 10.3 p. 10-6, online at http://www.lacitysan.org/irp/facilitiesplan.htm, accessed January 16, 2013.

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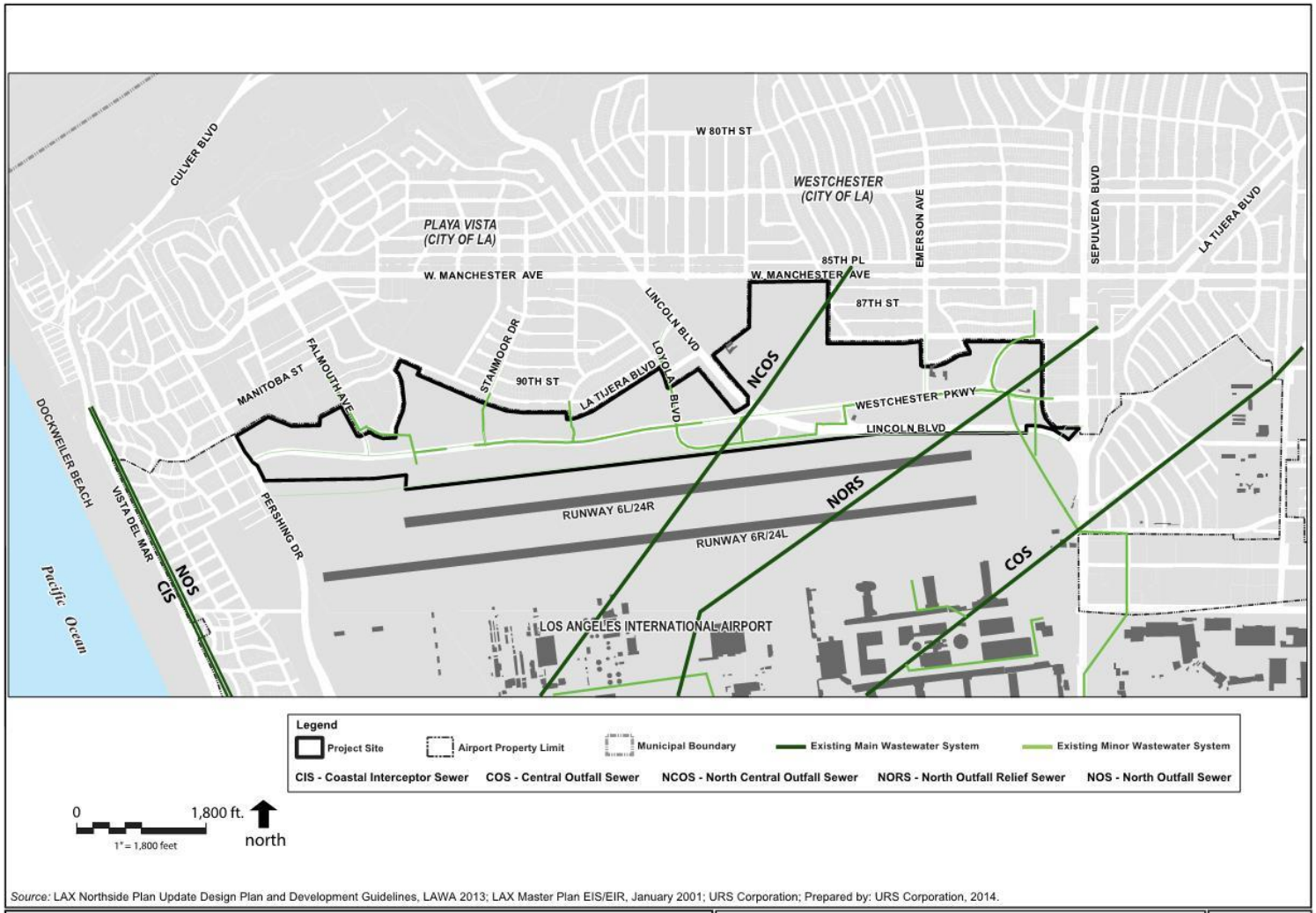

Source: LAX Northside Plan Update Design Plan and Development Guidelines, LAWA 2013; LAX Master Plan EIS/EIR, January 2001; URS Corporation; Prepared by: URS Corporation, 2014.

Existing Wastewater Infrastructure	Draft Environmental Impact Report LAX Northside Plan Update	FIGURE 4.15-1

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Baseline Wastewater Flows

To calculate baseline wastewater generation, usage-based factors were used, as described above. The current wastewater generation from existing uses within the Project site is 30,440 gallons per day (gpd), or 0.03 mgd. The estimated existing wastewater generation by land use within the Project site is presented in **Table 4.15-3**.

Table 4.15-3

Estimated Existing Wastewater Generation within the Project Site

Use Type	Quantity	Unit	Wastewater Generation Factor (gpd/unit)	Wastewater Generation
Commercial	32	Employee	30	960
Industrial	273,500	Square Feet	0.1	27,350
Open Space	34	Employee	30	1,020
Public Facilities	37	Employee	30	1,110
Total				30,440

Note:
gpd = gallons per day
Source: City of Los Angeles, Department of Public Works, Bureau of Engineering, 1992

4.15.2.2.2 Water Use

The water purveyor for the proposed Project is LADWP. The distribution system operated by LADWP has 114 tanks and reservoirs, as well as more than 7,200 miles of pipeline distribution.[9]

Water Supply

Water for the LADWP service area comes primarily from purchased Metropolitan Water District (MWD) imports, the Los Angeles Aqueducts (LAA), and local groundwater. In addition, recycled water is a smaller, but growing, source of water for LADWP. Water from LAA and MWD are considered imported and are obtained outside the LADWP service area.[10] The LAA obtains water via two aqueducts from the Owens Valley and from Mono Basin. MWD purchases water from the Colorado River Aqueduct and the State Water Project.[11] LAA water supplies 36 percent of LADWP water needs, and the MWD supplies 52 percent, meaning that the majority of

[9] City of Los Angeles, Department of Water and Power, Facts and Figures, 2012, online at https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-factandfigures?_adf.ctrl-state=14sylcby1p_21&_afrLoop=40285519008000, accessed January 16, 2013.
[10] City of Los Angeles, Department of Water and Power, Urban Water Management Plan, 2010, p. 3, online at https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=QOELLADWP005416&RevisionSelectionMethod=LatestReleased, accessed January 16, 2013.
[11] City of Los Angeles, LAX Master Plan Final EIS/EIR, 2004, p. 4-1491, online at http://www.ourlax.org/docs/final_eir/part1/38_042501_WaterUse.pdf, accessed January 16, 2013.

LADWP's water is imported. Local groundwater comprises 11 percent of the water supply, and recycled water provides one percent.[12]

The MWD provides wholesale water to customers in six different southern California counties. The IRP for MWD focuses on ensuring sufficient water resources in order to meet demand. The most recent update, in 2010, accommodates for new challenges such as several years of below-average precipitation for the Colorado River and significant reductions in State Water Project supplies due to regulatory cutbacks. The updated IRP plans for maintaining reliable water supplies, buffering for short-term changes, and securing additional resources for water if changes become permanent and significant.

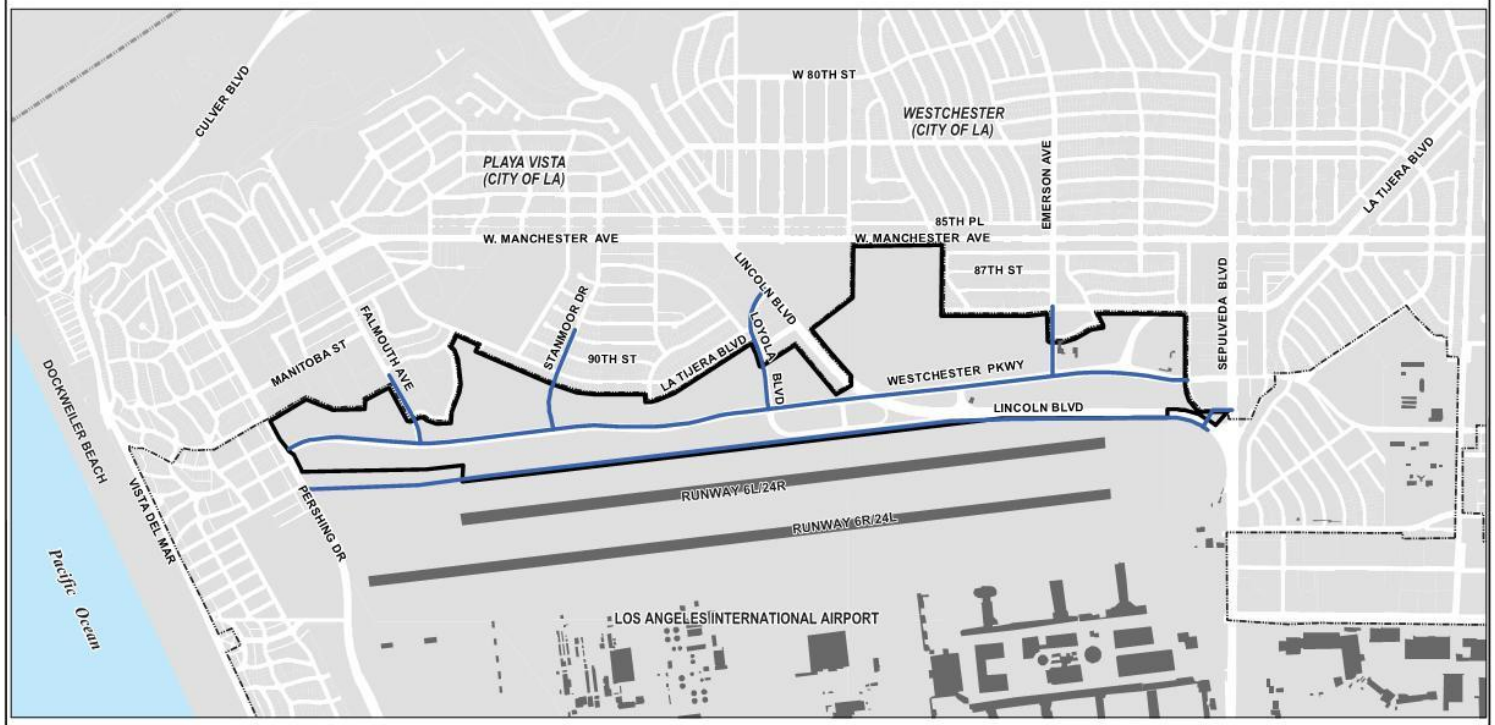
LADWP has a growing focus on increasing local water supply and is responsible for planning for locally-developed water supply sources to supplement the regional supplies that are ensured by the IRP. Because of environmental and other factors, the LAA water supply, while still a significant portion of LADWP's water sourcing, has been continually reduced, resulting in increased dependence on imported MWD water.

Groundwater has provided nearly 30 percent of the water needed by the City of Los Angeles in drought years, but is endangered by contamination issues which reduce its reliability as a water source. Groundwater levels have also decreased due to increased impervious surfaces and reduced natural infiltration. Reclaimed water in the LAX area is provided by the West Basin Municipal Water District's West Basin Water Reclamation Plant (WBWRP). The WBWRP is a tertiary treatment plant and has a capacity of 62 mgd.[13]

Water Infrastructure

LADWP has divided its service area into four major planning regions (Metro-South, North San Fernando Valley, South San Fernando Valley, and Westside), with these areas divided into 11 different planning subregions. The 11 planning subregions are divided into 36 pressure zones with close to 700,000 connections. Each pressure zone is numbered based on its governing hydraulic grade; the numbering system is established such that water pressure at any place in the City of Los Angeles can be determined by subtracting the elevation of the site from the pressure zone number. LAX is located within the 325 pressure zone of the Westside planning region. As indicated above, the 325 pressure zone in the DWP system serves the LAX area. LAX is served by a 36-inch trunk line in Sepulveda Boulevard that distributes water to a combination of 12-inch and 16-inch transmission lines running along the airport perimeter. LAX receives water via three connections from transmission lines from the 325-pressure zone. A 10-inch connection from a 16-inch connection in Westchester Parkway serves the Project site.[14] The water distribution lines serving the Project site, as well as other LADWP lines in the vicinity, are shown below (**Figure 4.15-2**).

[12] City of Los Angeles, Department of Water and Power, Facts and Figures, 2012, online at https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-factandfigures?_adf.ctrl-state=14sylcby1p_21&_afrLoop=40285519008000, accessed January 16, 2013.
[13] City of Los Angeles, LAX Final Master Plan EIS/EIR, 2004, p. 4-1492, online at http://www.ourlax.org/docs/final_eir/part1/38_042501_WaterUse.pdf, accessed January 16, 2013
[14] Ibid.



Source: LAX Northside Plan Update Design Plan and Development Guidelines, LAWA 2013; LAX Master Plan EIS/EIR, January 2001; URS Corporation; Prepared by: URS Corporation, 2014.

Existing Water Infrastructure	Draft Environmental Impact Report LAX Northside Plan Update	FIGURE 4.15-2

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Reclaimed water pipelines on the north and south side of Westchester Parkway provide service to the Project site. Four miles of distribution trunk line have been constructed to provide up to 700 acre-feet per year (AFY) to the LAX and Westchester area. Up to 1,850 AFY will be delivered through future expansions. LAX uses reclaimed water from the WBWRP for landscape irrigation.

Baseline Water Usage

After incorporating water savings from passive and active water conservation, the City of Los Angeles used 545,355 acre-feet (AF) of water in the year 2010. Water use is projected to continually grow, with 2020 projected water demand at 622,733 AF and demand peaking in 2030 at 643,786 AF, assuming that the City of Los Angeles continues to implement passive and active water conservation.[15]

To calculate baseline water use, usage-based factors were evaluated, as described above. Based on these factors, baseline water use within the Project site is approximately 77,952 gpd, or 0.08 mgd. The estimated existing water usage within the Project site by land use is presented in **Table 4.15-4**.

Table 4.15-4

Estimated Existing Water Usage within the Project Site

Use Type	Quantity	Unit	Water Usage Factor (gpd/unit)	Water Usage (gpd)
Commercial	32	Employee	84	2,688
Industrial	525	Employee	132	69,300
Open Space	34	Employee	84	2,856
Public Facilities	37	Employee	84	3,108
Total				77,952

Note:
gpd = gallons per day
Source: LADWP, 2010

4.15.2.2.3 Solid Waste

City of Los Angeles solid waste disposal and recycling services are provided by the City Bureau of Sanitation and a number of private companies. The City of Los Angeles Bureau of Sanitation provides collection, transfer, disposal, and recycling services for residential uses. Private waste haulers, which must obtain a waste hauling permit from the City of Los Angeles, provide services for all nonresidential uses.

[15] City of Los Angeles, Department of Water and Power, Urban Water Management Plan, 2010, p. 10, online at https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water?_adf.ctrl-state=1bmcxk7bal_4&_afrLoop=274703006926000, accessed January 16, 2013.

Regional Solid Waste Capacity

There are 13 major landfills currently accepting municipal solid waste in Los Angeles County. Most of these facilities are restricted from receiving waste from outside of a specified wasteshed. In addition, several landfills in Riverside, San Bernardino, and Orange counties receive waste from the City of Los Angeles. Only a small portion of the City of Los Angeles-generated waste is disposed of in landfills outside of the County of Los Angeles. Currently, the cost of hauling material to facilities outside the County of Los Angeles limits the volume of waste disposed of at these facilities. Landfills that are available to accept solid waste generated from the County of Los Angeles are presented in **Table 4.15-5**. These landfills accept a maximum of approximately 44,589 tons of solid waste each day. As of 2010, the landfills that serve the County of Los Angeles have a remaining capacity for approximately 2.21 billion tons of solid waste.

Of the Los Angeles County solid waste facilities, those that accept waste from the City of Los Angeles and would serve the proposed Project are the Calabasas Landfill, Chiquita Canyon Landfill, and Sunshine Canyon Landfill. As of 2010, these landfills have a remaining capacity of approximately 93.07 million tons of solid waste.

The City of Los Angeles generates 9.58 million tons of solid waste per year. However, the City is subject to AB 939, and, therefore, has been required to divert 25 and 50 percent of the solid waste stream from landfills by 1995 and 2000, respectively. The City of Los Angeles joined the Los Angeles Integrated Waste Management Authority to receive assistance in meeting and exceeding the mandated 50 percent diversion rate. The City of Los Angeles reported a diversion rate of 59.7 percent to the California Department of Resource Recycling and Recovery in 2006.[16] The City of Los Angeles diverted 5.72 million tons of solid waste and disposed 3.86 million tons of solid waste in 2000.

Solid Waste Collection

As mentioned above, a number of City-permitted private waste haulers are responsible for solid waste collection at all nonresidential uses within the City of Los Angeles. The Project site is served by a City-permitted private waste hauler, the Consolidated Disposal Service.

[16] City of Los Angeles, Department of Public Works, Bureau of Sanitation, City of Los Angeles Solid Waste Planning Background Studies Summary Report, p. 12, online at http://san.lacity.org/solid_resources/pdfs/rfp-swirp-appendix-b3.pdf, accessed January 16, 2013.

Table 4.15-5

Los Angeles County Municipal Solid Waste Disposal Facilities, Locations, and Capacity

Facility Name	Location	Permitted Capacity (tons/day)	Remaining Capacity (Million Tons)[a]
Puente Hills Landfill	13130 Crossroads Parkway South, Industry, CA 91746	13,200	12.516
Sunshine Canyon City/ County Landfill	14747 San Fernando Road, Sylmar, CA 91342	12,100	80.805
Chiquita Canyon Landfill	29201 Henry Mayo Drive, Castaic, CA 91384	5,000	6.233
Calabasas Landfill	5300 Lost Hills Road, Agoura, CA 91301	3,500	6.031[b]
Scholl Canyon Landfill	3001 Scholl Canyon Road, Glendale, CA 91206	3,400	4.104
Southeast Resource Recovery Facility	120 Pier S Avenue, Long Beach, CA 90802	2,240	1602
Antelope Valley Recycling and Disposal Facility	1200 West City Ranch Road, Palmdale, CA 93551	1,800	20.4CY[c]
Lancaster Landfill	600 East Avenue F, Lancaster, CA 93535	1,700	0.886
Commerce Refuse-to-Energy Facility	5926 Sheila Street, Commerce, CA 90040	1,000	467
Savage Canyon Landfill	13919 East Penn Street, Whittier, CA 90602	350	3.788
City of Burbank Landfill #3	3000 North Bel Aire Drive, Burbank, CA 91504	240	3.1[b]
Pebbly Beach Landfill	1 Dump Road, Avalon, CA 90704	49	0.058
San Clemente Landfill	San Clemente Island, San Clemente Island, CA 92674	10	0.039
Total		44,589	2,206.96

Notes:
[a] As of December 2010.
[b] As of December 2009.
[C] As of June 2011.
CY = cubic yards
Source: County of Los Angeles, Department of Public Works, 2012.

Baseline Solid Waste Generation at the Project Site

Solid waste is generated at LAX by numerous on-airport uses, including passengers, visitors, LAWA uses, and tenant activities. The greatest variety of solid waste is generated by tenant activities, which include airlines, cargo handlers, caterers, flight service operators, concessionaires, and service and aviation-related support businesses. To comply with AB 939, LAWA's Construction & Maintenance, Recycling Division has implemented a recycling program to achieve a 70 percent waste reduction goal by 2020. Solid waste is generated at the Project site by the Westchester Golf Course, Los Angeles Fire Station Number 5, Jet Pets Animal Quarantine Facility, and First Flight Child Development Center.

To calculate baseline solid waste generation, usage-based factors were used, as described above. Based on these factors, baseline solid waste generation within the Project site is approximately 3,956 pounds per day. The estimated existing solid waste generation within the Project site by land use is presented in **Table 4.15-6**.

Table 4.15-6

Estimated Existing Solid Waste Generation within the Project Site

Use Type	Quantity	Unit	Solid Waste Generation Rate (pounds/unit)	Solid Waste Generation (pounds/day)
Commercial	32	Employee	6.3	202
Industrial	525	Employee	6.3	3,307
Open Space	34	Employee	6.3	214
Public Facilities	37	Employee	6.3	233
Total				3,956

Source: City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2006.

4.15.2.2.4 Energy

Electricity

Electricity Supply

Electric power within the City of Los Angeles, including the Project site, is supplied by LADWP. As of 2010, the largest single source of power supply for LADWP is coal, which provides 39 percent of the City of Los Angeles' energy. Oil and natural gas provide about 22 percent of the City of Los Angeles' energy; hydroelectricity accounts for about three percent; nuclear, 11 percent; and the remainder (25 percent) comes from purchased power.[17] The sources of coal-fired power production are three coal-fired power plants located outside California, in which LADWP owns an equity interest. The greatest amount of coal-fired power is received from the

[17] City of Los Angeles, Department of Water and Power, Facts and Figures, online at https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-factandfigures?_adf.ctrl-state=11pdf0umw1_21&_afrLoop=452562464025000, accessed January 16, 2013.

Intermountain Generating Station near Delta, Utah. About one-fifth of LADWP's power production is received from the Mohave Power Plant in southern Nevada and the Navajo Power Project near Page, Arizona. Of the four power plants producing energy from oil and natural gas located within the Los Angeles Basin, the largest is the Haynes Generating Station in Long Beach.[18] The other plants are the Valley, Harbor, and Scattergood generating stations.

The two primary hydroelectric power plants serving the City of Los Angeles are Hoover Dam, on the Colorado River, and Castaic Power Plant, on the California State Aqueduct, about 22 miles north of the City of Los Angeles. In addition, hydroelectric power is derived from several smaller LAA stations, as well as purchased from other producers, mainly the Columbia River Power System. Nuclear power has been a source of electricity for the City since 1986, from the Palo Verde Nuclear Generating Station near Phoenix.

According to the California Energy Commission, in 2010, LADWP customers consumed 25,240 gigawatt-hours (GWh) (a gigawatt-hour is equal to 1,000 megawatt-hours [MWh]).[19] To accommodate future needs, LADWP prepares 10-year and 20-year plans. The 10-year plan, updated annually, forecasts demand, distribution, and transmission needs to maintain system integrity. The 20-year plan, also updated annually, forecasts resource needs based on demand projections. The power system is designed to accommodate the maximum peak load of the City of Los Angeles, which far exceeds the needs of any one project. In addition, the Electrical Infrastructure Systems Element of the City of Los Angeles' General Plan indicates where major transmission facilities are anticipated. The California Energy Commission projects that annual electricity demand within the LADWP service area in 2022 will be 28,333 GWh (mid-level projection).[20]

Electricity Distribution Infrastructure

LADWP has 21 receiving stations, designed to handle large quantities of bulk power from the major transmission lines connected to the power generating plants in California and neighboring states. The receiving stations lower the voltage of electricity to subtransmission levels, sending the power on to 120 distributing stations in the City of Los Angeles.[21] The distributing stations either serve a large manufacturing or commercial center directly or, as in most cases, they each supply a five- to ten-square mile area for residential and business consumers. The distribution stations reduce the voltage from 34,500 to 4,800 volts for efficient distribution of electricity to local transformers. The local distribution system consists of 6,100 miles of overhead pole-lines and 2,200 miles of underground cable.[22]

The Project site is located in LADWP's Receiving Station N (RS-N) service area. RS-N is served by four, 138-kilovolt (kV) underground transmission lines: two from the Fairfax Receiving Station to the north, and two from the Scattergood Generating Station to the south. From RS-N, power is stepped down to 34.5 kV and distributed to six Distributing Stations in the airport area. In addition to these facilities, there are 12 customer stations, also referred to as Industrial Stations,

[18] City of Los Angeles, Village at Playa Vista Draft EIR, 2003, p. 1054, online at http://cityplanning.lacity.org/EIR/PlayaVista/PlayaVistaDEIR/DISK1/text/Book_3/Book3.pdf, accessed January 16, 2013.
[19] City of Los Angeles, Department of Water and Power, Facts and Figures, online at https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-factandfigures?_adf.ctrl-state=11pdf0umw1_21&_afrLoop=452562464025000, accessed January 16, 2013.
[20] California Energy Commission, California Energy Demand 2012-2022 Final Forecast, Volume 2: Electricity Demand by Utility Planning Area, June 2012.
[21] City of Los Angeles, Village at Playa Vista Final EIR, 2003, p. 1055, online at http://cityplanning.lacity.org/EIR/PlayaVista/PlayaVistaDEIR/DISK1/text/Book_3/Book3.pdf, accessed January 16, 2013.
[22] Ibid.

which serve the Project site. A customer station is similar to a distribution station with circuit switching and a transformer and is fed by 34.5 kV lines.[23] Existing electrical distribution facilities in the Project site are shown in below (**Figure 4.15-3**).

Baseline Electricity Usage

To calculate baseline electricity consumption, usage-based factors were used, as described above. Based on these factors, baseline electricity consumption within the Project site is approximately 6,846,571 kilowatt hours per year (kWh/year), or 6.85 GWh/year. The estimated existing electricity usage from existing uses within the Project site is presented in **Table 4.15-7**.

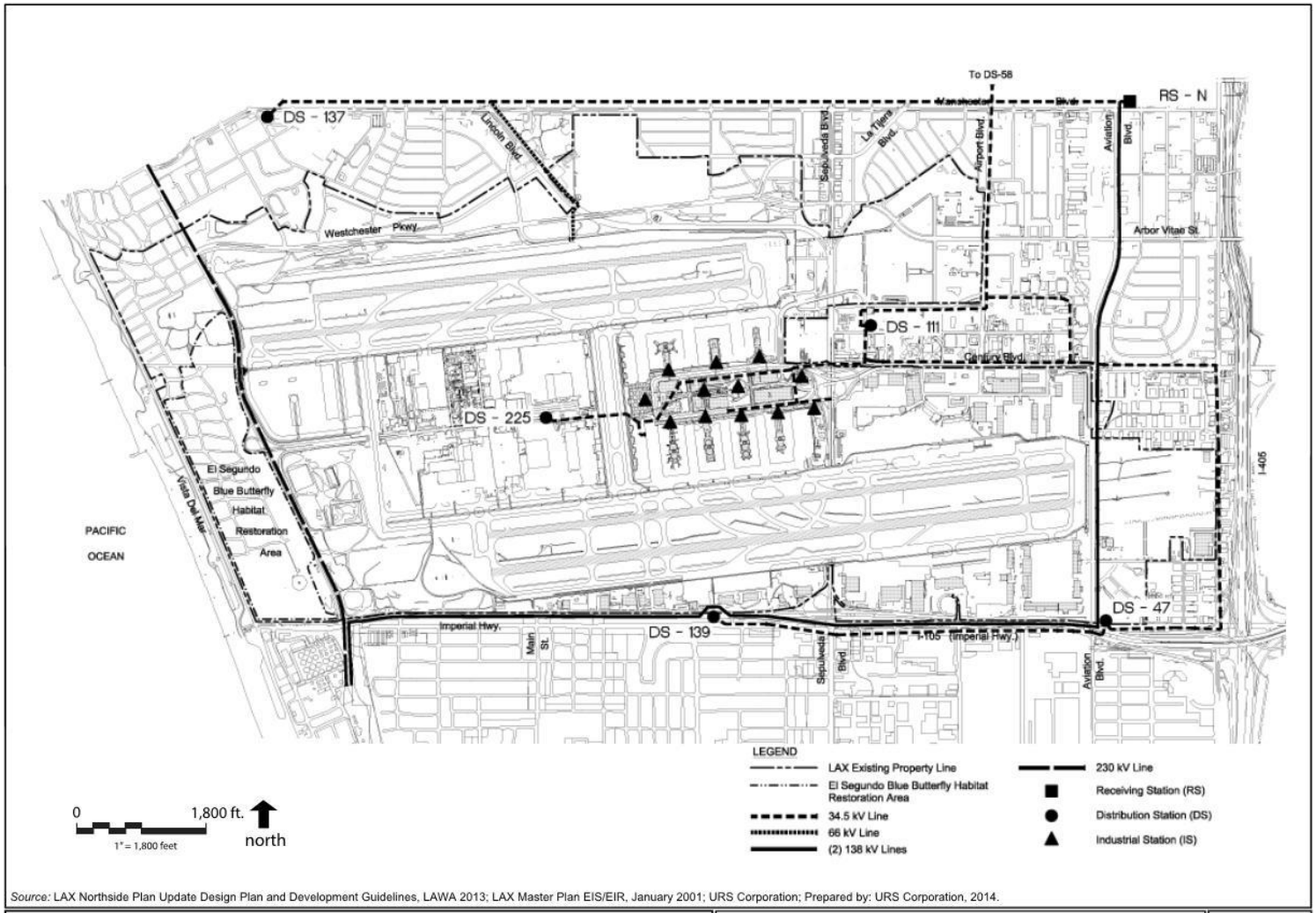
Table 4.15-7

Estimated Existing Electricity Usage within the Project Site

Use Type	Quantity	Unit	Electricity Usage Rate (kWh/year)	Electricity Usage Generation (kWh/year)
Commercial	143,221	Square Feet	14.63	2,095,323
Industrial	273,500	Square Feet	15.77	4,313,095
Open Space	6,199	Square Feet	14.63	90,691
Public Facilities	23,750	Square Feet	14.63	347,462
Total				6,846,571

Note:
kWh = kilowatt hours
[a] The square footage only represents the amount of development on the Westchester Golf Course; this was obtained by using the LA County Department of Regional Planning's interactive GIS web mapping applications
Source: City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2006.

[23] City of Los Angeles, LAX Master Plan Final EIS/EIR, Energy Technical Report, p. 4-1044, 2004.



Source: LAX Northside Plan Update Design Plan and Development Guidelines, LAWA 2013; LAX Master Plan EIS/EIR, January 2001; URS Corporation; Prepared by: URS Corporation, 2014.

Existing Electrical Power Lines and Distribution Facilities	Draft Environmental Impact Report LAX Northside Plan Update	FIGURE 4.15-3

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Natural Gas

Natural Gas Supply

Southern California Gas Company (SCGC) provides natural gas service to much of Southern California, including the Los Angeles Metropolitan area. SCGC obtains the majority of its natural gas from out-of-state sources. SCGC's sources include interstate suppliers, natural gas transportation companies, California producers, and offshore supplies.[24] During 2010, SCGC customers consumed approximately 962.87 billion cubic feet of natural gas.[25] Projected annual demand for natural gas within the SCGC service area in 2020 will be approximately 948.64 billion cubic feet.[26]

Natural Gas Distribution Infrastructure

Natural gas is transported from suppliers to SCGC transmission facilities for distribution to their Southern California service areas by a network of high pressure transmission lines. Included in the transmission facilities are five underground storage fields in Southern California. The storage fields act as reservoirs to hold natural gas, and are used to supplement in-line gas storage, primarily to meet peak demands during the winter season. From the transmission facilities, natural gas is distributed on a local level to customers through an extensive pipeline network of underground gas mains. Natural gas is supplied to LAX by several natural gas distribution lines. Service to individual tenants is provided through connections to these distribution lines. Existing natural gas distribution facilities in the Project site are shown below (**Figure 4.15-4**).

[24] City of Los Angeles, LAX Master Plan EIS/EIR 8. Energy Supply Technical Report, 2001, p. 14, online at http://www.ourlax.org/docs/draft_eir_NE/T08_LR.pdf, accessed January 14, 2013.
[25] California Gas and Electric Utilities, California Gas Report, 2010.
[26] Ibid.

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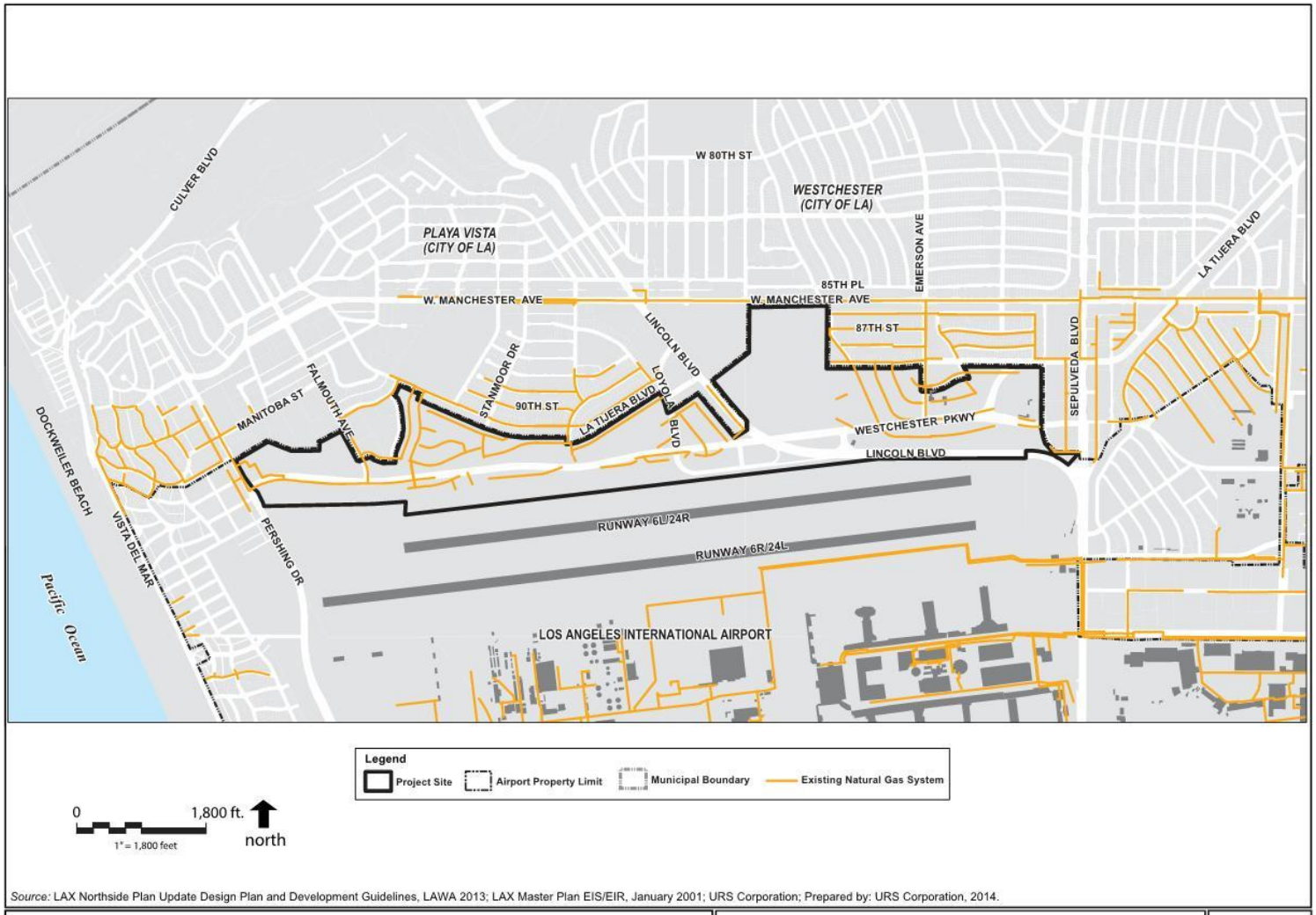

Source: LAX Northside Plan Update Design Plan and Development Guidelines, LAWA 2013; LAX Master Plan EIS/EIR, January 2001; URS Corporation; Prepared by: URS Corporation, 2014.

Existing Natural Gas Distribution Facilities	Draft Environmental Impact Report LAX Northside Plan Update	FIGURE 4.15-4

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Baseline Natural Gas Usage

To calculate baseline natural gas consumption, usage-based factors were used, as described above. Based on these factors, baseline natural gas consumption within the Project site is 2,229,400 cubic feet per month, or 26.75 million cubic feet per year. The estimated existing natural gas usage from existing uses within the Project site is presented in **Table 4.15-8**.

Table 4.15-8

Estimated Existing Natural Gas Usage within the Project Site

Use Type	Quantity	Unit	Natural Gas Usage Rate (cubic feet/month)	Natural Gas Usage Generation (cubic feet/month)
Commercial	32	Employee	3,550	113,600
Industrial	525	Employee	3,550	1,863,750
Open Space	34	Employee	3,550	120,700
Public Facilities	37	Employee	3,550	131,350
Total				2,229,400

Source: City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2006.

4.15.3 Impact Analysis

4.15.3.1 Methodology

Relevant state and local plans and the significance thresholds specified within the Los Angeles CEQA Thresholds Guide were used to conduct the impact analysis of the proposed Project impacts on wastewater, water use, solid waste, and energy. Projected impacts were measured against the existing conditions of the Project site and significance thresholds to determine the level of significance of each impact.

Projected wastewater, water use, solid waste, and energy impacts are based on the employment generated by, and square footage of, development within the proposed Project, which are presented in **Table 4.15-9**. The employment generated by each type of land use within the proposed Project is calculated by taking the total square footage of development proposed and applying the appropriate employment density factor (square foot per employee) for that particular type of land use. Employment densities for the Project site were taken from the Southern California Association of Governments' (SCAG) Employment Density Study Summary Report. For the purpose of calculating utility consumption, office, research and development employees are calculated using SCAG's low-rise office and R&D/flex space generation rates, as well as project-specific estimates for higher education students. Mixed use-commercial employees are calculated using SCAG's other retail/services generation rate. Community and civic and open space and recreation employees are calculated using SCAG's government offices generation rate. Airport support employees are calculated based on LAWA estimates for net new employees.

Table 4.15-9

Proposed Project Development & Employee Generation

Employment	Proposed Square Footage	Total Employee and Student Population
Office, Research and Development	1,275,000	5,484[a]
Mixed Use- Commercial	220,000	640
Community and Civic	215,000	824
Open Space and Recreation	10,000	38
Airport Support	600,000	125[b]
Total	2,320,000	7,111

Notes:
[a] Includes higher educational use student population and employees.
[b] Reflects net new LAWA employees.
Source: LAWA, 2012; Otis College, 2012; URS, 2014.

4.15.3.1.1 Wastewater

Wastewater generation estimates were developed for long-term operational use based on land use generation factors developed by the City of Los Angeles Bureau of Engineering in its Sewer Design Manual, Part F 200: Projection of Flows and Hydraulics of Sewers. The wastewater generation factors were then applied to the square footage of, or number of employees generated by, each land use type to estimate the wastewater generation of the proposed Project. This figure is then compared against existing conditions to determine the impacts of the proposed Project.

4.15.3.1.2 Water Use

Water use estimates were developed for long-term operational use based on land use generation factors developed by the LADWP in its 2010 UWMP. The water use generation factors were then applied to the number of employees generated by each land use type to estimate the water use of the proposed Project. This figure is then compared against existing conditions to determine the impacts of the proposed Project.

4.15.3.1.3 Solid Waste

Solid waste generation estimates were developed for long-term operational use based on land use generation factors developed by the City of Los Angeles Bureau of Sanitation in its City of Los Angeles Solid Waste Planning Background Studies Summary Report. The solid waste generation factors were then applied to the number of employees generated by each land use type to estimate the solid waste generation of the proposed Project. This figure is then compared against existing conditions to determine the impacts of the proposed Project.

4.15.3.1.4 Energy

The estimated energy use of the proposed Project was calculated by adding the estimated electricity use and natural gas use of the proposed Project. Electricity use estimates were developed for long-term operational use based on land use generation factors developed by the California Energy Commission in its California Energy Demand 2010-2020 Adopted Forecast. The electricity use generation factors were then applied to the square footage of each land use type to estimate the electricity use of the proposed Project. Natural gas use generation factors were developed for long-term operation use by dividing the total gas consumption for non-residential uses in the County of Los Angeles by the total employment in the County of Los Angeles, which provides a usage rate per employee. The natural gas use generation factors were then applied to the square footage of, or number of employees generated by, each land use type to estimate the natural gas use of the proposed Project. These figures are then compared against existing conditions to determine the impacts of the proposed Project.

4.15.3.2 Significance Thresholds

The Los Angeles CEQA Thresholds Guide identifies 12 factors to be used for determining the significance of a project's impact on utilities and services. Two thresholds are related to wastewater, four thresholds are related to water use, three thresholds are related to solid waste, and three thresholds are related to energy.

4.15.3.2.1 Wastewater

A significant operational wastewater impact would occur if the direct and indirect changes in the environment that may be caused by the proposed Project would potentially result in one or more of the following future conditions:

- The project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; and/or
- The project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or the City of Los Angeles' General Plan and its elements.

4.15.3.2.2 Water Use

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The total estimated water demand for the project;
- Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;
- The amount by which the project would cause the projected growth in population, housing, or cause employment for the surrounding communities to be exceeded in the year of the project completion; and
- The degree to which scheduled water infrastructure improvements or Project Design Features would reduce or offset service impacts.

4.15.3.2.3 Solid Waste

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Amount of projected waste generation, diversion, and disposal during demolition, construction, and operation of the project, considering proposed design and operational features that could reduce typical waste generation rates;
- Need for an additional solid waste collection route, or recycling or disposal facility to adequately handle project-generated waste; and
- Whether the project conflicts with solid waste policies and objectives in the SRRE or its updates, CiSWMPP, Framework Element, or the Curbside Recycling Program, including consideration of the land use-specific waste diversion goals contained in Volume 4 of the SRRE.

4.15.3.2.4 Energy

The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure, or capacity enhancing alterations to existing facilities;
- Whether and when the needed infrastructure was anticipated by adopted plans; and
- The degree to which the project design and/or operations incorporate energy conservation measures, particularly those that go beyond City requirements.

4.15.3.3 LAX Master Plan Commitments and Project Design Features

LAX Master Plan EIS/EIR Commitments

As part of the LAX Master Plan, LAWA adopted commitments pertaining to wastewater, water use, solid waste, and energy use to avoid or reduce environmental impacts. Since the Project site is located within the LAX Master Plan boundaries, LAWA will also fulfill the commitments it has made in the LAX Master Plan for the proposed Project. The following commitments are applicable to the proposed Project and were considered in the utilities/services analysis herein.

- **Energy (E)-1: Energy Conservation and Efficiency Program:** LAWA will seek to continually improve the energy efficiency of building design and layouts during the implementation of the LAX Master Plan. Title 24, Part 6, Article 2 of the California Administrative Code establishes maximum energy consumption levels for heating and cooling of new buildings to assure that energy conservation is incorporated into the design of new buildings. LAWA will design new facilities to meet or exceed the prescriptive standards required under Title 24. Some of the energy conservation measures that LAWA may incorporate into the design of new buildings and airports facilities may include the use of energy-efficient building materials, energy-saving lighting systems, energy-efficient air-conditioning systems, energy-efficient water-heating systems, and designed-in access for alternative means of surface transportation, including the Green Line and the APM. These

energy conservation measures may be further improved upon as energy-saving design approaches and technologies develop.

- **E-2: Coordination with Utility Providers:** LAWA will implement Master Plan activities in coordination with local utility providers. Utility providers will provide input on the layout of utilities at LAX to assure that LAX and the surrounding region receive both safe and uninterrupted service. When service by existing utility lines could be affected by airport design features, LAWA will work with the utility to identify alternative means of providing equivalent or superior post-construction utility service.
- **Public Utilities (PU)-1: Develop a Utility Relocation Program:** LAWA will develop and implement a utilities relocation program to minimize interference with existing utilities associated with LAX Master Plan facility construction. Prior to initiating construction of a Master Plan component, LAWA will prepare a construction evaluation to determine if the proposed construction will interfere with existing utility location or operation. LAWA will determine utility relocation needs and, for sites on LAX property, LAWA will develop a plan for relocating existing utilities as necessary before, during, and after construction of LAX Master Plan features. LAWA will implement the utility relocation program during construction of LAX Master Plan improvements.
- **Solid Waste (SW)-1: Implement an Enhanced Recycling Program:** LAWA will enhance their existing recycling program, based on successful programs at other airports and similar facilities. Features of the enhanced recycling program will include: expansion of the existing terminal recycling program to all terminals, including new terminals; development of a recycling program at LAX Northside/Westchester Southside; lease provisions requiring that tenants meet specified diversion goals; and preference for recycled materials during procurement where, practical and appropriate.
- **SW-2: Requirements for the Use of Recycled Materials during Construction:** LAWA will require, where feasible, that contractors use a specified minimum percentage of recycled materials during construction of LAX Master Plan improvements. The percentage of recycled materials required will be specified in the construction bid documents. Recycled materials may include, but are not limited to, asphalt, drywall, steel, aluminum, ceramic tile, cellulose insulation, and composite engineered wood products. The use of recycled materials in LAX Master Plan construction will help to reduce the project's reliance upon virgin materials and support the recycled materials market, decreasing the quantity of solid waste requiring disposal.
- **SW-3: Requirements for the Recycling of Construction and Demolition Waste:** LAWA will require that contractors recycle a specified minimum percentage of waste materials generated during demolition and construction. The percentage of waste materials required to be recycled will be specified in the construction bid documents. Waste materials to be recycled may include, but are not limited to, asphalt, concrete, drywall, steel, aluminum, ceramic tile, and architectural details.
- **Water (W)-1: Maximize Use of Reclaimed Water:** To the extent feasible, LAWA will maximize the use of reclaimed water in Master Plan-related facilities and landscaping. The intent of this commitment is to maximize the use of reclaimed water as an offset for potable water use and to minimize the potential for increased water use resulting from implementation of the LAX Master Plan. This commitment will also facilitate achievement of the City of Los Angeles' goal of increased beneficial use of its reclaimed water resources. This commitment will be implemented by various means, such as installation and use of reclaimed water distribution piping for landscape irrigation.

- **W-2: Enhance Existing Water Conservation Program:** LAWA will enhance the existing Street Frontage and Landscape Plan for LAX to ensure the ongoing use of water conservation practices at LAX facilities. The intent of this program, to minimize the potential for increased water use due to implementation of the LAX Master Plan program, is also in accordance with regional efforts to ensure adequate water supplies for the future. Features of the enhanced conservation program will include identification of current water conservation practices and an assessment of their effectiveness; identification of alternate future conservation practices; continuation of the practice of retrofitting and installing new low-flow toilets and other water-efficient fixtures in all LAX buildings, as remodeling takes place or new construction occurs; use of Best Management Practices for maintenance; use of water efficient vegetation for landscaping, where possible; and continuation of the use of fixed automatic irrigation for landscaping.

Project Design Features

Adoption of the proposed Project would permit the development of up to 2,320,000 square feet of various uses, including areas for recreation, open space, and buffer space. As presented in **Table 4.15-9**., the proposed Project would involve the potential building development:

- 1,275,00 square feet of office, research, and development uses;
- 220,000 square feet of mixed use-commercial uses;
- 215,000 square feet of community and civic uses;
- 10,000 square feet of open space and recreation uses; and
- 600,000 square feet of airport support uses.

The proposed Project would also update the 1989 Design Plan and Development Guidelines for LAX Northside by replacing it with the proposed LAX Northside Design Guidelines and Standards, which will include additional requirements to reduce environmental impacts. These guidelines also include revised parameters for height and massing, building setbacks, signage, street furniture, and landscaping. The proposed urban design framework within the proposed Project would guide and shape future development by providing LAWA, developers, and surrounding communities clearly defined design expectations. While individual projects would have the flexibility to determine their own architectural styles, the proposed LAX Northside Design Guidelines and Standards are intended to ensure that future development within the Project site meets LAWA's high standards for sustainability, and achieves compatibility with neighboring residential, educational, and business communities.

Wastewater

LAWA has committed to implement the following water conservation measures as Project Design Features (PDFs) for the entire Project site:

- **PDF Utilities/Services (U)-1:** Compliance with Ordinance No. 181480 of the Los Angeles Municipal Code, including but not limited to:
  - High Efficiency Toilets with flush volume of 1.0 gallons of water per flush (Table 5.303.2.2)
  - Reduce wastewater by 20% by installing water-conserving fixtures (water closets, urinals) or utilizing non-potable water systems (Section 99.05.303.4)

Water Use

The proposed LAX Northside Design Guidelines and Standards will require the proposed Project to incorporate landscaping techniques that will reduce water use impacts. The following PDFs apply:

- **PDF U-2:** Drought-tolerant plants that require moderate to limited maintenance are required in certain areas.
- **PDF U-3:** Landscaped buffers, landscaped setbacks, and recreational areas are required to have only drought-tolerant plants.
- **PDF U-4:** Landscaping in surface parking lots is required to be compatible with sustainable water management systems, such as bioswales.
- **PDF U-5:** Roofs are encouraged to be designed to collect rain water in the form of a green roof where applicable.
- **PDF U-6:** All building projects with an LADBS permit-valuation over $200,000 shall achieve LAGBC Tier-1 conformance.
- **PDF U-7:** All areas would integrate LID best practices into future developments under the proposed Project to promote and facilitate water conservation.
- **PDF U-8:** Natural drainage systems will be used to the maximum extent feasible.
- **PDF U-9:** Impervious area will be minimized to the maximum extent feasible.
- **PDF U-10:** Non-structural BMPs will be used unless they are infeasible, in which case the infeasibility will be documented and structural BMPs implemented.
- **PDF U-11:** Surface parking would incorporate stormwater management and water quality measures, such as permeable paving and bioswales.
- **PDF U-12:** Any portion of the parking area not used for parking, loading, drive aisles, or pedestrian connectivity would be landscaped.
- **PDF U-13:** Parking stalls would be paved with permeable pavers or porous paving materials. Drive aisles and primary and secondary entrance roadways would not be required to be permeable or porous.
- **PDF U-14:** Curb cuts in landscaping areas would be provided to allow drainage of stormwater into landscaping islands and fingers.
- **PDF U-15:** Compliance with Ordinance No. 181480 of the Los Angeles Municipal Code is required, including but not limited to:
    - Plumbing fixtures and fixture fittings that will reduce overall use of potable water by 20% (Section 99.05.303.2)
    - Faucets – all indoor faucets (other than City Ordinance No.180822 requirements) with flow rate of .25 gallons/cycle (Table 5.303.2.2)
    - Providing separate meters or submeters for indoor and outdoor potable water use (99.05.304.2)
    - Having irrigation controllers and sensors (Section 99.05.304.3)
- **PDF U-16:** The project requires a hybrid landscape that provides non-native planting strategies along Westchester Parkway, a mix of non-native and native plantings in the

development zones and parking areas, and a full native planting palette for all areas that exist along the northern property lines, adjacent to the residential communities (Refer to the proposed LAX Northside Design Guidelines and Standards). The landscaping is required to be:

- 50% non-native and 50% native in the landscape setback zone
- 70% non-native and 30% native in the paseo and streetscape zone
- 80% native and 20% non-native in the airport support zone
- 100% locally-native, drought-tolerant in the buffer zone
- 80% native and 20% non-native in the recreation zone
- 40% non-native and 60% native in parking and development zones

- **PDF U-17:** The following items are required by the Water Efficiency Requirements Ordinance, City Ordinance No.180822, effective Dec. 1, 2009, and LAWA acknowledges compliance with the following requirements for the entire project Site:
  - High Efficiency Toilets – maximum flush volume not to exceed 1.28 gallons of water (effective) per flush
  - High Efficiency Urinals – maximum flush volume not to exceed 0.125 gallons of water per flush
  - Faucets:
    - Private Use Lavatory Faucets – 1.5 gallons per minute
    - Public Use Lavatory Faucets – 0.5 gallons per minute, self-closing
    - Pre-rinse Spray Valve installed in Commercial Kitchens – 1.6 gallons per minute
    - All Other Indoor Faucets – 2.2 gallons per minute
  - Low-flow Showerheads – maximum flow rate not to exceed 2.0 gallons per minute, except emergency shower heads for health or safety purposes.
  - Showerheads – No more than one showerhead per stall.
  - High efficiency Clothes Washers (Commercial).
  - All Installed Dishwashers must be Energy Star Rated and in compliance with the following:
    - The maximum water use for high efficiency commercial dishwashers shall be in accordance with the City of Los Angeles Water Efficiency Requirements Ordinance (Ordinance No. 180822). The maximum gallons per rack are 0.70, 0.95, and 0.90 for high-temperature conveyor, door, and undercounter dishwashers respectively. The maximum gallons per rack are 0.62, 1.16, and 0.98 for chemical conveyor, door, and undercounter dishwashers. These requirements are shown in **Table 4.15-10**.

Table 4.15-10

Maximum Water Use for High Efficiency Dishwashers

Type	High-Temperature Maximum gallons per rack	Chemical-Maximum gallons per rack
Conveyer	0.70	0.62
Door	0.95	1.16
Undercounter	0.90	0.98

Source: Water Efficiency Requirements Ordinance, City Ordinance No.180822, 2009.

        - The maximum water use per washing cycle for high efficiency domestic dishwashers shall be 5.8 gallons.
    - All cooling towers must operate at a minimum of 5.5 cycles of concentration
    - Single-pass cooling systems are strictly prohibited for use in devices, processes, or equipment installed in commercial, industrial, or multi-family residential buildings. This prohibition shall not apply to devices, processes, or equipment installed for health or safety purposes that cannot operate safely otherwise.
    - Landscaping would be designed to advance sustainability. Drought-tolerant plant materials would be allowed to preserve water resources and bioswales would be used to remove silt and pollution from surface runoff water. The proposed Project would use rotating sprinkler nozzles for landscape irrigation, would use weather based irrigation controller, and would implement at least 30 percent native California plants in landscaping.
    - Reclaimed Water – To the extent possible, LAWA will maximize the use of reclaimed water in LAX Master Plan – related facilities and landscaping.

Solid Waste

The proposed LAX Northside Design Guidelines and Standards will not require the proposed Project to incorporate techniques to reduce solid waste. As such, there are no Project Design Features that will reduce solid waste impacts from the proposed Project.

Energy Use

The proposed LAX Northside Design Guidelines and Standards will require the proposed Project to incorporate techniques to reduce energy consumption, which will reduce energy impacts from the proposed Project.

- **PDF U-19:** Roofs of all buildings are required to be painted a light color, preferably white.
- **PDF U-20:** Energy efficient lighting is required.

4.15.3.4 Project Impacts

4.15.3.4.1 Wastewater

Construction Impacts

During construction of the proposed Project, a negligible amount of wastewater would be generated by construction staff. It is anticipated that portable toilets would be provided by a private company and the waste disposed of off-site. Wastewater generation from construction activities is not anticipated to cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained. Additionally, construction is not anticipated to generate wastewater flows that would substantially, or incrementally, exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or the City of Los Angeles' General Plan and its elements. Therefore, construction impacts related to wastewater would be less than significant.

Operational Impacts

Wastewater Generation

LAX Northside Center District

Area 11

Area 11 allows for up to 270,000 square feet of development in the Mixed Use and the Office, and Research and Development Use land use categories. Wastewater generation for both categories is generated at a rate of 30 gpd per employee and/or student. Based on the amount of developable land in Area 11, there would be up to 814 employees and up to 24,420 gpd of wastewater generated by Area 11. Wastewater generation for Area 11 represents approximately nine percent of the proposed Project's total wastewater generation.

Area 12A East

Area 12A East allows for up to 200,000 square feet of development in the Mixed Use land use category, which generates wastewater at a rate of 30 gpd per employee. Based on the amount of developable land in Area 12A East, there would be up to 694 employees and up to 20,820 gpd of wastewater generated by Area 12A East. Wastewater generation for Area 12A East represents approximately eight percent of the proposed Project's total wastewater generation.

Area 12A West

Area 12A West allows for up to 130,000 square feet of development in the Community and Civic Use land use category, which generates wastewater at a rate of 30 gpd per employee. Based on the amount of developable land in Area 12A West, there would be up to 498 employees and up to 14,940 gpd of wastewater generated by the proposed Project. Wastewater generation for Area 12A West represents approximately six percent of the proposed Project's total wastewater generation.

Area 12B

This portion of the site will not be modified. The existing Westchester Golf Course would remain in its existing location and configuration. As such, wastewater generation in this portion of the proposed Project area would not change substantially beyond the existing condition.

Area 13

Area 13 allows for up to 45,000 square feet of development in the Community and Civic Use land use category, which generates wastewater at a rate of 30 gpd per employee. Based on the amount of developable land in Area 13, there would be up to 172 employees and up to 5,160 gpd of wastewater generated by Area 13. Wastewater generation for Area 13 represents approximately two percent of the proposed Project's total wastewater generation.

LAX Northside Campus District

Area 1

Up to 10,000 square feet of Area 1 is categorized under the Open Space land use category, which is anticipated to have similar wastewater generation rates as Office, Research and Development. Wastewater generation for the Office, and Research and Development Use land use category is generated at a rate of 30 gpd per employee. Based on the amount of developable land in Area 1, there would be up to 38 employees and up to 1,140 gpd of wastewater generated by Area 1. Wastewater generation for Area 1 represents less than one percent of the proposed Project's total wastewater generation.

Area 2 and 3

Area 2 and Area 3 allows for up to 1,065,000 square feet of development in the Office, and Research and Development Use and Community and Civic Use land use categories. Wastewater generation for both categories is generated at a rate of 30 gpd per employee and/or student. Based on the amount of developable land in both Area 2 and Area 3, there would be up to 4,770 employees and up to 143,100 gpd of wastewater generated by the proposed Project. Collectively, wastewater generation for both Areas represents more than half of the proposed Project's total wastewater generation at approximately 53 percent.

LAX Northside Airport Support District

Area 4 - Area 10

Wastewater generation for the Airport Support land use category is generated at a rate of 0.1 gpd per square foot of developable land. Project, Areas 4 through 10 would collectively allow for up to 600,000 square feet of development. Therefore, up to 60,000 gpd of wastewater, approximately 22 percent of the total wastewater generation for the proposed Project, would be generated within this District.

Project Site Wastewater Generation

The HTP has a design capacity of 450 mgd, and currently has an excess wastewater capacity of approximately 151 mgd. The NCOS has an effective capacity of 381 mgd and an excess wastewater capacity of approximately 252 mgd. The NORS has an effective capacity of 259 mgd and an excess wastewater capacity of approximately 39 mgd. These projected wastewater flows would be conveyed to the existing facilities operated by the LADPW and Los Angeles Bureau of Sanitation, which would serve the proposed Project's wastewater collection and treatment needs. Sewers to convey wastewater to LADPW facilities would be constructed on-site to serve the proposed development and would be sized according to projected flows, including peak day flows. With respect to the operation of uses proposed for the Project site, an estimated total of 269,580 gpd would be generated for all Areas within each District, as discussed above and presented in Table 4.15-11. Therefore, operational impacts related to wastewater would be less than significant.

Wastewater Conveyance

The on-site and other local sewers would convey wastewater to the NCOS and NORS, which are projected to have substantial surplus capacity at proposed Project buildout. The estimated 269,580 gpd wastewater generation for the proposed Project, therefore, would use approximately 0.09 percent of the total available flow capacity (291 mgd) within the NCOS and NORS. As such, the projected flows would not cause the NCOS and NORS to become constrained.

The proposed Project would require new local wastewater collection infrastructure that would convey wastewater to the NCOS and NORS, but the construction of this new infrastructure would be incorporated into the proposed Project as part of LAX Master Plan Commitment PU-1. Furthermore, the proposed Project would allow the construction of subsurface parking, which would be approximately 20 feet deep and would potentially interfere with existing wastewater collection infrastructure. Based on preliminary engineering analysis, it appears that the NCOS and NORS could be affected by the construction of the proposed Project and may require relocation or modification. However, the proposed Project would be designed to provide the requisite wastewater infrastructure and to avoid any sewer conflicts that would require relocation or modification of sewer lines to the maximum extent possible. Under LAX Master Plan Commitment PU-1, Develop a Utility Relocation Program, a utility relocation program would be implemented during construction. The proposed Project is not anticipated to cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained, or that would cause a sewer's capacity to become constrained. Therefore, operational impacts related to wastewater conveyance would be less than significant.

Wastewater Treatment

As noted above, the HTP has a design capacity of 450 mgd, and currently has an excess wastewater capacity of approximately 151 mgd. The IRP projects that the average daily water flow (ADWF) of the HTP will increase to 435 mgd by 2020.[27] This would leave an excess wastewater capacity of approximately 15 mgd. The estimated 269,580 gpd wastewater generation of the proposed Project would use only about 1.7 percent of the projected available flow capacity (15 mgd) of the HTP in 2020. If Alternative 1 of the IRP is implemented and the HTP design capacity is increased to 500 mgd, the proposed Project would use only about 0.4 percent of the projected available flow capacity (65 mgd) of the HTP in 2020. The proposed Project will not generate wastewater flows that would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or the City of Los Angeles' General Plan and its elements. Therefore, operational impacts related to wastewater treatment would be less than significant.

[27] City of Los Angeles, Department of Public Works, Bureau of Sanitation, Integrated Resources Plan, p. 4-35, online at http://www.lacitysan.org/irp/facilitiesplan.htm, accessed January 17, 2013.

Table 4.15-11

Estimated Wastewater Generation of the Proposed Project

Area	Land Use	Quantity	Unit	Wastewater Generation Factor (gpd/unit)	Wastewater Generation (gpd)
LAX Northside Center District					
Area 11	Mixed Use Office, and Research and Development Use	814	Employee and Student	30	24,420
Area 12 A East	Mixed Use	694	Employee	30	20,820
Area 12 A West	Community and Civic Use	498	Employee	30	14,940
Area 12 B	Recreation and Open Space	-	Employee	30	-
Area 13	Community and Civic Use	172	Employee	30	5,160
LAX Northside Center District Total					65,340
LAX Northside Campus District					
Area 1	Recreation and Open Space Office, and Research and Development Use	38	Employee	30	1,140
Area 2 - Area 3	Recreation and Open Space Office, and Research and Development Use Community and Civic Use	4,770	Employee and Student	30	143,100
LAX Northside Campus District Total					144,240
LAX Northside Airport Support District					
Area 4 - Area 10	Airport Support	600,000	Square Feet	0.1	60,000
LAX Northside Airport Support District Total					60,000
Total					269,580

Note:
gpd = gallons per day
Source: City of Los Angeles, Department of Public Works, Bureau of Engineering, 1992

4.15.3.4.3 Water Use

Construction Impacts

During construction, water would be used for dust suppression, the mixing and pouring of concrete, and other construction-related activities. In addition, the proposed Project would require water for temporary irrigation during plant establishment. This temporary irrigation system would be designed to avoid over-irrigation.[28] It is not possible to quantify the water usage attributable to development construction and plant establishment activities with any level of certainty. Water usage for such purposes would, however, be temporary in nature and would not exceed that of the completed development.

Reclaimed water may be used for dust suppression, temporary irrigation, and various construction-related activities, reducing the use of potable water. It is unlikely that such water use would exceed the available supply, given the current and planned utilization of recycled "product" water serving the proposed Project site and vicinity (i.e., recycled water customers currently consume only about 60 percent of the water treated at WBWRP, and planned expansions will meet, if not exceed projected demands).[29] Therefore, construction impacts related to water use would be less than significant.

Operational Impacts

Water Usage

LAX Northside Center District

Area 11

Area 11 allows for up to 270,000 square feet of development in the Mixed Use and the Office, and Research and Development Use land use categories. Water usage for both categories is generated at a rate of 77 gpd per employee and/or student. Based on the amount of developable land in Area 11, there would be up to 814 employees and up to 62,678 gpd of water used by Area 11. Water use for Area 11 represents approximately 11 percent of the proposed Project's total water consumption.

Area 12A East

Area 12A East allows for up to 200,000 square feet of development in the Mixed Use land use category, which uses water at a rate of 77 gpd per employee. Based on the amount of developable land in Area 12A East, there would be up to 694 employees and up to 53,438 gpd of water used by Area 12A East. Water use for Area 12A East represents approximately nine percent of the proposed Project's total water consumption.

Area 12A West

Area 12A West allows for up to 130,000 square feet of development in the Community and Civic Use land use category, which uses water at a rate of 77 gpd per employee. Based on the amount of developable land in Area 12A West, there would be up to 498 employees and up to 38,346 gpd of water used by the proposed Project. Water use for Area 12A West represents approximately seven percent of the proposed Project's total water consumption.

[28] City of Los Angeles, LAX Master Plan Final EIS/EIR, 2004, p. 4-1498.
[29] City of Los Angeles, LAX Master Plan Final EIS/EIR, 2004, 4-1492.

Area 12B

This portion of the site will not be modified. As such, water consumption in this portion of the proposed Project area would not change substantially beyond the existing condition.

Area 13

Area 13 allows for up to 45,000 square feet of development in the Community and Civic Use land use category, which uses water at a rate of 77 gpd per employee. Based on the amount of developable land in Area 13, there would be up to 172 employees and up to 13,244 gpd of water used by the proposed Project. Water use for Area 13 represents approximately two percent of the proposed Project's total water consumption.

LAX Northside Campus District

Area 1

Area 1 is categorized as the Open Space land use category. Open space is estimated to generate 120 gpd per acre. The proposed Project would introduce approximately 36 acres of new open space, including Area 1. Open space would use up to 7,200 gpd of water, approximately one percent of the proposed Project's total water consumption.

Area 2 and 3

Area 2 and Area 3 allows for up to 1,065,000 square feet of development in the Office, and Research and Development Use and Community and Civic Use land use categories. Water use for both categories is generated at a rate of 77 gpd per employee and/or student. Based on the amount of developable land in both Area 2 and Area 3, there would be up to 4,770 employees and up to 367,290 gpd of water used by the proposed Project. Collectively, water use for both Areas represents approximately two thirds of the proposed Project's total water consumption at 66 percent.

LAX Northside Airport Support District

Area 4 - Area 10

Water use for the Airport Support land use category is generated at a rate of 120 gpd per employee. Based on the 600,000 square feet of developable land available in this District, Areas 4 through 10 would collectively allow for up to 125 employees. Therefore, up to 15,000 gpd of water, approximately three percent of the total water use for the proposed Project would be consumed within this District.

Project Site Water Usage

In 2010, the City of Los Angeles used 545,771 acre-feet of water. In 2020, water demand is projected to reach 622,732 AFY. In 2030, water demand is projected to reach 643,785 AFY.[30] The UWMP does not provide a projected demand specific to 2022, which is the proposed Project buildout year, but an approximation using the 2020 and 2030 estimates indicate that the demand in 2022 would be 626,944 AFY. This would represent an 81,589 acre-feet per year, or 72.8 mgd, increase in water demand from 2010 to 2022. With respect to the operation of uses proposed for the Project site, an estimated total of 552,922 gpd of water would be consumed, as presented in **Table 4.15-12**.

[30] City of Los Angeles, Department of Water and Power, Urban Water Management Plan, 2010. p. 10

Table 4.15-12

Estimated Water Usage of the Proposed Project

Area	Land Use	Quantity	Unit	Water Usage Factor (gpd/unit)	Water Usage (gpd)
LAX Northside Center District					
Area 11	Mixed Use Office, and Research and Development Use	814	Employee and Student	77	62,678
Area 12 A East	Mixed Use	694	Employee	77	53,438
Area 12 A West	Community and Civic Use	498	Employee	77	38,346
Area 12 B[a]	Recreation and Open Space	N/A	N/A	N/A	N/A
Area 13	Community and Civic Use	172	Employee	77	13,244
LAX Northside Center District Total					167,706
LAX Northside Campus District					
Area 1	Recreation and Open Space Office, and Research and Development Use	36[b]	Acre	200	7,200
Area 2 and Area 3	Recreation and Open Space Office, and Research and Development Use Community and Civic Use	4,770	Employee and Student	77	367,290
LAX Northside Campus District Total					364,490
LAX Northside Airport Support District					
Area 4 through Area 10	Airport Support	125	Employee	120	15,000
LAX Northside Airport Support District Total					15,000
Total					552,922

Notes:
gpd = gallons per day
[a] The proposed Project would not change existing water usage in Area 12B.
[b] Includes all proposed new Recreation and Open Space within the Project site.
Source: LADWP, 2010

Water Supply

The water consumption associated with the proposed Project at the buildout year, which is 552,922 gpd, would represent approximately 0.75 percent of the projected increase in LADWP's water demand from 2010 to 2022, which is 72.8 mgd.

The planning for future water supplies to meet regional needs is based primarily on SCAG regional growth projections. The proposed Project is within the SCAG regional growth projections (see Section 4.11, Population/Housing, of the EIR, for a discussion of applicable plans, projected growth, and the proposed Project's conformance with those projections). The water demand associated with development of the proposed Project has been accounted for in existing water supply planning programs at the local and regional level. Specifically, LADWP previously conducted a Water Supply Assessment (WSA) for the Project site as part of the LAX Master Plan, which included up to 4.5 million square feet of planned development on the Project site. The proposed Project and the corresponding water demand does not exceed the prior approved WSA's water consumption and is already accounted for in LADWP's water supply plans for the Project site. As noted above, the water consumption for the proposed Project would not exceed the available supply. Additionally, a Water Supply Assessment was conducted by LADWP's Water Executive for the proposed Project in August, 2013 based on the most current water code procedures.

Based on the UWMP and the existing infrastructure, LADWP issued a Will Serve letter on May 22, 2013 which states that Project can be supplied with water from the municipal system subject to the LADWP Water System's rules and conditions (Appendix N- Water Supply Assessment and Will Serve Letter).

Furthermore, LAWA would implement the Project Design Features discussed above and LAX Master Plan Commitment W-1, Maximize Use of Reclaimed Water, to maximize the use of reclaimed water in facilities and landscaping and offset potable water use to minimize the potential for increased water use resulting from the proposed Project. LAWA would also implement LAX Master Plan Commitment W-2, Enhance Existing Water Conservation Program, to ensure the ongoing use of water conservation practices at LAX facilities, such as installing water-efficient fixtures. Additionally, the use of drought-tolerant plants will reduce the water demand of the proposed Project because drought-tolerant plants will require less water for maintenance. The use of green roofs will reduce the water demand of the proposed Project because reclaimed water can be reused for other purposes, such as watering plants. These LAX Master Plan Commitments and Project Design Features would reduce the water use impacts associated with the proposed Project.

As such, the total estimated water demand on the proposed Project at buildout would not exceed available supplies. Therefore, operational impacts related to water supply would be less than significant.

Water Infrastructure

The proposed Project will allow the construction of subsurface parking, which would be up to 20 feet deep and may interfere with existing water infrastructure, requiring adjustment/relocation. Potential utility conflicts during construction would be minimized with the implementation of a utility relocation program under LAX Master Plan Commitment PU-1, Develop a Utility Relocation Program. Implementing this commitment would ensure that potential construction-related impacts would be less than significant.

The proposed Project would require new water distribution infrastructure that connects to the water transmission lines that serve the LAX. The construction of this new infrastructure would

be incorporated into the LAX Master Plan as part of Master Plan Commitment PU-1, Develop a Utility Relocation Program, and W-1, Maximize Use of Reclaimed Water. With implementation of water distribution system improvements currently planned by LADWP, the water service needs for the proposed Project would not exceed distribution infrastructure capabilities and it is anticipated that regional water distribution pipelines would be adequate to accommodate increases in water demand for the proposed Project. Therefore, operational impacts related to water infrastructure would be less than significant.

4.15.3.4.4 Solid Waste

Construction Impacts

Although no demolition of buildings will take place because the majority of the Project site is vacant, and existing structures will not be demolished as part of the proposed Project, some inert waste will be generated during construction. Construction activities would include earthwork, grading, clearing of brush and debris, and excavation. Total solid waste generated during construction of the proposed Project would be 397,778.2 tons, as presented in **Table 4.15-13**. However, LAX Master Plan Commitments SW-2, Requirements for the Use of Recycled Materials during Construction, and LAX Master Plan Commitment SW-3, Requirements for the Recycling of Construction and Demolition Waste, would reduce the amount of construction waste requiring disposal by requiring contractors to use recycled construction materials and to recycle construction-related waste. Therefore, impacts related to solid waste would be less than significant.

Table 4.15-13

Estimated Solid Waste Generation of the Proposed Project - Construction

Use Type	Quantity	Unit	Solid Waste Generation Rate (pounds/unit)	Solid Waste Generation (tons)
Soil Removal	N/A	N/A	N/A	393,265.8
Non-Residential Construction	2,320,000	Square Feet	3.89	4512.4
Total				397,778.2

Source: USEPA, 1998; URS, 2014.

Operational Impacts

LAX Northside Center District

Area 11

Area 11 allows for up to 270,000 square feet of development in the Mixed Use and the Office, and Research and Development Use land use categories. Solid waste generation for both categories is generated at a rate of 6.3 pounds (lbs) per employee and/or student each day. Based on the amount of developable land in Area 11, there would be up to 814 employees and up to 5,128 lbs per day by the proposed Project. Solid waste generation for Area 11 represents approximately 11 percent of the proposed Project's daily solid waste generation.

Area 12A East

Area 12A East allows for up to 200,000 square feet of development in the Mixed Use land use category, which generates solid waste at a rate of 6.3 lbs per employee each day. Based on the amount of developable land in Area 12A East, there would be up to 694 employees and up to 4,372 lbs of solid waste generated by the proposed Project each day. Solid waste generation for Area 12A East represents approximately ten percent of the proposed Project's daily solid waste generation.

Area 12A West

Area 12A West allows for up to 130,000 square feet of development in the Community and Civic Use land use category, which generates solid waste at a rate of 6.3 lbs per employee each day. Based on the amount of developable land in Area 12A West, there would be up to 498 employees and up to 3,137 lbs of solid waste generated by the proposed Project each day. Solid waste generation for Area 12A West represents approximately seven percent of the proposed Project's daily solid waste generation.

Area 12B

This portion of the site will not be modified. As such, solid waste generation in this portion of the proposed Project area would not change substantially beyond the existing condition.

Area 13

Area 13 allows for up to 45,000 square feet of development in the Community and Civic Use land use category, which generates solid waste at a rate of 6.3 lbs per employee each day. Based on the amount of developable land in Area 13, there would be up to 172 employees and up to 1,084 lbs of solid waste generated by the proposed Project each day. Solid waste generation for Area 13 represents approximately two percent of the proposed Project's daily solid waste generation.

LAX Northside Campus District

Area 1

Up to 10,000 square feet of Area 1 is categorized under the Open Space land use category which is anticipated to have similar solid waste generation as the Office, and Research and Development land use category. Solid waste generation for the Office, and Research and Development Use land use category is generated at a rate of 6.3 lbs per employee each day. Based on the amount of developable land in Area 1, there would be up to 38 employees and up to 239 lbs of solid waste generated by the proposed Project each day. Solid waste generation for Area 1 represents less than one percent of the proposed Project's daily solid waste generation.

Area 2 and 3

Area 2 and Area 3 allows for up to 1,065,000 square feet of development in the Office, and Research and Development Use and Community and Civic Use land use categories. Solid waste generation for both categories is generated at a rate of 6.3 lbs per employee and/or student each day. Based on the amount of developable land in both Area 2 and Area 3, there would be up to 4,770 employees and up to 30,051 lbs of solid waste generated by the proposed Project each day. Collectively, solid waste generation for both Areas represents approximately two thirds of the proposed Project's daily solid waste generation at 67 percent.

LAX Northside Airport Support District

Area 4 - Area 10

Solid waste generation for the Airport Support land use category is generated at a rate of 6.3 lbs per employee each day. Based on the 600,000 square feet of developable land available in this District, Areas 4 through 10 would collectively allow for up to 125 employees. Therefore, up to 788 lbs of solid waste, approximately two percent of the proposed Project's total daily generation, would be generated in this District.

Project Site Waste Generation

As mentioned above, the landfills that serve the City of Los Angeles have a remaining capacity of 93.07 million tons and the City of Los Angeles disposed approximately 3.86 million tons in 2000. Based on solid waste generation rates for the types of land uses in the proposed Project, approximately 44,799 pounds per day would be generated by the proposed Project, as presented in **Table 4.15-14**.

Solid Waste Capacity

As of 2010, the landfills that serve the City of Los Angeles have a remaining capacity of approximately 93.07 million tons of solid waste. Based on the average 2000 disposal rate of approximately 3.86 million tons per year, this capacity will not be exhausted until about 2036. Moreover, based on the City of Los Angeles' 70 percent diversion goal, only 13,439 pounds of solid waste from the proposed Project would require disposal per day in 2022. This solid waste disposal, which would amount to 2,454 tons per year, would represent an approximately 0.06 percent increase in the amount of City-generated solid waste that is disposed of at landfills that serve the City of Los Angeles, and approximately 0.002 percent of its remaining capacity. The estimated solid waste generation would not exceed the solid waste capacity, so the proposed Project would not require an additional solid waste recycling or disposal facility to adequately handle project-generated waste. Therefore, operational impacts related to solid waste capacity would be less than significant.

Solid Waste Collection

As mentioned in Subsection 4.15.2.2, Existing Conditions, City-permitted private waste haulers are responsible for the collection of solid waste for non-residential areas. Implementation of the proposed Project would require additional solid waste collection routes to adequately handle Project-generated waste. However, the landfills that would be used for the proposed Project have a capacity of 93 million lbs/day while the proposed Project is expected to create 44,779 lbs/day. This equates to 0.05 percent of a capacity burden on the combined landfills. Development of the proposed Project would include completion of an internal roadway system that would provide on-site routes for waste collection/hauling vehicles. Furthermore, an extensive system of private solid waste collection already exists. There are 229 private waste haulers that have been approved by the City of Los Angeles Bureau of Sanitation to provide solid waste collection services for nonresidential uses within the City of Los Angeles.[31] Given the small increase in solid waste generated from the proposed Project, these City-permitted private waste haulers would be able to provide adequate solid waste collection services for the

[31] City of Los Angeles, Department of Public Works, Bureau of Sanitation, Permitted Waste Haulers in the City of Los Angeles, 2012, online at http://www.lacitysan.org/solid_resources/strategic_programs/ab939/compliance_fee.htm, accessed October 1, 2012.

proposed Project. Therefore, operational impacts related to solid waste collection would be less than significant.

Table 4.15-14

Estimated Solid Waste Generation of the Proposed Project – Operation

Area	Land Use	Quantity	Unit	Solid Waste Generation Rate (pounds/unit)	Solid Waste Generation (pounds/day)
LAX Northside Center District					
Area 11	Mixed Use Office, and Research and Development Use	814	Employee and Student	6.3	5,128
Area 12 A East	Mixed Use	694	Employee	6.3	4,372
Area 12 A West	Community and Civic Use	498	Employee	6.3	3,137
Area 12 B	Recreation and Open Space	-	Employee	6.3	-
Area 13	Community and Civic Use	172	Employee	6.3	1,084
LAX Northside Center District Total					13,721
LAX Northside Campus District					
Area 1	Recreation and Open Space Office, and Research and Development Use	38	Employee	6.3	239
Area 2 and Area 3	Recreation and Open Space Office, and Research and Development Use Community and Civic Use	4,770	Employee and Student	6.3	30,051
LAX Northside Campus District Total					30,290
LAX Northside Airport Support District					
Area 4 through Area 10	Airport Support	125	Employee	6.3	788
LAX Northside Airport Support District Total					788
Total					44,799

Source: City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2006; URS, 2014.

Consistency with Solid Waste Policies

As described in Subsection 4.15.2, Environmental Setting, the City of Los Angeles has set a waste diversion of 70 percent by year 2020. As discussed earlier, in 2000, the City of Los Angeles achieved an overall diversion rate of 59.7 percent. As the City of Los Angeles endeavors to meet the 70 percent diversion goal in the coming decade, solid waste from the proposed Project, as well as from other communities in the region, would be reduced to meet or exceed the City of Los Angeles' 2020 minimum diversion requirements in order be in conformance with such policies.

Additionally, LAX Master Plan Commitments SW-1, SW-2, and SW-3; implementation of the Los Angeles County Solid Waste Management Action Plan; and implementation of the City of Los Angeles Solid Waste Management Action Plan, SRRE, SWiRP, CiSWMPP, LAWA Sustainability Plan, and LAMC Section 66.32 would serve to reduce the amount of solid waste generated. The proposed Project would be consistent with, and would apply all applicable goals, policies, and strategies of, the CiSWMPP and the associated implementation strategies of the SRRE, including such components as the Curbside Recycling Program, as outlined in the City of Los Angeles' Framework Element. As such, the proposed Project's anticipated on-site diversion programs would serve to enhance the ability of the City of Los Angeles to meet or exceed its long-term goal of 70 percent diversion by 2020. The proposed Project would comply with, and implement as necessary, all provisions of the aforementioned City policies and programs to achieve the waste diversion goals of AB 939. In addition to existing programs aimed at reducing solid waste generation, LAWA would implement LAX Master Plan Commitment SW-1, Implement an Enhanced Recycling Program, to enhance the current on-site recycling program, extend recycling requirements to tenants, and address the procurement of recycled materials. With the continuation of existing recycling programs and implementation of LAX Master Plan Commitment SW-1, the proposed Project would not conflict with solid waste policies and objectives intended to help achieve the requirements of AB 939. As such, the proposed Project would not conflict with solid waste policies and objectives in the SRRE or its updates, CiSWMPP, the City of Los Angeles' Framework Element, or the Curbside Recycling Program, including consideration of the land use-specific waste diversion goals contained in Volume 4 of the SRRE. Therefore, operational impacts related to adopted solid waste diversion programs and policies would be less than significant.

4.15.3.4.5 Energy

Construction Impacts

Electricity

Construction of the proposed Project would only consume minimal quantities of electricity (i.e., temporary use for lighting, construction trailer office equipment, small power tools, etc.). Furthermore, existing lighting would further reduce electricity usage during construction. Although, the Project site is primarily vacant and dimly lit, the Westchester Golf Course provides lighting for evening golf course use. Additionally, Westchester Parkway, which runs through the Project site, is lined with street lights. The Project site is also bordered by residential uses to the north, and the LAX North Airfield to the south, which provide additional lighting.

As such, construction impacts would not result in an increase in demand for electricity that exceeds available supply or distribution infrastructure capabilities, so the construction of the proposed Project would not require new electricity supply facilities, distribution infrastructure, or

capacity enhancing alterations to existing facilities. Therefore, construction impacts related to electricity use would be less than significant.

Natural Gas

The construction of the proposed Project would not consume natural gas, and thereby would not require new natural gas supply facilities, distribution infrastructure, or capacity enhancing alterations to existing facilities. Therefore, the proposed Project would not have construction impacts related to natural gas.

Operational Impacts

Electricity Usage

The LADWP service area, which encompasses the City of Los Angeles, is projected to have an annual demand of 28,333 GWh at project buildout, as discussed above in Subsection 4.5.2.2, Existing Conditions. Operation of proposed uses would consume an estimated total of 34,626 MWh, or 35 GWh, of electricity per year, as presented in **Table 4.15-15** and further detailed below.

LAX Northside Center District

Area 11

Area 11 allows for up to 270,000 square feet of development in the Mixed Use and the Office, and Research and Development Use land use categories. Electricity usage for both categories is generated at a rate of 14.63 kWh annually. Based on the amount of developable land in Area 11, up to 3,950 MWh of electricity would be used by the proposed Project. Electricity use for Area 11 represents approximately 11 percent of the proposed Project's total electricity usage.

Area 12A East

Area 12A East allows for up to 200,000 square feet of development in the Mixed Use land use category, which uses electricity at a rate of 14.63 kWh annually. Based on the amount of developable land in Area 12A East there would be up to 694 employees and up to 2,926 MWh of electricity would be used by the proposed Project annually. Electricity use for Area 12A East represents approximately eight percent of the proposed Project's total electricity usage.

Area 12A West

Area 12A West allows for up to 130,000 square feet of development in the Community and Civic Use land use category, which uses electricity at a rate of 14.63 kWh annually. Based on the amount of developable land in Area 12A West there would be up to 1,902 MWh of electricity used by the proposed Project annually. Electricity use for Area 12A West represents approximately five percent of the proposed Project's total electricity usage.

Area 12B

This portion of the site will not be modified. As such, electricity generation in this portion of the proposed Project area would not change substantially beyond the existing condition.

Area 13

Area 13 allows for up to 45,000 square feet of development in the Community and Civic Use land use category, which uses electricity at a rate of 14.63 kWh annually. Based on the amount of developable land in Area 13 there would be up to 658 MWh of electricity used by the

proposed Project annually. Electricity use for Area 13 represents approximately two percent of the proposed Project's total electricity usage.

LAX Northside Campus District

Area 1

Up to 10,000 square feet of Area 1 is categorized under the Open Space land use category, which is anticipated to have similar energy usage as the Office, and Research and Development land use category. Electricity usage for the Office, and Research and Development Use land use category is generated at a rate of 14.63 kWh annually. Based on the amount of developable land in Area 1, there would be up to 146 MWh of electricity used by the proposed Project. Electricity usage for Area 1 represents less than one percent of the proposed Project's total electricity usage.

Area 2 and 3

Area 2 and Area 3 allows for up to 1,065,000 square feet of development in the Office, and Research and Development Use and Community and Civic Use land use categories. Electricity usage for both categories is generated at a rate of 14.63 kWh annually. Based on the amount of developable land in both Area 2 and Area 3, there would be 15,581 MWh of electricity used by the proposed Project annually. Collectively, electricity usage for both Areas represents almost half of the proposed Project's total electricity usage at 45 percent.

LAX Northside Airport Support District

Area 4 - Area 10

Electricity usage for the Airport Support land use category is generated at a rate of 15.77 kWh per year. Based on the 600,000 square feet of developable land available in this District, Areas 4 through 10 would collectively require 9,462 MWh annually. This shows that approximately 27 percent of the total electricity usage for the proposed Project would be used within this District.

Table 4.15-15

Estimated Electricity Usage of the Proposed Project

Area	Land Use	Quantity	Unit	Electricity Usage Rate (kWh/year)	Electricity Usage Generation (kWh/year)
LAX Northside Center District					
Area 11	Mixed Use Office, and Research and Development Use	270,000	Square Feet	14.63	3,950,100
Area 12 A East	Mixed Use	200,000	Square Feet	14.63	2,926,000
Area 12 A West	Community and Civic Use	130,000	Square Feet	14.63	1,901,900
Area 12 B	Recreation and Open Space	-	Square Feet	14.63	-
Area 13	Community and Civic Use	45,000	Square Feet	14.63	658,350
LAX Northside Center District Total					9,436,350
LAX Northside Campus District					
Area 1	Recreation and Open Space Office, and Research and Development Use	10,000	Square Feet	14.63	146,300
Area 2 and Area 3	Recreation and Open Space Office, and Research and Development Use Community and Civic Use	1,065,000	Square Feet	14.63	15,580,950
LAX Northside Campus District Total					15,727,250
LAX Northside Airport Support District					
Area 4 through Area 10	Airport Support	600,000	Square Feet	15.77	9,462,000
LAX Northside Airport Support District Total					9,462,000
Total					34,625,600

Note:

kWh = kilowatt hours

Source: City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2006

Electricity Supply

The annual electricity demand of the proposed Project, which is 35 GWh per year, is approximately 0.12 percent of the total demand of the LADWP service area, which will be 28,333 GWh at project buildout, and is within the anticipated service capabilities of LADWP. Current transmission and distribution facilities for electricity are adequate to meet the demands of the proposed Project.

The estimated electricity usages of the proposed Project do not take into account the energy conservation measures that are described in Subsection 4.15.3.3, Project Design Features. For example, the proposed Project will implement light-colored roofs, which will reflect more light than dark-colored roofs and reduce electricity usage by lowering cooling requirements. Additionally, in order to reduce electricity consumption, LAWA would implement Master Plan Commitment E-1 to maximize the energy efficiency of new facilities. This program would be consistent with federal policies pertaining to energy efficiency of new facilities.

Operational impacts would not result in an increase in demand for electricity that exceeds available supply infrastructure capabilities, so the operation of the proposed Project would not require new electricity supply facilities or capacity enhancing alterations to existing facilities. Therefore, operational impacts related to electricity supply would be less than significant.

Electricity Distribution Infrastructure

Changes in peak electrical loads and the location of new electrical loads within the Project site may result in the need for upgrades to the electrical power transmission system. However, under LAX Master Plan Commitment E-2, Coordination with Utility Providers, a utility coordination program would be implemented by LAWA to ensure that adequate electrical distribution facilities are available to support the electricity needs associated with the proposed Project. Development and implementation of a utility coordination program would reduce potential impacts to the electricity distribution system to a level that is less than significant.

The proposed Project will also allow the construction of subsurface parking, which would be approximately 20 feet deep and may interfere with existing electricity distribution infrastructure, requiring adjustment/relocation. Potential utility conflicts during construction would be minimized with the implementation of a utility relocation program under LAX Master Plan Commitment PU-1, Develop a Utility Relocation Program. Implementing this commitment would ensure that potential construction-related impacts would be less than significant.

Operational impacts would not result in an increase in demand for electricity that exceed available distribution infrastructure capabilities, so the operation of the proposed Project would not require new distribution infrastructure or capacity enhancing alterations to existing facilities. Therefore, operational impacts related to electricity distribution infrastructure would be less than significant.

Natural Gas

The SCGC service area, which includes the Counties of Fresno, Kings, Tulare, San Luis Obispo, Kern, Santa Barbara, Ventura, Los Angeles, San Bernardino, Orange, Riverside, San Diego, and Imperial, is projected to have an annual demand of 948.64 billion cubic feet at project buildout, as discussed above in Subsection 4.15.2.2, Existing Conditions. Operation of proposed uses would consume an estimated total of 25 million cubic feet of natural gas per month, or 300 million cubic feet of natural gas per year, as presented in **Table 4.15-16** and further described below.

Table 4.15-16

Estimated Natural Gas Usage of the Proposed Project

Area	Land Use	Quantity	Unit	Natural Gas Usage Rate (cubic feet/month)	Natural Gas Usage Generation (cubic feet/month)
LAX Northside Center District					
Area 11	Mixed Use Office, and Research and Development Use	814	Employee and Student	3,550	2,889,700
Area 12 A East	Mixed Use	694	Employee	3,550	2,463,700
Area 12 A West	Community and Civic Use	498	Employee	3,550	1,767,900
Area 12 B	Recreation and Open Space	-	Employee	3,550	-
Area 13	Community and Civic Use	172	Employee	3,550	610,600
LAX Northside Center District Total					7,731,900
LAX Northside Campus District					
Area 1	Recreation and Open Space Office, and Research and Development Use	38	Employee	3,550	134,900
Area 2 and Area 3	Recreation and Open Space	4,770	Employee	3,550	16,933,500
	Office, and Research and Development Use		Employee		
	Community and Civic Use		Employee		
LAX Northside Campus District Total					17,068,400
LAX Northside Airport Support District					
Area 4 through Area 10	Airport Support	125	Employee	3,550	443,750
LAX Northside Airport Support District Total					443,750
Total					25,244,050

Source: City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2006.

LAX Northside Center District

Area 11

Area 11 allows for up to 270,000 square feet of development in the Mixed Use and the Office, and Research and Development Use land use categories. Natural gas usage for both categories is generated at a rate of 3,550 cubic feet per month. Based on the amount of developable land in Area 11, there would be up to 2.89 million cubic feet per month of natural gas used per month by the proposed Project. Natural gas use for Area 11 represents approximately 11 percent of the proposed Project's total natural gas usage.

Area 12A East

Area 12A East allows for up to 200,000 square feet of development in the Mixed Use land use category, which uses natural gas at a rate of 3,550 cubic feet per month. Based on the amount of developable land in Area 12A East, there would be up to 2.46 million cubic feet natural gas used per month of by the proposed Project. Natural gas use for Area 12A East represents approximately ten percent of the proposed Project's total natural gas usage.

Area 12A West

Area 12A West allows for up to 130,000 square feet of development in the Community and Civic Use land use category, which uses natural gas at a rate of 3,550 cubic feet per month. Based on the amount of developable land in Area 12A West, there would be up to 1.77 million cubic feet of natural gas used per month by the proposed Project. Natural gas use for Area 12A West represents approximately seven percent of the proposed Project's total natural gas usage.

Area 12B

This portion of the site will not be modified. As such, natural gas usage in this portion of the proposed Project area would not change substantially beyond the existing condition.

Area 13

Area 13 allows for up to 45,000 square feet of development in the Community and Civic Use land use category, which uses natural gas at a rate of 3,550 cubic feet per month. Based on the amount of developable land in Area 13, there would be up to 611 thousand cubic feet of natural gas used per month by the proposed Project. Natural gas use for Area 13 represents approximately two percent of the proposed Project's total natural gas usage.

LAX Northside Campus District

Area 1

Up to 10,000 square feet of Area 1 is categorized under the Open Space/Office, and Research and Development land use category. Natural gas use for the Office, and Research and Development Use land use category is generated at a rate of 3,550 cubic feet per month. Based on the amount of developable land in Area 1, there would be up to 135 thousand cubic feet of natural gas used per month by the proposed Project. Natural gas use for Area 1 represents less than one percent of the proposed Project's total natural gas usage.

Area 2 and 3

Area 2 and Area 3 allows for up to 1,065,000 square feet of development in the Office, and Research and Development Use and Community and Civic Use land use categories. Natural gas use for both categories is generated at a rate of 3,550 cubic feet per month. Based on the amount of developable land in both Area 2 and Area 3, there would be up to 16.93 million cubic feet of natural gas used per month by the proposed Project. Collectively, natural gas use for

both Areas represents approximately two thirds of the proposed Project's total natural gas usage at 67 percent.

LAX Northside Airport Support District

Area 4 - Area 10

Natural gas use for the Airport Support land use category is generated at a rate of 3,550 cubic feet per month. Based on the 600,000 square feet of developable land available in this District, Areas 4 through 10 would collectively allow for up to 444 thousand cubic feet of natural gas used per month. This represents approximately two percent of the total natural gas use for the proposed Project.

Project Natural Gas Usage

Natural Gas Supply. The annual natural gas demand of the proposed Project, which is 300 million cubic feet per year, is approximately 0.03 percent of the projected total demand of the SCGC service area at proposed Project buildout, which is 948.64 billion cubic feet, and is within the anticipated service capabilities of SCGC. Current transmission and distribution facilities for natural gas are adequate to meet the demands of the proposed Project.

Additionally, in order to reduce natural gas consumption, LAWA would implement LAX Master Plan Commitment E-1, Energy Conservation and Efficiency Program. This program would be consistent with federal policies pertaining to energy efficiency of new facilities.

Operational impacts would not result in an increase in demand for natural gas that exceeds available supply infrastructure capabilities, so the operation of the proposed Project would not require new natural gas supply facilities or capacity enhancing alterations to existing facilities. Therefore, operational impacts related to natural gas supply would be less than significant.

Natural Gas Distribution Infrastructure. As discussed above, it is not anticipated that the proposed Project would require new natural gas supply facilities, distribution infrastructure, or capacity enhancing alterations to existing facilities.

However, the proposed Project will allow the construction of subsurface parking, which would be up to 20 feet deep and may interfere with existing natural gas distribution infrastructure, requiring adjustment/relocation. Potential utility conflicts during construction would be minimized with the implementation of a utility relocation program under LAX Master Plan Commitment PU-1, Develop a Utility Relocation Program. Implementing this commitment would ensure that potential construction-related impacts would be less than significant.

Additionally, under LAX Master Plan Commitment E-2, Coordination with Utility Providers, a utility coordination program would be implemented by LAWA to ensure that adequate natural gas distribution facilities are available to support the natural gas needs associated with the proposed Project. Development and implementation of a utility coordination program would reduce potential impacts to the natural gas distribution system to a level that is less than significant.

Operational impacts would not result in an increase in demand for natural gas that exceeds available distribution infrastructure capabilities, so the operation of the proposed Project would not require new natural gas distribution facilities or capacity enhancing alterations to existing facilities. Therefore, operational impacts related to natural gas distribution infrastructure would be less than significant.

4.15.3.4.6 Transfer Program

The proposed Project would include flexibility to allow for transfers of floor area for within Districts on a per square foot basis. While transfers of floor area across Districts would be permitted, the maximum proposed Project total of 2,320,000 square feet may not be exceeded. Floor area transfers would not result in new impacts with regard to wastewater, water use, solid waste, and energy. Floor area transfers would not result in any new land use types that are not analyzed herein or in additional development above the maximum proposed Project total of 2,320,000 square feet. Thus, floor area transfers would not change the approximately 269,580 gpd of wastewater, 552,922 gpd of water, 44,799 lbs/day of solid waste, 34,625,600 kWh/year of electricity, and 25,244,050 cubic feet/month of natural gas that was calculated for the proposed Project. Therefore, as wastewater, water use, solid waste, and energy would not be substantially changed as a result of floor area transfers, floor area transfers would not alter the conclusions with regard to utility services. Should floor area be transferred across the Districts, the resulting impacts would be similar to those evaluated herein.

4.15.4 Cumulative Impacts

4.15.4.1 Wastewater

4.15.4.1.1 Wastewater Conveyance

Related new development projects occurring in the Project site vicinity would be subject to LAMC Sections 64.11 and 64.12, which require approval of a sewer permit (S-Permit) prior to connection to the sewer system. Additionally, in order to connect to the sewer system, related projects in the City of Los Angeles would be subject to payment of the City's Sewerage Facilities Charge. Payment of such fees would help to offset the costs associated with infrastructure improvements that would be needed to accommodate wastewater generated by future growth. Therefore, cumulative impacts on wastewater conveyance systems would be less than significant.

4.15.4.1.2 Wastewater Treatment

The buildout year for the proposed Project is 2022. Therefore, cumulative impacts on wastewater facilities are analyzed relative to 2022 growth projected in the HSA. The 2022 growth projections are based on the Southern California Association of Government's 2008 Regional Transportation Plan. As indicated in Section 3.0, Environmental Setting, the growth associated with the identified related projects are within the 2022 SCAG growth forecasts.

The IRP projects ADWF and wastewater treatment capacity through 2020. Projected year 2020 ADWF for the HSA is 511 mgd. With future improvements identified in the IRP the total effective capacity of the HSA in 2020 would be approximately 570 mdg. ADWF for the HSA in 2030 is expected to be 381 mgd. Based on the projected capacity and projected ADWF, the HSA would have an available capacity of 189 mgd in 2030. As discussed above, the proposed Project would generate a net increase of 269,580 gpd in average daily flows. The proposed Project, combined with the forecasted 2030 ADWF would result in a total cumulative wastewater flow of approximately 381.3 mdg, which is within the projected capacity of the HSA. Therefore, cumulative impacts on wastewater treatment would be less than significant.

4.15.4.2 Water Use

4.15.4.2.1 Water Supply

The geographic context for the cumulative impact analysis on water supply is the LADWP service area, i.e., the City of Los Angeles. As discussed above, LADWP is required to prepare and periodically update an UWMP to plan and provide for water supplies to serve existing and projected demands. The 2010 UWMP prepared by LADWP accounts for existing development within the City of Los Angeles, as well as projected growth through 2035.

In 2010, the City of Los Angeles used 545,771 acre-feet of water. In 2020, water demand is projected to reach 622,732 AFY. In 2030, water demand is projected to reach 643,785 AFY.[32] The UWMP does not provide a projected demand specific to 2022, which is the proposed Project buildout year, but an approximation using the 2020 and 2030 estimates indicate that the demand in 2022 would be 626,944 AFY. This would represent an 81,589 acre-feet per year, or 72.8 mgd, increase in water demand from 2010 to 2022. With respect to the operation of uses proposed for the Project site, an estimated total of 552,922 gpd of water would be consumed.

Section 3.0, Environmental Setting, identifies 34 related projects anticipated to be developed within the City of Los Angeles. The estimated water demand of the related projects is shown in **Table 4.15-17**. As shown, the related projects would have an average daily water demand of approximately 1,901,060 gpd, or 2,130.92 AF annually. Therefore, the proposed Project in conjunction with the 34 related projects would yield a total average daily water demand of approximately 2,453,982 gpd, or 2,750.69 AF annually. As previously stated, LADWP's 2010 UWMP projected that water demand within the LADWP service area would reach approximately 626,732 AF annually by 2022. Thus, the total annual cumulative water demand of approximately 2,750.69 AF associated with the proposed Project and the related projects would fall within the available and projected water demand of the LADWP's 2010 UWMP. Therefore, cumulative impacts on water supply would be less than significant.

[32] City of Los Angeles, Department of Water and Power, Urban Water Management Plan, 2010. p. 10

Table 4.15-17

Related Projects Water Demand

ID	Related Project	Address	City	Residential	Residential Demand	Restaurant	Restaurant Demand	Retail	Retail Demand	Office	Office Demand	Other	Other Demand	School	School Demand	Total Demand (gpd)	Total Demand (AFY)
Factor[a]					**200**		**0.2**		**0.8**		**0.15**		**0.8**		**8**		**892.1325914**
Units					**gpd/unit**		**gpd/sf**		**gpd/sf**		**gpd/sf**		**gpd/sf**		**gpd/ student**	**gpd**	**AFY**
1	Mixed-use office & retail	11955 W. Washington Blvd	Los Angeles		-		-	9,500	7,600	41,000	6,150		-		-	13,750	15.41
2	Mixed-use Apartment & Office	2900 S. Sepulveda Blvd	Los Angeles	48	9,600		-		-	1,500	225		-		-	9,825	11.01
3	Mixed-use Apartment & Retail	9901 Washington Blvd	Los Angeles	131	26,200		-	12,000	9,600		-		-		-	35,800	40.13
4	Mixed-use Apartment, office, retail, and restaurant	10601 Washington Blvd	Los Angeles	126	25,200	9,000	1,800	9,000	7,200	23,000	3,450		-		-	37,650	42.20
5	Mixed-use condominium and retail	3115 S. Sepulveda Blvd	Los Angeles	175	35,000		-	28,000	22,400		-		-		-	57,400	64.34
6	Condominium	11131 Rose Ave	Los Angeles	227	45,400		-		-		-		-		-	45,400	50.89
7	Mixed-use Apartment & Retail	3417 Motor Ave	Los Angeles	115	23,000		-	975,000	780,000		-		-		-	803,000	900.09
8	Hotel & Restaurant Project	305 Ocean Front Walk	Los Angeles	24	4,800	2,000	400		-		-		-		-	5,200	5.83
9	Restaurant & Retail	10612 National Blvd	Los Angeles			2,500	500	3,500	2,800		-		-		-	3,300	3.70
10	LADPW Maintenance Yard	3233 Thatcher Ave	Los Angeles				-		-		-		-		-	-	-
11	Apartment	7280 W. Manchester Ave	Los Angeles	126	25,200		-	24,000	19,200		-		-		-	44,400	49.77

Table 4.15-17

Related Projects Water Demand

ID	Related Project	Address	City	Residential	Residential Demand	Restaurant	Restaurant Demand	Retail	Retail Demand	Office	Office Demand	Other	Other Demand	School	School Demand	Total Demand (gpd)	Total Demand (AFY)
Factor[a]					**200**		**0.2**		**0.8**		**0.15**		**0.8**		**8**		**892.1325914**
Units					**gpd/unit**		**gpd/sf**		**gpd/sf**		**gpd/sf**		**gpd/sf**		**gpd/ student**	**gpd**	**AFY**
12	Proposed Hotel & Airport Parking	6225 W. Century Blvd	Los Angeles	340	68,000		-		-		-		-		-	68,000	76.22
13	Mixed-use apartment, retail and restaurant	6819 Pacific Ave	Los Angeles	29	5,800	3,000	600	1,000	800		-		-		-	7,200	8.07
14	Mixed-use apartment and retail	220 Culver Blvd	Los Angeles	63	12,600		-	6,000	4,800		-		-		-	17,400	19.50
15	Mixed-use condominium and retail	138 Culver Blvd	Los Angeles	63	12,600		-	10,000	8,000		-		-		-	20,600	23.09
16	MTA Bus Facility	10701 S. La Cienega Blvd	Los Angeles		-		-		-		-		-		-	-	-
17	LMU Master Plan	1 LMU Dr	Los Angeles	428	85,600		-		-		-	483,000	386,400		-	472,000	529.07
18	Car Wash	9204 Airport Blvd	Los Angeles		-		-		-		-	15,000	12,000		-	12,000	13.45
19	Retail Space	585 Venice Blvd	Los Angeles		-		-	10,000	8,000		-		-		-	8,000	8.97
20	Walk-in Bank	12410 Venice Blvd	Los Angeles		-		-		-	2,800	420		-		-	420	0.47
21	Mixed-use	9336 Washington Blvd	Los Angeles		-		-		-		-	107,688	86,150		-	86,150	96.57
22	Apartment	8614 Saran Dr	Los Angeles	49	9,800		-		-		-		-		-	9,800	10.98
23	Supermarket	1600 Lincoln Blvd	Los Angeles		-		-	36,800	29,440		-		-		-	29,440	33.00
24	Boeing Selby Remodel & Office Addition	900 N. Sepulveda Blvd	Los Angeles		-		-		-	38,759	5,814		-		-	5,814	6.52

Table 4.15-17

Related Projects Water Demand

ID	Related Project	Address	City	Residential	Residential Demand	Restaurant	Restaurant Demand	Retail	Retail Demand	Office	Office Demand	Other	Other Demand	School	School Demand	Total Demand (gpd)	Total Demand (AFY)
Factor[a]					**200**		**0.2**		**0.8**		**0.15**		**0.8**		**8**		**892.1325914**
Units					**gpd/unit**		**gpd/sf**		**gpd/sf**		**gpd/sf**		**gpd/sf**		**gpd/ student**	**gpd**	**AFY**
25	Walk-in Bank or Coffee Shop	6066 W. Manchester Ave	Los Angeles		-		-	4,000	3,200		-		-		-	3,200	3.59
26	Residential & Retail	580 Venice Blvd	Los Angeles	5	1,000		-	5,700	4,560		-		-		-	5,560	6.23
27	Dollar Tree Discount Store	4160 Lincoln Blvd	Los Angeles		-		-	8,000	6,400		-		-		-	6,400	7.17
28	Windward School	11350 Palms Blvd	Los Angeles		-		-		-		-		-	75	600	600	0.67
29	Auto Care Shop	8332 Osage Ave	Los Angeles		-		-		-		-	31,000	24,800		-	24,800	27.80
30	Fast-food Restaurant	6249 W. 87th St	Los Angeles		-	1,455	291		-		-		-		-	291	0.33
31	Goethe International Charter School	2920 S. Sepulveda Blvd	Los Angeles		-		-		-		-		-	120	960	960	1.08
32	Office Building	6161 W. Centinela Ave	Los Angeles		-		-		-	342,000	51,300		-		-	51,300	57.50
33	Apartment	4100 Del Rey Ave	Los Angeles	77	15,400		-		-		-		-		-	15,400	17.26
34	Proposed Aviation Station Project	11604 Aviation Blvd	Los Angeles		-		-		-		-		-		-	-	-
															Related Projects Total	1,901,060	2,130.92
															Proposed Project	552,922	619.7755864

Notes:
gpd = gallons per day
sf = square feet
AFY = acre-feet per year
[a] Factor from the South Coast Air Quality Management District, CEQA Handbook.
Source: URS, 2014.

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4.15.4.2.2 Water Infrastructure

The geographic context for the cumulative impact analysis on water infrastructure is the Project site vicinity. Development of the proposed Project and future new development in the Project site vicinity would cumulatively increase demand on the existing water infrastructure system. However, new development projects would be subject to discretionary review to assure that the existing public utility facilities would be adequate to meet the domestic and fire water demands of each project. Furthermore, LADWP, Los Angeles Department of Public Works, and the City of Los Angeles Fire Department would conduct ongoing evaluations to ensure facilities are adequate. Therefore, cumulative impacts on the water infrastructure system would be less than significant.

4.15.4.3 Solid Waste

Construction of the proposed Project and forecasted 2022 growth in the County of Los Angeles (inclusive of the related projects identified in Section 3.0, Environmental Setting) would generate construction and demolition waste and thus, would cumulatively increase the need for waste disposal at the County of Los Angeles' unclassified landfills. As shown in **Table 4.15-13**, the proposed Project would generate a total of approximately 397,778 tons of construction and demolition waste. As noted above, LAX Master Plan Commitments SW-2, Requirements for the Use of Recycled Materials during Construction, and LAX Master Plan Commitment SW-3, Requirements for the Recycling of Construction and Demolition Waste, would reduce the amount of construction waste requiring disposal by requiring contractors to use recycled construction materials and to recycle construction-related waste. It is anticipated that future cumulative development would also implement similar measures to divert construction and demolition waste from landfill disposal. Furthermore, unclassified landfills generally do not face capacity issues and would be expected to have sufficient capacity to accommodate cumulative demand. Thus, cumulative construction impacts on unclassified landfills would be less than significant.

Operation of the proposed Project in conjunction with forecasted 2022 growth in the County of Los Angeles (inclusive of related projects) would generate municipal solid waste and thus, would cumulatively increase the need for waste disposal at landfills. The buildout year for the proposed Project is 2022. Therefore, cumulative impacts on solid waste facilities and services were analyzed relative to 2022 growth projected in the County of Los Angeles. The 2022 growth projections are based on the Southern California Association of Governments' (SCAG) 2008 Regional Transportation Plan. As indicated in Section 3.0, Environmental Setting, the growth associated with all identified related projects is within SCAG growth forecasts. Proposed Project growth in conjunction with all identified related projects would also be within SCAG growth forecasts. Therefore, the analysis does consider the effects of cumulative growth.

The demand for landfill capacity is continually evaluated by the County of Los Angeles through preparation of the Los Angeles County Integrated Waste Management Plan (IWMP) annual reports. Each annual IWMP report assesses future landfill disposal needs over a 15 year planning horizon. As such, the most recent 2010 IWMP annual report only projects out waste generation and available landfill capacity through 2035. Per the 2010 IWMP annual report, the forecasted 2022 waste generation for the County is approximately 26 million tons.[33] The

[33] County of Los Angeles, Department of Public Works, Countywide Integrated Waste Management Plan 2010 Annual Report, 2010.

estimated proposed Project generation of approximately 4,905 tons per year would represent only a small percentage (approximately 0.02 percent) of the County's cumulative waste generation in 2022 and is within projected cumulative waste generation. Thus, the proposed Project's contribution to the County's cumulative waste stream would not be substantial.

As indicated in the 2010 IWMP annual report, based on scenario analysis the County would meet the disposal capacity requirements of AB 939 by a combination of successfully permitting and developing all proposed in-County landfills, and developing conversion and other alternative technologies. Additionally, by continuing to enhance its diversion programs and increasing the Countywide diversion rate the County may further ensure adequate disposal capacity is available through the planning period. Therefore, cumulative impacts to solid waste would be less than significant.

4.15.4.4 Energy

4.15.4.4.1 Electricity

The geographic context for the cumulative impact analysis on electricity is the service area of LADWP. Operation of the proposed Project in conjunction with forecasted 2022 growth in LADWP's service area would increase electricity consumption and thus, would cumulatively increase the need for additional electricity supplies and infrastructure capacity.

The annual electricity demand of the proposed Project, which is 35 GWh per year, is approximately 0.12 percent of the total demand of the LADWP service area, which will be 28,333 GWh at project buildout, and is within the anticipated service capabilities of LADWP.

As previously analyzed, LADWP forecasts that by 2022, electricity consumption within its service area would increase to 28,333 GWh per year. Future 2022 cumulative growth within LADWP's service area is accounted for in this forecast. Thus, the proposed Project related annual electricity consumption of approximately 35 GWh would represent approximately 0.12 percent of the forecasted cumulative energy consumption in 2022. Based on this small percentage, the proposed Project's contribution to the cumulative electricity demand would not be substantial. The annual electricity demand attributable to the related projects in LADWP's service area identified in Section 3.0, Environmental Setting, of this Draft EIR is shown in **Table 4.15-18**. Three related projects do not currently have known square footages and are therefore excluded from the analysis as insufficient information exists to calculate electricity usage. Sixteen of the related projects would remove existing uses that currently consume electricity. The cumulative analysis considers gross new uses and does not exclude current uses that would be removed, presenting a conservative analysis. As indicated, these related projects would result in an estimated electricity demand of 9,384,914 MWh per year, or approximately 9,385 GWh per year. Therefore, the electricity demand attributable to these related projects is within LADWP's 2022 electricity demand forecasts. Additionally, these related projects and other future development projects through 2022 would be subject to Title 24, the CalGreen Code, which are updated periodically to incorporate new technologies and methods that achieve greater energy efficiency. Thus, cumulative impacts on electricity would be less than significant.

Table 4.15-18

Related Projects Electricity Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (kWh/sf or unit/year)[a]	Electricity Usage (MWh)
1	Mixed-use office & retail	11955 W Washington Blvd	Los Angeles	Office	41.000	12.95	530.950
				Retail	9.500	13.55	128.725
2	Mixed-use Apartment & Office	2900 S Sepulveda Blvd	Los Angeles	Apartment	48.000	5626.5	270,072.000
				Office	1.500	12.95	19.425
3	Mixed-use Apartment & Retail	9901 Washington Blvd	Los Angeles	Apartment	131.000	5626.5	737,071.500
				Retail	12.000	13.55	162.600
4	Mixed-use Apartment, office, retail, and restaurant	10601 Washington Blvd	Los Angeles	Apartment	126.000	5626.5	708,939.000
				Office	23.000	12.95	297.850
				Retail	9.000	13.55	121.950
				Restaurant	9.000	47.45	427.050
5	Mixed-use condominium and retail	3115 S Sepulveda Blvd	Los Angeles	Condominium	175.000	5626.5	984,637.500
				Retail	28.000	13.55	379.400
6	Condominium	11131 Rose Ave	Los Angeles	Condominium	227.000	5626.5	1,277,215.500
7	Mixed-use Apartment & Retail	3417 Motor Ave	Los Angeles	Apartment	115.000	5626.5	647,047.500
				Retail	975.000	13.55	13,211.250
8	Hotel & Restaurant Project	305 Ocean Front Walk	Los Angeles	Hotel[b]	9.600	9.95	95.520
				Restaurant	2.000	47.45	94.900
9	Restaurant & Retail	10612 National Blvd	Los Angeles	Restaurant	2.500	47.45	118.625
				Retail	3.500	13.55	47.425

Table 4.15-18

Related Projects Electricity Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (kWh/sf or unit/year)[a]	Electricity Usage (MWh)
10	LADPW Maintenance Yard	3233 Thatcher Ave	Los Angeles	Utility Maintenance Yard	N/A	N/A	N/A
11	Apartment	7280 W Manchester Ave	Los Angeles	Apartment	126.000	5626.5	708,939.000
				Retail	24.000	13.55	325.200
12	Proposed Hotel & Airport Parking	6225 W Century Blvd	Los Angeles	Hotel[b]	136.000	9.95	1,353.200
13	Mixed-use apartment, retail and restaurant	6819 Pacific Ave	Los Angeles	Apartment	29.000	5626.5	163,168.500
				Restaurant	3.000	47.45	142.350
				Retail	1.000	13.55	13.550
14	Mixed-use apartment and retail	220 Culver Blvd	Los Angeles	Apartment	63.000	5626.5	354,469.500
				Retail	6.000	13.55	81.300
15	Mixed-use condominium and retail	138 Culver Blvd	Los Angeles	Apartment	63.000	5626.5	354,469.500
				Retail	10.000	13.55	135.500
16	MTA Bus Facility	10701 S La Cienega Blvd	Los Angeles	Transit Station	N/A	N/A	N/A
17	LMU Master Plan	1 LMU Dr	Los Angeles	University	457.000	11.55	5,278.350
				Residential	428.000	5626.5	2,408,142.000
				Athletic Uses	26.000	10.5	273.000
18	Car Wash	9204 Airport Blvd	Los Angeles	Car Wash	15.000	13.55	203.250

Table 4.15-18

Related Projects Electricity Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (kWh/sf or unit/year)[a]	Electricity Usage (MWh)
19	Retail Space	585 Venice Blvd	Los Angeles	Retail	10.000	13.55	135.500
20	Walk-in Bank	12410 Venice Blvd	Los Angeles	Bank	2.800	12.95	36.260
21	Mixed-use	9336 Washington Blvd	Los Angeles	Retail/Office/ Restaurant	107.688	13.55	1,459.172
22	Apartment	8614 Saran Dr	Los Angeles	Apartment	49.000	5626.5	275,698.500
23	Supermarket	1600 Lincoln Blvd	Los Angeles	Market	36.800	13.55	498.640
24	Boeing Selby Remodel & Office Addition	900 N Sepulveda Blvd	Los Angeles	Office	198.502	12.95	2,570.601
25	Walk-in Bank or Coffee Shop	6066 W Manchester Ave	Los Angeles	Retail	4.000	13.55	54.200
26	Residential & Retail	580 Venice Blvd	Los Angeles	Apartment	5.000	5626.5	28,132.500
				Retail	5.700	13.55	77.235
27	Dollar Tree Discount Store	4160 Lincoln Blvd	Los Angeles	Retail	8.000	13.55	108.400
28	Windward School	11350 Palms Blvd	Los Angeles	School[c]	50.350	5.9	297.065
29	Auto Care Shop	8332 Osage Ave	Los Angeles	Retail- Auto Care Shop	31.000	13.55	420.050
30	Fast-food Restaurant	6249 W 87th St	Los Angeles	Restaurant	1.455	47.45	69.040
31	Goethe International Charter School	2920 S Sepulveda Blvd	Los Angeles	School[c]	12.720	5.9	75.048
32	Office Building	6161 W Centinela Ave	Los Angeles	Office	342.000	12.95	4,428.900

Table 4.15-18

Related Projects Electricity Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (kWh/sf or unit/year)[a]	Electricity Usage (MWh)
33	Apartment	4100 Del Rey Ave	Los Angeles	Apartment	77.000	5626.5	433,240.500
34	Proposed Aviation Station Project	11604 Aviation Blvd	Los Angeles	Transit Station	N/A	N/A	N/A
Total Related Projects Electricity Demand (MWh)							**9,384,914.481**

Notes:
ksf = thousand square feet
sf = square feet
MWh = megawatt hours
[a] Factor from the South Coast Air Quality Management District, CEQA Handbook.
[b] Assumes average hotel room size of 400 sf.
[C] Assumes 106 sf./student based on average Western Region school sizes. California Department of Education, Complete Schools Report, http://www.cde.ca.gov/ls/fa/sf/completesch.asp, accessed October 2013.
Source: URS, 2014.

4.15.4.4.2 Natural Gas

The geographic context for the cumulative impact analysis on natural gas is the service area of The Gas Company. Operation of the proposed Project in conjunction with forecasted 2022 growth in The Gas Company's service area would increase natural gas consumption and thus, would cumulatively increase the need for additional natural gas supplies and infrastructure capacity. As previously analyzed, The Gas Company forecasts that by 2020, natural gas consumption within its service area would increase to 948.64 billion cubic feet per year. Future cumulative growth within The Gas Company's service area is accounted for in this forecast. Thus, the proposed Project-related annual natural gas consumption (300 million cubic feet per year) would represent approximately 0.03 percent of the forecasted cumulative natural gas consumption in 2022. Based on this small percentage, the proposed Project's contribution to the cumulative natural gas demand would not be substantial.

The annual natural gas demand attributable to the 104 related projects in the Gas Company's service area identified in Section 3.0, Environmental Setting, of this Draft EIR is shown in **Table 4.15-19**. Eight related projects do not currently have known square footages and are therefore excluded from the analysis as insufficient information exists to calculate natural gas usage. Twenty-nine of the related projects would remove existing uses that currently consume natural gas. The cumulative analysis considers gross new uses and does not exclude current uses that would be removed, presenting a conservative analysis. As indicated, these related projects would result in an estimated natural gas demand of 12,789,816 kscf per year. Therefore, the natural gas demand attributable to these related projects is within The Gas Company's 2020 natural gas demand forecasts. Additionally, these related projects and other future development projects through 2022 would be subject to Title 24, CalGreen Code, which are updated periodically to incorporate new technologies and methods that achieve greater energy efficiency. Thus, cumulative impacts on natural gas would be less than significant.

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Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
1	Mixed-use office & retail	11955 W Washington Blvd	Los Angeles	Office	41.000	2.00	82.000
				Retail	9.500	2.90	27.550
2	Mixed-use Apartment & Office	2900 S Sepulveda Blvd	Los Angeles	Apartment	48.000	4,011.50	192,552.000
				Office	1.500	2.00	3.000
3	Mixed-use Apartment & Retail	9901 Washington Blvd	Los Angeles	Apartment	131.000	4,011.50	525,506.500
				Retail	12.000	2.90	34.800
4	Mixed-use Apartment, office, retail, and restaurant	10601 Washington Blvd	Los Angeles	Apartment	126.000	4,011.50	505,449.000
				Office	23.000	2.00	46.000
				Retail	9.000	2.90	26.100
				Restaurant	9.000	4.80	43.200
5	Mixed-use condominium and retail	3115 S Sepulveda Blvd	Los Angeles	Condominium	175.000	4,011.50	702,012.500
				Retail	28.000	2.90	81.200
6	Condominium	11131 Rose Ave	Los Angeles	Condominium	227.000	4,011.50	910,610.500
7	Mixed-use Apartment & Retail	3417 Motor Ave	Los Angeles	Apartment	115.000	4,011.50	461,322.500
				Retail	975.000	2.90	2,827.500
8	Hotel & Restaurant Project	305 Ocean Front Walk	Los Angeles	Hotel[b]	9.600	4.80	46.080
				Restaurant	2.000	4.80	9.600
9	Restaurant & Retail	10612 National Blvd	Los Angeles	Restaurant	2.500	4.80	12.000
				Retail	3.500	2.90	10.150

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
10	LADPW Maintenance Yard	3233 Thatcher Ave	Los Angeles	N/A	N/A	N/A	N/A
11	Apartment	7280 W Manchester Ave	Los Angeles	Apartment	126.000	4,011.50	505,449.000
				Retail	24.000	2.90	69.600
12	Proposed Hotel & Airport Parking	6225 W Century Blvd	Los Angeles	Hotel[b]	136.000	4.80	652.800
13	Mixed-use apartment, retail and restaurant	6819 Pacific Ave	Los Angeles	Apartment	29.000	4,011.50	116,333.500
				Restaurant	3.000	4.80	14.400
				Retail	1.000	2.90	2.900
14	Mixed-use apartment and retail	220 Culver Blvd	Los Angeles	Apartment	63.000	4,011.50	252,724.500
				Retail	6.000	2.90	17.400
15	Mixed-use condominium and retail	138 Culver Blvd	Los Angeles	Apartment	63.000	4,011.50	252,724.500
				Retail	10.000	2.90	29.000
16	MTA Bus Facility	10701 S La Cienega Blvd	Los Angeles	Transit	N/A	N/A	N/A
17	LMU Master Plan	1 LMU Dr	Los Angeles	University	457.000	4.80	2,193.600
				Residential	428.000	4,011.50	1,716,922.000
				Athletic Uses	26.000	2.90	75.400
18	Car Wash	9204 Airport Blvd	Los Angeles	Car Wash	15.000	2.90	43.500
19	Retail Space	585 Venice Blvd	Los Angeles	Retail	10.000	2.90	29.000

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
20	Walk-in Bank	12410 Venice Blvd	Los Angeles	Bank	2.800	2.00	5.600
21	Mixed-use	9336 Washington Blvd	Los Angeles	Retail/Office/ Restaurant	107.688	2.90	312.295
22	Apartment	8614 Saran Dr	Los Angeles	Apartment	49.000	4,011.50	196,563.500
23	Supermarket	1600 Lincoln Blvd	Los Angeles	Market	36.800	2.90	106.720
24	Boeing Selby Remodel & Office Addition	900 N Sepulveda Blvd	Los Angeles	Office	198.502	2.00	397.004
25	Walk-in Bank or Coffee Shop	6066 W Manchester Ave	Los Angeles	Retail	4.000	2.90	11.600
26	Residential & Retail	580 Venice Blvd	Los Angeles	Apartment	5.000	4,011.50	20,057.500
				Retail	5.700	2.90	16.530
27	Dollar Tree Discount Store	4160 Lincoln Blvd	Los Angeles	Retail	8.000	2.90	23.200
28	Windward School	11350 Palms Blvd	Los Angeles	School[c]	50.350	2.00	100.700
29	Auto Care Shop	8332 Osage Ave	Los Angeles	Retail- Auto Care Shop	31.000	2.90	89.900
30	Fast-food Restaurant	6249 W 87th St	Los Angeles	Restaurant	1.455	4.80	6.984
31	Goethe International Charter School	2920 S Sepulveda Blvd	Los Angeles	School[c]	12.720	2.00	25.440
32	Office Building	6161 W Centinela Ave	Los Angeles	Office	342.000	2.00	684.000

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
33	Apartment	4100 Del Rey Ave	Los Angeles	Apartment	77.000	4,011.50	308,885.500
34	Proposed Aviation Station Project	11604 Aviation Blvd	Los Angeles	Transit Station	N/A	N/A	N/A
35	Condominium	4139-4145 Duquesne Ave	Culver City	Condominium	7.000	4,011.50	28,080.500
36	3 Story Mixed-Use Development	11042-11056 Washington Blvd	Culver City	Retail	485.000	2.90	1,406.500
37	Brotman Medical Center	3828 Hughes Ave	Culver City	Condominium	232.000	4,011.50	930,668.000
38	Commercial Building	9920 Jefferson Blvd	Culver City	Retail	15.000	2.90	43.500
39	Office	9336 Washington Blvd	Culver City	Office	107.400	2.00	214.800
40	Auto Repair	11304 Culver Blvd	Culver City	Retail- Auto Repair	N/A	N/A	N/A
41	Mixed-Use Building	9355 Culver Blvd	Culver City	Office/Apartment	N/A	N/A	N/A
42	Office Building	13110 Washington Blvd	Culver City	Office	1.032	2.00	2.064
43	Office and Warehouse	6029 Slauson Ave	Culver City	Office	14.686	2.00	29.372
44	Office and Retail	11012-11014 Washington Blvd	Culver City	Office/Retail	3.385	2.90	9.817
45	Commercial & Condominium Building	12803 Washington Blvd	Culver City	Retail/Condominium	37.308	2.90	108.193
46	Vehicle Repair Shop	11167 Washington Blvd	Culver City	Retail- Auto Repair	N/A	N/A	N/A

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
47	Office Building	5800 Uplander Way	Culver City	Office	49.881	2.00	99.762
48	Special Needs School	12095-12101 Washington Blvd	Culver City	School Expansion	N/A	N/A	N/A
49	Office Building	9919 Jefferson Blvd	Culver City	Office	113.467	2.00	226.934
50	Office Tower & Parking Structure	6161 W Centinela Ave	Culver City	Office	342.000	2.00	684.000
51	Office Building	8665 Hayden Ave	Culver City	Office	62.765	12.95	812.807
52	Mixed-Use Retail & Office	4043 Irving Pl	Culver City	Condominium	28.000	4,011.50	112,322.000
				Office	1.403	2.00	2.806
53	Condominium	4058 Madison Ave	Culver City	Condominium	4.000	4,011.50	16,046.000
54	Condominium	3862 Huron Ave	Culver City	Condominium	5.000	4,011.50	20,057.500
55	Condominium	4228 Madison Ave	Culver City	Condominium	2.000	4,011.50	8,023.000
56	Condominium	4014 Van Buren Pl	Culver City	Condominium	4.000	4,011.50	16,046.000
57	Fueling Station [a]	10638 Culver Blvd	Culver City	Expand Fueling Station at Car Wash	N/A	N/A	N/A
58	Condominium	13340 W Washington Blvd	Culver City	Condominium	41.000	4,011.50	164,471.500
59	Data Center / Office	445 N Douglas St	El Segundo	Office	332.000	2.00	664.000
60	Hotel	888 N Sepulveda Blvd	El Segundo	Hotel[b]	71.200	4.80	341.760

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
61	Office	2350 E El Segundo Blvd	El Segundo	Office	1.887	2.00	3.774
				Industrial	25.000	2.90	72.500
				Restaurant	75.000	4.80	360.000
				Hotel[b]	40.000	4.80	192.000
				Retail	75.000	2.90	217.500
				Child Care Center	7.000	2.90	20.300
				Fitness Center	19.000	2.90	55.100
62	El Segundo Corporate Campus	700-800 N Nash St	El Segundo	Office	1.887	2.00	3.774
				Industrial	25.000	2.90	72.500
				Restaurant	75.000	4.80	360.000
				Hotel[b]	40.000	4.80	192.000
				Retail	75.000	2.90	217.500
				Child Care Center	7.000	2.90	20.300
				Fitness Center	19.000	2.90	55.100
63	Office	1950 E Grand Ave	El Segundo	Office	93.569	2.00	187.138
64	Medical Office	1700 E Grand Ave	El Segundo	Office	104.980	2.00	209.960
65	Hotel	101 Continental Blvd	El Segundo	Hotel[b]	66.800	4.80	320.640
66	Industrial Uses	215 California St	El Segundo	Industrial	82.429	2.90	239.044
67	Data Center / Office	444 N Nash St	El Segundo	Office	116.756	2.00	233.512

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
68	LA Air Force Base - Area A	SE Aviation Blvd	El Segundo	Condominium	525.000	4,011.50	2,106,037.500
69	Industrial Uses	222 Kansas St	El Segundo	Industrial	89.249	2.90	258.822
70	Hotel	1960 E Grand Ave	El Segundo	Hotel[b]	60.000	4.80	288.000
71	Residential	425-429 Indiana St	El Segundo	Residential	8.000	4,011.50	32,092.000
72	Condominium	616-620 W Imperial Hwy	El Segundo	Condominium	12.000	4,011.50	48,138.000
73	Condominium	301, 303, 305 W Palm Ave	El Segundo	Condominium	7.000	4,011.50	28,080.500
74	Plaza El Segundo	NE Sepulveda Blvd	El Segundo	Retail	425.000	2.90	1,232.500
75	Corporate Office	455 / 475 Continental Blvd	El Segundo	Office	304.595	2.00	609.190
76	Shopping Center	850 S Sepulveda Blvd	El Segundo	Retail	70.000	2.90	203.000
77	Walgreens	NE Sepulveda Blvd	El Segundo	Retail	67.000	2.90	194.300
78	Parking Structure	525 N Sepulveda Blvd	El Segundo	Parking Structure	328.532	2.90	952.743
79	Office/Industrial Condominium Project	222 Kansas St	El Segundo	Condominium	55.000	4,011.50	220,632.500
				Office	93.473	2.00	186.946
80	Mixed-Use Commercial	141 Main St	El Segundo	Retail	12.550	2.90	36.395

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
81	Warehouse, Office, Manufacturing	900, 950 Sepulveda Blvd & 960, 901 - 915 Selby St	El Segundo	Warehouse	20.819	2.90	60.375
				Manufacturing	139.558	2.90	404.718
				Office	14.025	2.00	28.050
82	Lifeguard Station	105 Vista del Mar	El Segundo	Lifeguard Station	1.400	2.00	2.800
83	Senior Assisted Living Facility	540 E Imperial Hwy	El Segundo	58-300 Residential Units Under Review	300.000	4,011.50	1,203,450.000
84	Indoor Ice Rink	555 N Nash St	El Segundo	Fitness Center- Ice Rink	17.315	2.90	50.214
85	Office	116 W El Segundo Blvd	El Segundo	Office	38.000	2.00	76.000
86	Fast-food Restaurant with Drive- Thru	600-630 N Sepulveda Blvd	El Segundo	Restaurant	3.714	4.80	17.827
87	Walgreens	2400 N Sepulveda Blvd	Manhattan Beach	Retail	15.000	2.90	43.500
88	Commercial / Office	1300 Highland Ave	Manhattan Beach	Retail/Office	15.000	2.90	43.500
89	Mixed-use Retail, Office, Coffee Shop	1000 N Sepulveda Blvd	Manhattan Beach	Office	23.000	2.00	46.000
				Retail	2.400	2.90	6.960
90	Mixed-use office & retail	222 N Sepulveda Blvd	Manhattan Beach	Office	12.000	2.00	24.000
				Retail	1.000	2.90	2.900

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
91	Rite-Aid	1100 Manhattan Beach Blvd	Manhattan Beach	Retail	13.000	2.90	37.700
92	Bank and Retail	1129 N Sepulveda Blvd	Manhattan Beach	Retail	6.000	2.90	17.400
93	Retail Space	1700 Rosecrans Ave	Manhattan Beach	Retail	10.000	2.90	29.000
94	Gas Station w/ Mini-Mart	1002 Manhattan Beach Blvd	Manhattan Beach	Retail- Gas Station Expansion	0.615	2.90	1.784
95	Bank	400 Manhattan Beach Blvd	Manhattan Beach	Retail- Bank Expansion	0.090	2.90	0.261
96	Manhattan Beach County Library	1320 Highland Ave	Manhattan Beach	Library	21.500	2.90	62.350
97	Manhattan Academy	1826 Manhattan Beach Blvd	Manhattan Beach	School	4.517	2.00	9.034
98	Manhattan Village Mall	3200 N Sepulveda Blvd	Manhattan Beach	Retail	125.000	2.90	362.500
99	Chevron	Aviation Blvd	Manhattan Beach	Retail- Gas Station	5.180	2.90	15.022
100	Louie Tomaro Office	2617 N Sepulveda Blvd	Manhattan Beach	Office	8.800	2.00	17.600
101	Manhattan Beach Work Lofts	1300 Highland Ave	Manhattan Beach	Retail/Office/Condo	15.000	2.90	43.500

Table 4.15-19

Related Projects Natural Gas Usage

ID	Related Project	Address	City	Land Use Type	Development Proposed (ksf or unit)	Factor (cf/sf or unit/month)[a]	Natural Gas Usage (cf)
102	Mixed-Use Building	3912 Highland Ave	Manhattan Beach	Retail	0.400	2.90	1.160
				Condominium	1.000	4,011.50	4,011.500
				Office	0.700	2.00	1.400
103	Chalk Preschool	1030 Manhattan Beach Blvd	Manhattan Beach	School	4.191	2.00	8.382
104	Lawndale Annex	14900 Aviation Blvd	Lawndale	Condominium	290.000	4,011.50	1,163,335.000
Total Related Projects Natural Gas Demand (cf)							**12,789,816.042**

Notes:

ksf = thousand square feet

cf = cubic feet

sf = square feet

[a] Factor from the South Coast Air Quality Management District, CEQA Handbook.

[b] Assumes average hotel room size of 400 sf.

[C] Assumes 106 sf./student based on average Western Region school sizes. California Department of Education, Complete Schools Report, http://www.cde.ca.gov/ls/fa/sf/completesch.asp, accessed October 2013.

Source: URS, 2014.

4.15.5 Mitigation Measures

4.15.5.1 Wastewater, Water Use, Solid Waste, and Energy

The proposed Project will be developed in compliance with all statutory requirements to preclude significant impacts to utility services. In addition, implementation of LAX Master Plan Commitments E-1, E-2, PU-1, SW-1, SW-2, SW-3, W-1, and W-2 and the Project Design Features would ensure that impacts relative to utility services associated with the proposed Project would be less than significant. Therefore, no mitigation measures specific to the proposed Project are required.

4.15.6 Level Of Significance After Mitigation

4.15.6.1 Wastewater

As impacts related to wastewater would be less than significant without mitigation in excess of what the LAX Master Plan EIR/EIS requires of LAWA projects (Section 4.15.2.1.3), impacts would remain less than significant.

4.15.6.2 Water Use

As impacts related to water use would be less than significant without mitigation in excess of what the LAX Master Plan EIR/EIS requires of LAWA projects (Section 4.15.2.1.3), impacts would remain less than significant.

4.15.6.3 Solid Waste

As impacts related to solid waste would be less than significant without mitigation in excess of what the LAX Master Plan EIR/EIS requires of LAWA projects (Section 4.15.2.1.3), impacts would remain less than significant.

4.15.6.4 Energy

No unavoidable adverse impacts on energy would occur with the development of the proposed Project. Therefore, the proposed Project would not have impacts related to utility services.