# 3.12

# UTILITIES

## 3.12.1 Introduction

This section identifies the existing utility service systems (water, wastewater, storm drains, solid waste, electricity, and natural gas) within the proposed project area, and addresses potential impacts on these systems that could result from development of the proposed Project. This section also describes the regulatory setting associated with utilities and the mitigation measures that would reduce impacts on utilities to less-than-significant levels.

## 3.12.2 Environmental Setting

For this EIR the proposed project's environmental setting generally consists of the Port of Los Angeles and the adjacent community of Wilmington. The public utility providers that serve this particular area include the City of Los Angeles Bureau of Sanitation, Los Angeles County Sanitation Districts, LADWP, and Southern California Gas Company. Each utility has been actively growing in concert with the growth experienced by the communities and region. The individual provisions for providing and delivering service within the particular geographic areas, as well as each utility's planning efforts to accommodate anticipated future growth are discussed in detail below.

The specific study area considered in this section encompasses proposed project elements that would use, change, remove, or affect public utilities in some physical capacity. Proposed project elements that have this potential include the development proposed within the Avalon Waterfront District, the Avalon Development District, and the Waterfront Red Car Line/California Coastal Trail (as identified in Figure 2-2). The proposed Project does not include any physical changes to the Avalon Triangle Park area, as explained below in Section 3.12.4.1, "Methodology." Therefore, this area would not have an impact on the utilities, and further analysis is not required.

# 3.12.2.1 Utilities

## 3.12.2.1.1 Water

Water service is provided to the proposed project area by LADWP, which is responsible for conserving, treating, and distributing water for domestic, industrial, agricultural, and firefighting purposes within the City of Los Angeles. Water sources utilized by LADWP consist of both local, such as wells and recycled water (for nonpotable uses), and imported water, including water obtained via the Los Angeles Aqueducts and purchases from the Metropolitan Water District (MWD) of Southern California. MWD imports water from the Colorado River via the Colorado River Aqueduct, from northern California via the State Water Project's California Aqueduct, and from various groundwater sources.

Water supply and conveyance structures comprise a series of reservoirs and a network of pipelines, including reservoir outlets, major trunk lines, and other delivery lines. In 2004, LADWP supplied 690,450 acre-feet of water in its service area (LADWP 2005).[1]

In a continuing effort to ensure a reliable water supply for future years, LADWP has invested in various sources, including groundwater, recycled water, and water conservation. Specific supply and demand side management strategies are designed to provide a "hedge" against droughts and variability of surface water. The 2005 Urban Water Management Plan (UWMP) estimates water demand and supply through a 25-year outlook period, and is updated every 5 years by LADWP. The UWMP assumes future development as prescribed by the General Plan of the City of Los Angeles when planning future water demand. Correspondingly, development projects that are consistent with the General Plan's land use designation and planned densities are taken into account in the calculations used to predict water demand for future years. Calculations are also based on assumptions regarding the various supplies of water available and existing and projected levels of water conservation. Based on these assumptions, LADWP has predicted service reliability for average and single dry-year conditions and expects to be able to meet future demand with a combination of existing supplies, planned supplies, and MWD purchases (LADWP 2005).

In the 2005 UWMP, LADWP forecasted that the City of Los Angeles would grow 0.4% annually over the next 25 years, or by approximately 368,000 persons over the next 25 years. Total citywide demand for water is predicted to be 755,000 acre-feet in 2025 and 766,000 acre-feet in 2030. According to the 2005 UWMP, under wet, average, and dry years throughout the 25-year projection period, LADWP'S supply portfolio is expected to be reliable, with adequate supplies available to meet projected demands through 2030 (LADWP 2005:ES-12).

Table 3.12-1 identifies the existing land uses, the square footages, and the water demand of the existing uses that would be altered, removed, or otherwise affected

[1]The 2005 MWD Urban Water Management Plan uses data from the 2003–2004 fiscal year.

under the proposed Project. Based on the existing land uses in the study area, the water demand of the study area is estimated to be 3,954 gallons per day (gpd).

Distribution water mains are located throughout the proposed project area. Six-inch lines are used along most north-south cross streets throughout the proposed project site, including Lagoon, Island, Fries, Marine, and Broad Avenues. An additional 6-inch line is located east of the proposed project site, along Harry Bridges Boulevard between Avalon Boulevard and Alameda Street (see Figure 3.12-1 for location of water lines). Water hydrants in the proposed project area include double 4-inch hydrants, single 2.5-inch hydrants, and double 4-inch plus 2.5-inch hydrants (Navigate LA 2008). The proposed project area also has an existing 24-inch recycled water mainline along Harry Bridges Boulevard and Lagoon Avenue. The recycled water in this line is provided from the TITP.

#### 3.12.2.1.2 Sewer and Wastewater Treatment Service

The City of Los Angeles Department of Public Works, Bureau of Sanitation, provides wastewater treatment and sewer service to the City. The Bureau of Sanitation operates wastewater treatment and reclamation facilities that serve most of its incorporated areas and several other cities and unincorporated areas in the Los Angeles basin and San Fernando Valley. The existing system comprises two treatment plants; two water reclamation plants; a collection system consisting of over 6,500 miles of local, trunk, mainline, and major interceptor sewers; five major outfall sewers; and 48 pumping plants.

The sewer infrastructure in the vicinity of the proposed Project includes an existing 8-inch sewer line on Harry Bridges Boulevard and a 14-inch line on Avalon Boulevard. The sewage flows from the 8-inch line into the 14-inch line, which in turn feeds into an 18-inch sewer line on A Street, a 24-inch line on Fries Avenue, and a 30-inch sewer line on San Clemente Avenue, before discharging into the TITP. Based on available gauging information, the current flow level in 18-inch line is approximately 64% full and in 21-inch line is approximately 50% full. The design capacities (at depth/Diameter [d/D] ratio of 50%) of the 8-inch line is 162,156 gpd, 721,163 gpd for the 14-inch line, 996,714 gpd for the 18-inch line, 2.23 million gpd for the 21-inch line, 2.14 million gpd for the 24-inch line, and 3.01 million gpd for the 30-inch line (Lorscheider pers. comm. 2008). Based on the gauging information, the current flow level (d/D) in the 8-inch line on Harry Bridges Boulevard is approximately 75% full and the 14-inch line on Avalon Boulevard is flowing full (Lorscheider pers. comm. 2008).

The wastewater generated by existing uses in the study area that would be altered, removed, or otherwise affected under the proposed Project is estimated to be 4,562 gpd. See Table 3.12-2 for details.

**Table 3.12-1.** Existing Water Use in the Study Area (Estimated)

| *Location* | *Existing Land Use* | *General Land Use* | *Area (Square Feet)* | *Generation Factor Used to Estimate gpd*[1] | *Gallons per Day* |
|---|---|---|---|---|---|
| Avalon Development District | Bekins Warehouse Building | Warehouse | 14,500 | 22.2 gpd/1000 gross square feet (gsf) | 322 |
| | Private buildings south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Warehouse | 41,260 | 22.2 gpd/ 1000 gsf | 916 |
| | DWP-owned vacant lots south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Vacant, barren lots | 48,930 | Assume 0 gpd | 0 |
| | Police trailer at southeast corner of C Street and Marine Avenue | Office/ Commercial | 1,440 | 88.8 gpd/ 1000 gsf | 128 |
| | All Port-owned property north of Harry Bridges Boulevard | Vacant, barren lots | 325,540 | Assume 0 gpd | 0 |
| | All Port- owned property south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue with no buildings | Vacant, barren lots | 47,490 | Assume 0 gpd | 0 |
| Avalon Waterfront District | DWP bulk oil storage tanks | Industrial | 117, 930 | Assume 0 gpd | 0 |
| | DWP oil tank supporting buildings | Warehouse | 19,000 | 22.2 gpd/ 1000 gsf | 422 |
| | DWP-owned vacant lot along Avalon Boulevard | Vacant, barren lot | 98,900 | Assume 0 gpd | 0 |
| | 1 small support building on DWP-owned vacant lot | Warehouse | 875 | 22.2 gpd/ 1000 gsf | 19 |

| *Location* | *Existing Land Use* | *General Land Use* | *Area (Square Feet)* | *Generation Factor Used to Estimate gpd*[1] | *Gallons per Day* |
|---|---|---|---|---|---|
| | along Avalon Boulevard | | | | |
| | Parking area south/southwest of Water Street and Railroad, north of Slip 5 | Parking | 50,850 | 22.2 gpd/ 1000 gsf | 1,129 |
| | Catalina Freight buildings | Warehouse | 30,860 | 22.2 gpd/ 1000 gsf | 685 |
| | National Polytechnic College of Science, Hyperbaric Chamber Building | Trade or Vocational School (per students) | 2,370 (assumes 25 students) | 13.32 gpd/ student | 333 |
| | Southeast corner of Harry Bridges and Avalon Boulevards | Vacant, barren lot | 58,609.36 | Assume 0 gpd | 0 |
| | | | | **TOTAL** | **3,954** |

Notes:

[1]Water generation factors equivalent to 111% of the sewage generation factors provided in the *L.A. CEQA Thresholds Guide* (2006).

Compiled by ICF Jones and Stokes, 2008.

**Table 3.12-2.** Existing Wastewater Generation in the Study Area (Estimated)

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Generation Factor Used to Estimate gpd*[1] | *Gallons per Day* |
|---|---|---|---|---|---|
| Avalon Development District | Bekins Warehouse Building | Warehouse | 14,500 | 20 gpd/1000 gsf | 290 |
| | Private buildings South of Harry Bridges Boulevard, North of A Street, between Avalon Boulevard and Marine Avenue | Warehouse | 41,260 | 20 gpd/1000 gsf | 825 |

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Generation Factor Used to Estimate gpd*[l] | *Gallons per Day* |
|---|---|---|---|---|---|
| | DWP-owned vacant lots south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Vacant, barren lot | 41,260 | Assume 0 gpd | 0 |
| | Police trailer at southeast corner of C Street and Marine Avenue | Office/ Commercial | 1,440 | 80 gpd/1000 gsf | 115 |
| | All Port-owned property north of Harry Bridges Boulevard with no buildings | Vacant, barren lots | 362,456 | Assume 0 gpd | 0 |
| | All Port-owned property south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue with no buildings | Vacant, barren lots | 55,162 | Assume 0 gpd | 0 |
| Avalon Waterfront District | DWP Oil Tanks | Vacant, barren Lot | 117, 930 | Assume 0 gpd | 0 |
| | DWP oil tank supporting buildings | Warehouse | 19,000 | 20 gpd/1000 gsf | 380 |
| | DWP-owned vacant lot along Avalon Boulevard | Vacant, barren lot | 98,900 | Assume 0 gpd | 0 |
| | 1 small support building on DWP-owned vacant lot along Avalon Boulevard | Warehouse | 875 | 20 gpd/1000 gsf | 18 |
| | Parking area south/southwest of Water Street and Railroad, north of Slip 5 | Parking | 50,850 | 20 gpd/1000 gsf | 1,017 |
| | Catalina Freight buildings | Warehouse | 30,860 | 20 gpd/1000 gsf | 617 |

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Generation Factor Used to Estimate gpd*[1] | *Gallons per Day* |
|---|---|---|---|---|---|
| | National Polytechnic College of Science, Hyperbaric Chamber Building | Trade or Vocational School (per students) | 2,370 (assumes 25 students) | 12 gpd/student | 300 |
| | Southeast corner of Harry Bridges and Avalon Boulevards | Vacant, barren lot | 58,609.36 | Assume 0 gpd | 0 |
| | Banning's Landing | Community Center | (250 occupants) | 4 gpd/occupant | 1000 |
| | | | | **TOTAL** | **4,562** |

Notes:

[1]Wastewater generation factors are derived from the *L.A. CEQA Thresholds Guide* (2006).
Compiled by ICF Jones and Stokes, 2008.

Wastewater from the area flows to the TITP, located at 455 Ferry Street, which treats wastewater for the communities of Wilmington, San Pedro, a portion of Harbor City, and the heavily industrialized Terminal Island (LA Sewers 2008). The treatment process consists of pretreatment, primary sedimentation, secondary treatment, sludge digestion, and drying. The TITP treats all flow received to at least first-stage tertiary levels. Some wastewater is further treated for reuse in irrigation and industrial water supplies. TTIP has up to 5 million gpd advanced water treatment capability. The liquid effluent flows to the Los Angeles Outer Harbor to a point approximately 3,000 feet offshore via a 60-inch-diameter outfall. The TITP is designed to treat 30 million gpd. Currently, the plant is processing at approximately 58% capacity, or treating about 17.5 million gpd daily (City of Los Angeles Bureau of Sanitation 2008a).

#### 3.12.2.1.3 Storm Drainage

Storm drains are located throughout the proposed project area and maintained by the LAHD, City of Los Angeles, and Los Angeles County. Storm drains within the proposed project vicinity have sufficient capacity to accommodate current demands and are designed to accommodate 10-year storm events (Zambrano pers. comm. 2007).

#### 3.12.2.1.4 Solid Waste Service

Existing development in the proposed project area generates solid waste consisting of nonhazardous materials (e.g., food and beverage containers, paper products, and other

miscellaneous personal trash) and hazardous materials (diesel from railroads and the LADWP oil tanks). All solid waste generated by existing development must comply with federal, state, and local regulations and codes pertaining to nonhazardous and hazardous solid waste disposal.

Solid waste collection and disposal services for residential development in the Wilmington area are provided by the City of Los Angeles Bureau of Sanitation. Most of the nonhazardous solid waste generated within the proposed project area is disposed of at the Sunshine Canyon Sanitary Landfill (SLF) Canyon Extension, located at 14747 San Fernando Road in Sylmar, California. Sunshine Canyon is owned by Browning Ferris Industries (BFI) and has a maximum allotted throughput of 6,600 tons per day. Sunshine Canyon SLF has a remaining capacity of 111,200,000 cubic yards, a maximum allotted throughput of 12,100 tons per day, and an operation cease date of December 31, 2037 (California Integrated Management Waste Board [CIMWB] 2008a).

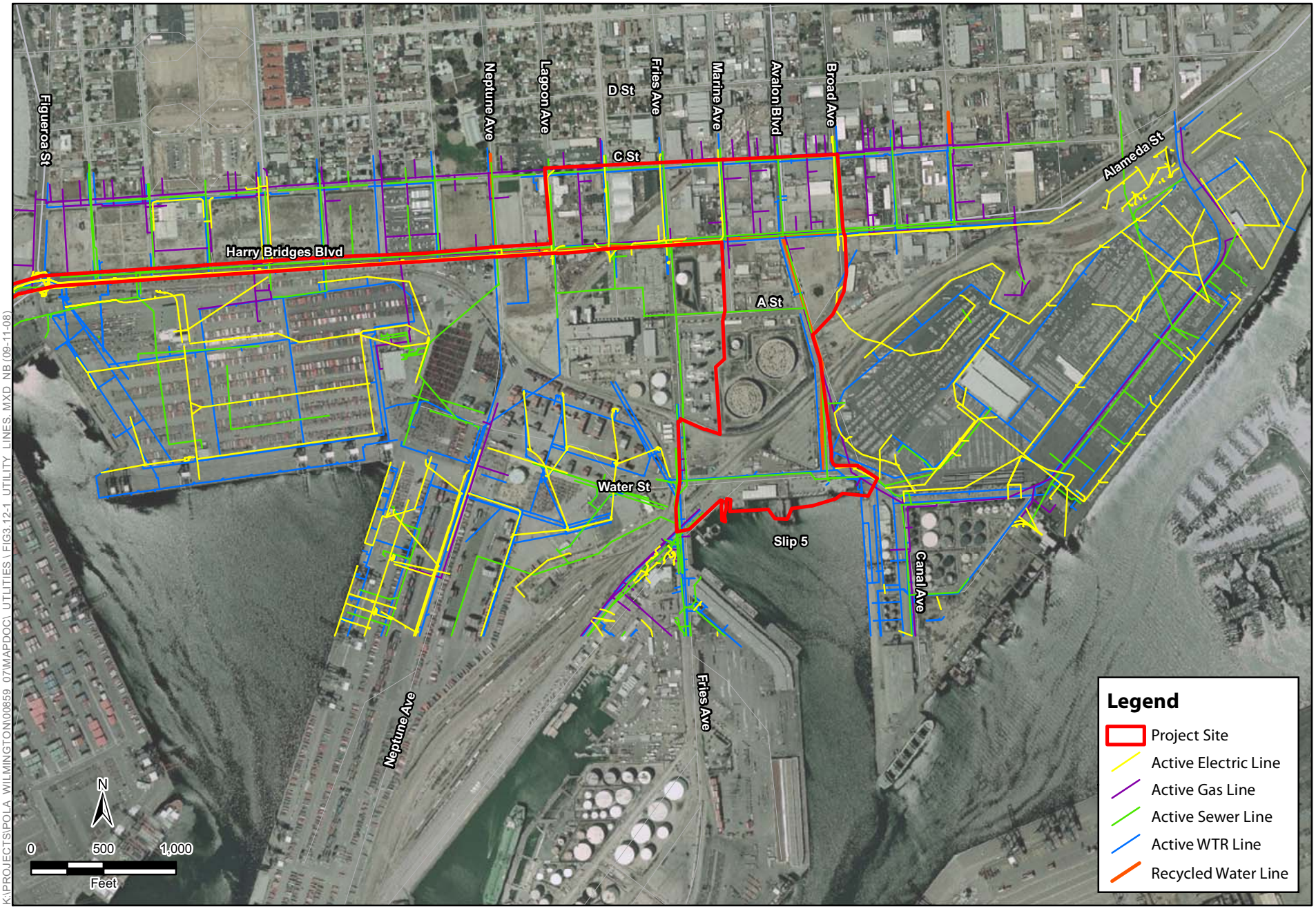
Additional landfills are available in Los Angeles County that could serve the proposed project area. Table 3.12-3 lists potential secondary landfills.

**Table 3.12-3.** Secondary Landfills for the Proposed Project

| *Landfill* | *Maximum Permitted Throughput, Tons/Day* | *Remaining Capacity, Cubic Yards* | *Remaining Capacity Date* | *Operation Cease Date* |
|---|---|---|---|---|
| Azusa Land Reclamation Co. Landfill | 6,500 | 34,100,000 | March 31, 1996 | January 1, 2025 |
| Burbank Landfill Site No. 3 | 240 | 5,107,465 | May 31, 2006 | January 1, 2053 |
| Calabasas Sanitary Landfill | 3,500 | 16,900,400 | October 14, 2004 | January 1, 2028 |
| Savage Canyon Landfill | 350 | 7,419,580 | July 15, 2006 | January 1, 2025 |
| Source: CIWMB (2008a). | | | | |

Additionally, the City of Industry is developing an EIR for a Puente Hills Intermodal Facility, which is expected to be approved by the summer of 2008. This is a waste-by-rail project, intended to accommodate the solid waste removal needs for Los Angeles County. The proposed facility would eventually have the capacity to handle up to two trains per day, transporting a total of 8,000 tons of municipal solid waste per day. If approved, it is anticipated to be in operation by 2011 (Puente Hills Intermodal Facility DEIR 2007).

Los Angeles County Ordinance 7A prohibits solid waste generated in the City of Los Angeles from being handled by or disposed of in facilities and landfills operated by the Los Angeles County Sanitation District. There are two transfer stations that serves the

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SOURCE: ESRI USA Imagery (2006), Port of Los Angeles (2008)

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**Figure 3.12-1**
**Utility Lines**
**Wilmington Waterfront Development Project**

proposed project area: the Falcon Refuse Center in the Wilmington Community and the Southeast Resource Recovery Facility in the City of Long Beach.

The Falcon Refuse Center is operated by Browning Ferris Industries, and it receives an average of 1,850 tons per day. The permitted capacity of this facility is 3,500 tons per day. The center accepts solid waste from construction and demolition activities, as well as industrial and mixed-municipal sources (CIMWB 2008b).

The Southeast Resource Recovery Facility (SERRF) is located in the City of Long Beach at 120 Pier S Avenue, west of the Terminal Island Freeway, just north of Ocean Boulevard on Pier S Avenue. The facility is owned by a separate authority created by a joint powers agreement between the Sanitation Districts and the City of Long Beach, but is operated under contract by a private company. The facility accepts only nonhazardous municipal solid waste (Sanitation Districts of Los Angeles County 2007). Currently the maximum daily permitted tonnage is 2,240 tons per day. The average daily tonnage being accepted is 1,900 tons per day; however, this fluctuates per season. The remaining lifespan of this facility is through 2018 (Amzcua pers. comm. 2007).

In order to comply with AB 939 and City of Los Angeles Solid Waste Management Policy Plan (CiSWMPP), a new waste generation study was conducted for 1999 and 2000 by the City of Los Angeles. The study included assessing the disposal and diversion for the tenants of the Port. In the year 2000, the Port alone disposed of approximately 5,791 tons of waste and diverted approximately 59,513 tons, achieving a diversion rate of 91%. The waste reduction and recycling assessments in 1999–2000 showed that the tenants audited disposed of 12,496 tons and diverted 12,291 tons, for an overall diversion rate of 49.6% (City of Los Angeles Bureau of Sanitation 2008b). Currently the Wilmington area has a diversion rate of 62%, with a goal of 70% by 2015, 90% by 2025, and an ultimate goal of zero waste by 2030 (Pereira pers. comm. 2008).

Additionally, LAHD's Construction and Maintenance Division recycles asphalt and concrete demolition debris by crushing and stockpiling the crushed material to use on other Port projects (City of Los Angeles Bureau of Sanitation 2007). In 2003, the Port's diversion rate was 41.8%, or 1,998.2 tons (Port 2005c). The following programs are implemented by the Port to assist in waste diversion (City of Los Angeles 2008b):

- Duplex Printing and Photocopying
- Wood Waste Diversion Program
- Green Waste Recycling Program
- Administrative Office Recycling Program
- Toner Cartridge Recycling
- Ferrous Metals Recovery Program
- Inerts Recycling Program
- Motor Oil Recycling Program

- Tire Recycling Program
- Office Paper
- Cardboard Recycling Program
- Scrap Metal
- Beverage Container Recycling
- Fish Sludge Recovery
- Wood Waste Collection Program
- Non-Food Donation
- Office Furniture Source Reduction

The estimated solid waste generated by existing uses in the study area that would be altered, removed, or otherwise affected under the proposed Project totals 1,193 pounds per day (Table 3.12-4).

Hazardous materials, such as contaminated soils and petroleum by-products generated as a result of ongoing soil and groundwater remediation and scheduled tank maintenance, are hauled to a Class I landfill that accepts hazardous waste for disposal. The closest Class I landfill is the Kettleman Hills facility in Kings County, which is the only such facility currently operating in southern California. The facility has a maximum permitted capacity of 10,700,000 cubic yards with a remaining capacity of 6,000,000 cubic yards. The landfill has maximum allotted throughput of 8,000 tons per day (CIMWB 2008c).

**Table 3.12-4.** Existing Solid Waste Generation in the Study Area (Estimated)

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Generation Factor Used to Estimate gpd* | *Pounds per Day* |
|---|---|---|---|---|---|
| Avalon Development District | Bekins Warehouse Building | Warehouse | 14,500 (16 employees[1]) | 8.93 lbs/employee/day[2] | 143 |
| | Private buildings south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Warehouse | 41,260 (46 employees[1]) | 8.93 lbs/employee/day[2] | 411 |
| | DWP-owned vacant lots south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Vacant, barren lot | 41,260 | Assume 0 lbs/day | 0 |
| | Police trailer on the southeast corner of C Street and Marine Avenue | Office/Commercial | 1,440 (3 employees[1]) | 10.53 lbs/employee/day[3] | 32 |
| | All Port-owned property north of Harry Bridges Boulevard | Vacant, barren lots | 362,456 | Assume 0 lbs/day | 0 |
| | All Port-owned property south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue, with no buildings | Vacant, barren lots | 55,162 | Assume 0 lbs/day | 0 |
| Avalon Waterfront District | DWP oil tanks | Vacant, barren lot | 117, 930 | Assume 0 lbs/day | 0 |
| | DWP oil tank supporting buildings | Warehouse | 19,000 (3 employees[1]) | 8.93 lbs/employee/day[2] | 27 |

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Generation Factor Used to Estimate gpd* | *Pounds per Day* |
|---|---|---|---|---|---|
| | DWP-owned vacant lot along Avalon Boulevard | Vacant, barren lot | 98,900 | Assume 0 lbs/day | 0 |
| | 1 small support building on DWP-owned vacant lot along Avalon Avenue | Warehouse | 875<br>(1 employee) | 8.93 lbs/employee/day[2] | 9 |
| | Parking area south/southwest of Water Street and Railroad, north of Slip 5 | Parking | 50,850 [1.17 acres] | Assume 0.372 tons/year/acre or 2.5 lbs/day/acre[4] | 3 |
| | Catalina Freight buildings | Warehouse | 30,860<br>(34 employees[1]) | 8.93 lbs/employee/day[2] | 304 |
| | National Polytechnic College of Science, Hyperbaric Chamber Building | Commercial | 2,370<br>(5 employees[1]) | 10.53 lbs/employee/day[3] | 53 |
| | Southeast corner of Harry Bridges and Avalon Boulevards | Vacant, barren lot | 58,609.36 | Assume 0 lbs/day | 0 |
| | Banning's Landing | Community Center | 10,000<br>(20 employees [1]) | 10.53 lbs/employee/day[2] | 211 |
| | | | | **TOTAL** | **1,193** |

Notes:

[1]Median Employees per Acre for Commercial/Retail land uses (broad polygon selection) for five-county region was 585 square feet per employee; rounded up to 500 square feet per employee to assume worst case scenario. Median Employees per Acre for Light Industrial land uses (broad polygon selection) for five county region was 924 square feet per employee; rounded up to 900 square feet per employee to assume worst case scenario.
[2]Solid Waste generation factors for industrial land use are from the *L.A. CEQA Thresholds Guide* (2006).
[3]Solid Waste generation factors for commercial land use are from the *L.A. CEQA Thresholds Guide* (2006).
[4]Port of Los Angeles, Recycling and Waste Diversions (2005).

### 3.12.2.1.5 Electrical Service

The proposed project site is located within the service area of LADWP, which maintains various generating and distribution substations throughout the greater Los Angeles area, including generating and distribution centers within and near the Port that serve the proposed project site. LADWP supplies electricity generated by its system of resources, which consists of a mix of renewable energy, hydro generation, gas-fired generation, coal-fired generation, nuclear generation, and purchases from others within the west.

The industrial power station closest to the Port has four main 138-kV supply lines, two from the Harbor Generating Station and two from North Wilmington. Several other electrical power cables are distributed throughout the harbor area. LADWP maintains the Harbor Generating Station at the intersection of Island Avenue and Harry Bridges Boulevard (refer to Figure 3.13-1). Receiving Station Q and numerous above- and below-ground electrical transmission lines are located in the proposed project area. Overall, LADWP supplies nearly 22 billion kilowatt (kW) hours of electricity a year to the City's 1.4 million electric customers. (LADWP 2008a)

LADWP has adequate generation to serve the current customer load. LADWP has produced a plan called the Integrated Resource Plan, which anticipates load growth and includes plans for new generating capacity or demand side management programs to meet load requirements for future customers (LADWP 2008b). In 2015, the peak demand for the LADWP service area is estimated to be 6,546 megawatts (MW) per day with available resources of 8,129 MW per day (LADWP 2007:27). In 2020, the peak demand is estimated to be 6,876 MW per day; total resources available are estimated to be 7,721 MW per day (LADWP 2007:21).

The estimated electricity consumption by existing uses in the study area that would be altered, removed, or otherwise affected under the proposed Project totals 835,472 Kilowatt hours (kWh). See Table 3.12-5 for details.

29 **Table 3.12-5.** Existing Electricity Consumption in the Study Area (Estimated)

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Consumption Factor Used to Estimate* | *Electricity Consumption (kWh/day)* |
|---|---|---|---|---|---|
| Avalon Development District | Bekins Warehouse Building | Warehouse | 14,500 | 4.35 kWh/ gsf/year[1] | 63,075 |
| | Private buildings south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Warehouse | 41,260 | 4.35 kWh/ gsf/year[1] | 179,481 |
| | DWP-owned vacant lots south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Vacant, barren lot | 41,260 | Assume 0 kWh/ gsf/year | 0 |
| | Police trailer on the southeast corner of C Street and Marine Avenue | Office/Commercial | 1,440 | 12.95 kWh/ gsf/year[2] | 18,648 |
| | All Port-owned property north of Harry Bridges Boulevard | Vacant, barren lots | 362,456 | Assume 0 kWh/ gsf/year | 0 |
| | All Port-owned property south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue, with no buildings | Vacant, barren lots | 55,162 | Assume 0 kWh/ gsf/year | 0 |
| Avalon Waterfront District | DWP oil tanks | Vacant, barren lot | 117, 930 | Assume 0 kWh/ gsf/year | 0 |
| | DWP oil tank supporting buildings | Warehouse | 19,000 | 4.35 kWh/ gsf/year[1] | 82,650 |
| | DWP-owned vacant lot along Avalon Boulevard | Vacant, barren lot | 98,900 | Assume 0 kWh/ gsf/year | 0 |

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Consumption Factor Used to Estimate* | *Electricity Consumption (kWh/day)* |
|---|---|---|---|---|---|
| | 1 small support building on DWP-owned vacant lot along Avalon Avenue | Warehouse | 875 | 4.35 kWh/ gsf/year[1] | 3,806 |
| | Parking area south/southwest of Water Street and Railroad, north of Slip 5 | Parking | 50,850 (1.17 acres) | 4.35 kWh/ gsf/year[1] | 221,198 |
| | Catalina Freight buildings | Warehouse | 30,860 | 4.35 kWh/ gsf/year[1] | 134,241 |
| | National Polytechnic College of Science, Hyperbaric Chamber Building | Commercial | 2,370 | 11.55kWh/ gsf/year[3] | 27,374 |
| | Southeast corner of Harry Bridges and Avalon Boulevards | Vacant, barren lot | 58,609.36 | Assume 0 kWh/ gsf/year | 0 |
| | Banning's Landing | Community Center | 10,000 | 10.50 kWh/ gsf/year[4] | 105,000 |
| | | | | **TOTAL** | **835,472** |

Notes:

[1]Electricity Consumption factors for Warehouse use from CEQA Air Quality Handbook (SCAQMD 1993).
[2]Electricity Consumption factors for Office use from SCAQMD (1993).
[3]Electricity Consumption factors for College/University from SCAQMD (1993).
[4]Electricity Consumption factors for Miscellaneous use from SCAQMD (1993).

#### 3.12.2.1.6 Natural Gas Service

Natural gas service to the proposed project site would be supplied by the Southern California Gas Company (Gas Company). As a public utility, the Gas Company is under the jurisdiction of the state PUC and can be affected by actions of federal regulatory agencies. While regulatory actions may affect the regional and local supply and pricing of natural gas, substantial changes in this utility supply are not anticipated at this time based on current supply and demand projections. (Gas Company 2007)

California's existing gas supply is regionally diverse (the southwestern United States, the Rocky Mountains, and Canada) and includes supplies from on- and offshore sources. Southern California currently operates in an environment where interstate pipeline capacity is in excess of anticipated demand. The interstate pipeline systems, along with local California gas supplies, deliver gas to Los Angeles area customers through the Gas Company. Interstate pipeline delivery capability into Southern California for the Gas Company is over 4,000 million cubic feet (MMcf) per day, with approximately 3,230 MMcf per day available directly to Gas Company customers (the remaining interstate capacity serves non-local distribution company customers;Gas Company 2007:61). In 2015 and 2020, the total firm capacity for natural gas supply would be 4.675 MMcf per day (Gas Company 2007:70). The estimated natural gas consumption by existing uses in the study area that would be altered, removed, or otherwise affected under the proposed Project totals 12,977 cubic feet (cf) per day (4,736,532 cf per year). Table 3.12-6 lists existing (estimated) gas consumption on site.

The major natural gas line in the area is a 16-inch high pressure line that extends diagonally in a northeasterly direction near the intersection of John S. Gibson Boulevard and Pacific Avenue toward Berth 127. From there it continues in a northwesterly direction to rejoin John S. Gibson Boulevard near Berth 131. Smaller distribution lines (usually 2- or 4-inch) are located along other streets, such as Pier A Street, Pier A Place, Neptune Avenue, and Front Street. (TraPac 2008)

## 3.12.3 Applicable Regulations

### 3.12.3.1 Federal Regulations

#### 3.12.3.1.1 Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) was created through the Department of Energy Organization Act on October 1, 1977, and assumed the responsibilities of its predecessor, the Federal Power Commission. FERC's legal authority comes from the Federal Power Act of 1935, the Natural Gas Act (NGA) of 1938, and the Natural Gas Policy Act of 1992. It is an independent regulatory agency within the Department of Energy that:

- regulates the transmission and sale of natural gas for resale in interstate commerce;
- regulates the transmission of oil by pipeline in interstate commerce;
- regulates the transmission and wholesale of electricity in interstate commerce;
- licenses and inspects private, municipal, and state hydroelectric projects;
- oversees environmental matters related to natural gas, oil, electricity, and hydroelectric projects;
- administers accounting and financial reporting regulations and conduct of jurisdictional companies; and
- approves site choices as well as abandonment of interstate pipeline facilities.

**Table 3.12-6.** Existing Natural Gas Consumption in the Study Area (Estimated)

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Consumption Factor Used to Estimate* | *Electricity Consumption (cf/year)* |
|---|---|---|---|---|---|
| Avalon Development District | Bekins Warehouse Building | Warehouse | 14,500 | 24 cf/gsf/year[1] | 348,000 |
| | Private buildings south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Warehouse | 41,260 | 24 cf/gsf/year[1] | 990,240 |
| | DWP-owned vacant lots south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue | Vacant, barren lot | 41,260 | Assume 0 cf/gsf/year | 0 |
| | Police trailer on the southeast corner of C Street and Marine Avenue | Office/ Commercial | 1,440 | 24 cf/gsf/year[2] | 34,560 |
| | All Port-owned property north of Harry Bridges Boulevard | Vacant, barren lots | 362,456 | Assume 0 cf/gsf/year | 0 |
| | All Port-owned property south of Harry Bridges Boulevard, north of A Street, between Avalon Boulevard and Marine Avenue, with no buildings | Vacant, barren lots | 55,162 | Assume 0 cf/gsf/year | 0 |

| *Location* | *Existing Land Use* | *General Land Use* | *Building Square Footage (Occupants)* | *Consumption Factor Used to Estimate* | *Electricity Consumption (cf/year)* |
|---|---|---|---|---|---|
| Avalon Waterfront District | DWP oil tanks | Vacant, barren lot | 117, 930 | Assume 0 cf/gsf/year | 0 |
| | DWP oil tank supporting buildings | Warehouse | 19,000 | 24 cf/gsf/year[1] | 456,000 |
| | DWP-owned vacant lot along Avalon Boulevard | Vacant, barren lot | 98,900 | Assume 0 cf/gsf/year | 0 |
| | 1 small support building on DWP-owned vacant lot along Avalon Avenue | Warehouse | 875 | 24 cf/gsf/year[1] | 21,000 |
| | Parking area south/southwest of Water Street and Railroad, north of Slip 5 | Parking | 50,850 [1.17 acres] | 34.8 cf/gsf/year[3] | 1,769,580 |
| | Catalina Freight buildings | Warehouse | 30,860 | 24 cf/gsf/year[1] | 740,640 |
| | National Polytechnic College of Science, Hyperbaric Chamber Building | Commercial | 2,370 | 57.6 cf/gsf/year[4] | 136,512 |
| | Southeast corner of Harry Bridges and Avalon Boulevards | Vacant, barren lot | 58,609.36 | Assume 0 cf/gsf/year | 0 |
| | Banning's Landing | Community Center | 10,000 | 24 cf/gsf/year[5] | 240,000 |
| | | | | **TOTAL** | **4,736,532** |

Notes:

[1]Natural Gas Consumption factors for Warehouse use from CEQA Air Quality Handbook (SCAQMD 1993).
[2]Natural Gas Consumption factors for Office use from SCAQMD (1993).
[3]Natural Gas Consumption factors for Miscellaneous from SCAQMD (1993).
[4]Natural Gas Consumption factors for College/ University from SCAQMD (1993).

## 3.12.3.2 State Regulations

### 3.12.3.2.1 SB 610 Water Supply Assessment

Senate Bill 610 (Costa) became effective January 1, 2002. When a city or county determines that a project is subject to CEQA and meets the definition of Water Code Section 10912, this bill requires the project to identify any public water system that

may supply water for the project and to request that the public water supplier prepare a specified water supply assessment. The assessment is required to include an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts. The assessment must be approved by the governing body of the public water system supplying water to the project. If the projected water demand associated with the project was included as part of the most recently adopted Urban Water Management Plan (UWMP), the public water system may incorporate the requested information from the urban water management plan in the water supply assessment. The bill requires the city or county, if it is not able to identify any public water system that may supply water for the project, to prepare the water supply assessment after a prescribed consultation.

If the public water system concludes that water supplies are or will be insufficient, plans for acquiring additional water supplies are required to be submitted to the city or county. The city or county must include the water supply assessment in any environmental document prepared for the project pursuant to the act. It also requires the city or county to determine whether project water supplies will be sufficient to satisfy the demand of the project, in addition to existing and planned future uses.

#### 3.12.3.2.2 California Urban Water Management Act

The California Urban Water Management Planning Act requires urban water suppliers to initiate planning strategies that make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry-water years. LADWP would be the water supplier, and as such the proposed Project would be under the jurisdiction of the LADWP UWMP, prepared pursuant to the California Urban Water Management Planning Act.

#### 3.12.3.2.3 AB 1327: California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Reuse and Recycling Access Act of 1991 required each jurisdiction to adopt an ordinance by September 1, 1994, requiring any "development project" for which an application for a building permit is submitted to provide an adequate storage area for collection and removal of recyclable materials. AB 1327 regulations govern the transfer, receipt, storage, and loading of recyclable materials at the Port.

#### 3.12.3.2.4 AB 939: California Integrated Waste Management Act

The State of California requires that all jurisdictions achieve compliance with AB 939, a state mandate that requires reaching 50% diversion of solid waste from landfills by 2000. AB 939 further requires each city to conduct a Solid Waste Generation Study and to prepare annually a Source Reduction and Recycling Element (SRRE) to describe how it will reach its goals. AB 939 was designed to focus on source reduction, recycling and composting, and environmentally safe landfilling and transformation activities. This act required cities and counties to divert 25% of all solid waste from landfills and transformation facilities by 1995, and 50% by 2000. The City of Los Angeles met and exceeded the year 2000 goals; in 2003, the City's diversion rate was 95.2%. In 2003, the Port's diversion rate was 41.8% (Port 2005c).

#### 3.12.3.2.5 California's Building Code 24 CCR 6

Title 24, Part 6 of the CBC describes California's energy efficiency standards for residential and nonresidential buildings. These standards were established in 1978 in response to a legislative mandate to reduce California's energy consumption and have been updated periodically to include new energy efficiency technologies and methods. Title 24 requires building according to energy efficient standards for all new construction, including new buildings, additions, alternations, and, in nonresidential buildings, repairs.

#### 3.13.3.2.6 Standard Urban Stormwater Mitigation Plan

On December 13, 2001, the RWQCB issued a Municipal Storm Water NPDES Permit (CAS004001) that requires new development and redevelopment projects to incorporate stormwater mitigation measures.

A Standard Urban Stormwater Mitigation Plan (SUSMP) is generally required to reduce the quantity and improve the quality of rainfall runoff that leaves a site. Developers are encouraged to begin work on complying with these mandatory regulations by consulting with the RWQCB Watershed Protection Division (WPD) in the design phase of their projects.

## 3.12.3.3 Regional and Local Regulations

### 3.12.3.3.1 LADWP Urban Water Management Plan

Consistent with the California Urban Water Management Planning Act, LADWP has prepared an UWMP to describe how water resources are used and to present strategies that will be used to meet the City's current and future water needs. To meet the objectives of the California Urban Water Management Planning Act, the

LADWP UWMP focuses primarily on water supply reliability and water use efficiency measures. The California Urban Water Management Planning Act requires water suppliers to develop water management plans every five years. LADWP most recently completed this 5-year update in 2005. This plan, the *2005 Urban Water Management Plan*, was completed as an update to the previous 2000 UWMP. LADWP also published annual fiscal year updates in the 2005 UWMP. The plan projects water demand and supplies through 2030; total demand for water is predicted to be 755,000 acre-feet in 2025 and 766,000 acre-feet in 2030. LADWP expects it will be able meet this demand with a combination of existing supplies, planned supplies, and MWD purchases (existing and planned) (LADWP 2005).

#### 3.12.3.3.2 Wastewater Facilities Plan

The current Wastewater Facilities Plan, which addresses the City's wastewater treatment and collection needs over a 2010-planning horizon, was adopted by the City Council on January 22, 1991. The Plan is currently being revised through an integrated resource planning effort to address demand and capacity through 2020 with new construction and expansion of facilities and operations, water reclamation, and conservation (Integrated Plan for the Wastewater Program).

#### 3.12.3.3.3 Sewer Allocation Ordinance

In 1990, City Ordinance No. 166,060 (also known as Sewer Allocation Ordinance) was adopted, which established regulations for projects that discharge into the Hyperion Treatment System (HTS). The ordinance established an annual sewage allotment of 5 million gpd, of which 34.5% is allocated for priority, 8% for public benefits, and 57.5% for nonpriority projects (of which 65% are residential and 35% are nonresidential projects).

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

The CiSWMPP is a long-term planning document adopted by the City Council in November 1994 containing goals, objectives, and policies for solid waste management for the City. It specifies Citywide diversion goals and disposal capacity needs. The mandate was enacted to encourage reduction, recycling, and reuse of solid waste generated in the state to preserve landfill capacity, conserve water, energy, and other natural resources, and to protect the state's environment. (City of Los Angeles 2006)

# 3.12.4 Impact Analysis

## 3.12.4.1 Methodology

Assessment of the proposed Project's impacts on utilities (water, wastewater, solid waste) and energy providers (electricity and natural gas) varies depending on the utility but generally includes a comparison of the project-generated demand against existing and anticipated resource supplies and/or conveyance and storage capacities. Quantifications of demands and generations were included based on factors provided by the applicable agencies, as shown in Tables 3.12-7 through 3.12-12. Only the existing uses that would be altered, removed, or otherwise affected under the proposed Project were used for calculation of existing demand. Uses and buildings which would not be affected by the proposed Project have not been included for comparison of project-generated demand against existing uses demand calculations.

The proposed Project includes changing the Port of Los Angeles Plan and Port Master Plan boundaries to include the Avalon Triangle Park area. The change in boundaries itself would be administrative in nature and would not involve any physical alterations to the existing onsite uses or their operational characteristics. Thus, the boundary changes would not have an impact on utility consumption.

For the purposes of this section, only impacts associated with the development in the Avalon Waterfront District, the Avalon Development District, and the Waterfront Red Car Line/California Coastal Trail (as identified in Figure 2-2) are analyzed. These three areas comprise the study area for this section,

The 150,000 square feet of proposed light industrial uses in the Avalon Development District, the 70,000 square feet of commercial uses in the Avalon Development District and Avalon Waterfront District, and the Waterfront Red Car Line/California Coastal Trail are analyzed programmatically for the purposes of this document. These components will require additional environmental analysis and evaluation under CEQA at the time specific projects are proposed and prior to actual construction or project-related changes; therefore, they are necessarily analyzed in less detail in this document than the other proposed project components.

The assessment of impacts is based on regulatory controls and on the assumptions that the proposed Project would include the following:

- **Prepare a Public Services Relocation Plan (PSRP)**. LAHD will prepare a PSRP as part of the proposed Project to address the public utilities that would be affected by proposed project construction, which would be reviewed by the service providers and City departments prior to implementation.

- **Employ Energy Conservation Design Features.** During the design process, LAHD will consult with LADWP's Efficiency Solutions Business Group regarding possible energy efficiency measures. LAHD and its tenants will incorporate measures to meet or, if possible, exceed minimum efficiency

standards for CCR Title 24 and the Los Angeles Green Building Program and Ordinance Section 16.10 and 16.11, such as the following:

a. Use built-in appliances, refrigerators, and space-conditioning equipment that exceed the minimum efficiency levels mandated in the California Code of Regulations.

b. Install high-efficiency air conditioning controlled by a computerized energy-management system in office and retail spaces that provides the following:

   - A variable air-volume system that results in minimum energy consumption and avoids hot water energy consumption for terminal reheat.
   - A 100% outdoor air-economizer cycle to obtain free cooling in appropriate climate zones during dry climatic periods.
   - Sequentially staged operation of air-conditioning equipment in accordance with building demands.
   - The isolation of air conditioning to any selected floor or floors.
   - Consideration of the applicability of the use of thermal energy storage to handle cooling loads.

c. Cascade ventilation air from high-priority areas before being exhausted, thereby decreasing the volume of ventilation air required. For example, air could be cascaded from occupied space to corridors and then to mechanical spaces before being exhausted.

d. Recycle lighting system heat for space heating during cool weather. Exhaust lighting-system heat from the buildings, via ceiling plenums, to reduce cooling loads in warm weather.

e. Install low- and medium–static pressure terminal units and ductwork to reduce energy consumption by air-distribution systems.

f. Ensure that buildings are well sealed to prevent outside air from infiltrating and increasing interior space-conditioning loads. Where applicable, design building entrances with vestibules to restrict infiltration of unconditioned air and exhausting of conditioned air.

g. A performance check of the installed space-conditioning system will be completed by the developer/installer prior to issuance of the certificate of occupancy to ensure that energy-efficiency measures incorporated into the proposed Project operate as designed.

h. Finish exterior walls with light-colored materials and high-emissivity characteristics to reduce cooling loads. Finish interior walls with light-colored materials to reflect more light and thus increase light efficiency.

i. Use a white reflective material for roofing that meets California standards for reflectivity and emissivity to reject heat.

j. Install thermal insulation in walls and ceilings that exceeds requirements established by the CCR.

k. Design window systems to reduce thermal gain and loss, thus reducing cooling loads during warm weather and heating loads during cool weather.

l. Install heat-rejecting window treatments, such as films, blinds, draperies, or others on appropriate exposures.

m. Install fluorescent and high-intensity discharge (HID) lamps that give the highest light output per watt of electricity consumed wherever possible, including all street and parking area lighting, to reduce electricity consumption. Use reflectors to direct maximum levels of light to work surfaces.

n. Install photosensitive controls and dimmable electronic ballasts to maximize the use of natural daylight available and reduce artificial lighting load.

o. Install occupant-controlled light switches and thermostats to permit individual adjustment of lighting, heating, and cooling to avoid unnecessary energy consumption.

p. Install time-controlled interior and exterior public area light limited to that necessary for safety and security.

q. Control mechanical systems (HVAC and lighting) in the building with timing systems to prevent accidental or inappropriate conditioning or lighting of unoccupied space.

r. Incorporate windowless walls or passive solar inset of windows.

s. Design the proposed Project to focus pedestrian activity within sheltered outdoor areas.

#### 3.12.4.1.1 Water Supply

Water supply or conveyance impacts are typically evaluated by estimating water consumption factors associated with proposed project site land uses or, for nonresidential development, unit demand factors per acre or gross square foot, as established by the City of Los Angeles (L.A. CEQA Thresholds Guide 2006:M.1-4). Water demand estimations for the proposed Project have been based on the expected amount of wastewater production. Water use is proportionate to wastewater discharge and is calculated as such. Water consumption is 111% (1.11) of wastewater production (Akhter pers. comm. 2008).

The proposed Project includes a restroom with six toilets, two urinals, and four sinks. Restroom demand is based on expected daily use of the park. This value is expected to vary greatly during the various seasons of a year, and would also be greatly influenced by the scheduling of events at the park that may draw greater crowds. The water feature daily demands are based on evaporation rates, and seepage and splashing rates, which have been established based on typical conditions for the region. The irrigation daily demands are based on typical numbers for the different surface covers:

- 1,600,000 gallons per acre per year for lawns or 1 inch per week.
- 800,000 gallons per acre per year for shrubs and trees, or 0.5 inch per week

Table 3.12-7 shows the water demand that would be generated from the proposed Project.

In accordance with LAHD's commitment to reduce and conserve the amount of water used in the proposed project area, infrastructure would be incorporated to support the use of reclaimed water for landscaping purposes (in parks and road medians for example). Therefore, the proposed Project would use recycled water from the Terminal Island Reverse Osmosis facility. The proposed Project would include adding several mainlines off of the existing 24-inch recycled water mainline so that all landscaping and water features would be supplied with recycled water (per Table 3.12-7, a total of 27,865 gpd in 2015 and 59,479 gpd in 2020).

**Table 3.12-7.** Proposed Project Water Demand

| *Location* | *Proposed Project Designated Land Use* | *General Land Use* | *Area Units in 2015 in Square Feet* | *Area Units in 2020 in Square Feet* | *Consumption Factor Used to Estimate gpd*[1] | *Gallons per Day in 2015* | *Gallons per Day in 2020* |
|---|---|---|---|---|---|---|---|
| Industrial Avalon Development District | Restaurant (assuming 100 seats) | Commercial | 12,000 | 12,000 | 33.3 gpd/seat for full service indoor restaurants | 3,330 | 3,330 |
| | Mercado | Commercial | 58,000 | 58,000 | 88.8 gpd/1,000 gsf | 5,150 | 5,150 |
| | Light Industrial | Light industrial | 75,000 | 150,000 | 88.8 gpd/1000 gsf | 6,660 | 13,320 |
| | Adaptive reuse of Bekins Storage property | Museum | 14,500 | 14,500 | 22.2 gpd/1,000 gsf | 322 | 322 |
| | Lagoon water feature | Water feature | N/A | N/A | See text above | 435 | 435 |
| | Railroad Green | Open lawn | 43,560 (1 acre) | 43,560 (1 acre) | See text above | 8,930 | 38,220 |
| Avalon Waterfront District | Land bridge and other Wilmington Waterfront landscaped areas | | 76,230 (1.75 acres) | 372,873.6 (7.56 acres) | | | |
| | Southeast Corner of Avalon and Harry Bridges Boulevards | | | | | | |
| Waterfront Red Car Line/California Coastal Trail | Shrub vegetation | Shrub vegetation | 0 (0 acres) | 45,302.4 (1.04 acres) | See text above | 0 | 2,324 |
| Avalon Waterfront District | South water features | Water feature | N/A | N/A | See text above | 1,715 | 1,715 |
| | North water feature | Water feature | N/A | N/A | See text above | 1,715 | 1,715 |
| | Upper Plaza water feature | Water feature | N/A | N/A | See text above | 5,950 | 5,950 |

| *Location* | *Proposed Project Designated Land Use* | *General Land Use* | *Area Units in 2015 in Square Feet* | *Area Units in 2020 in Square Feet* | *Consumption Factor Used to Estimate gpd*[1] | *Gallons per Day in 2015* | *Gallons per Day in 2020* |
|---|---|---|---|---|---|---|---|
| Entire Project Area | Trees | Trees | Individual trees: 456 | Individual trees: 456 | See text above | 9,120 | 9,120 |
| | 1 restroom | Restroom | 534.8 | 534.8 | See text above | 1,500 | 1,500 |
| | 3 parking areas | Parking | 52,000 | 98,000 | 22.2 gpd/1,000 sf | 1,154 | 2,176 |
| | Various locations of hardscaped plazas, sidewalks, etc. | Parking | 348,480 (8 acres) | 431,244 (9.9 acres) | 22.2 gpd/1,000 sf | 7,736 | 9,574 |
| | | | | | **Total Water Use** | **53,717** | **94,851** |

Notes:

[1]Water generation factors are based on 111% of sewage generation factors given for different land uses in the *L.A. CEQA Thresholds Guide.*
Source: Compiled by ICF Jones and Stokes, 2008

#### 3.12.4.1.2 Wastewater

Assessment of impacts on sewers or wastewater treatment systems generally includes the comparison of the project-related, land use–based wastewater flow generation to the existing and projected wastewater treatment capacity of the treatment plant. The wastewater generation factors, as stated in the *L.A. CEQA Thresholds Guide* (2006:Exhibit M.2-12), are as follows:

- Commercial/Retail: 80 gpd/1,000 square feet
- Manufacture/Industrial: 80 gpd/1,000 square feet
- Museum: 20 gpd/1,000 square feet
- Surface Parking: 20 gpd/1,000 square feet

Table 3.12-8 shows the total wastewater that would be generated under all conditions.

#### 3.12.4.1.3 Storm Drainage Facilities

The proposed project would include any required installation and expansion of storm water drainage facilities necessary to accommodate any stormwater runoff. The proposed Project would also include design elements for capturing stormwater for reuse, as well as permeable paving and bio-swales in parking areas to reduce the stormwater drainage requirements of the proposed Project. Thus, storm drainage facilities will not be discussed further in the document. For additional details regarding the existing hydrology and storm drainage characteristics of the area, please refer to Section 3.14, "Water Quality, Sediments, and Oceanography."

#### 3.12.4.1.4 Solid Waste

Impacts related to solid waste generally involve the estimation of the project-related, land use–based, solid waste generation compared to the capacity of the landfills serving the project area. The solid waste generated under the proposed Project was determined using a generation factor provided by the Port. For all other land uses, there were multiple conversion factors:

- Commercial: 10.53 pounds per day per employee
- Industrial: 8.93 pounds per day per employee

The percent contribution to the permitted daily throughputs of the Sunshine Canyon Landfill, minus the anticipated recycle diversion rate, was then determined based on the solid waste generation, as shown in Table 3.12-9.

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**Table 3.12-8.** Wastewater Generation from the Proposed Project (Estimated)

| *Location* | *Proposed Project Designated Land Use* | *General Land Use* | *Units in Square Feet in 2015* | *Units in Square Feet in 2020* | *Generation Factor Used to Estimate gpd* | *Gallons per Day[1] (2015)* | *Gallons per Day[1] (2020)* |
|---|---|---|---|---|---|---|---|
| Industrial Avalon Develoment District | Restaurant (assuming 100 seats) | Commercial | Buildings: 0 | Buildings: 12,000 | 300 gpd/1,000 sf | 0 | 3,600 |
| | Mercado | Commercial | Buildings: 58,000 | Buildings: 58,000 | 80 gpd/1,000 gsf | 4,640 | 4,640 |
| | Light industrial | Light industrial | Buildings: 75,000 | Buildings: 150,000 | 80 gpd/1,000 gsf | 6,000 | 12,000 |
| | Adaptive reuse of Bekins Storage property | Museum | Buildings: 14,500 | Buildings: 14,500 | 150 gpd/1,000 sf | 2,175 | 2,175 |
| | Lagoon water feature | Water feature | N/A | N/A | Assume 0 gpd | 0 | 0 |
| | Railroad Green | Open lawn | 43,560 (1 acre) | 43,560 (1 acre) | Assume 0 gpd | 0 | 0 |
| Avalon Waterfront District | Land bridge and other Avalon Waterfront District landscaped areas | Open lawn | 372,873.6 (7.56 acres) | 372,873.6 (7.56 acres) | Assume 0 gpd | 0 | 0 |
| | Southeast corner of Avalon and Harry Bridges Boulevards | | 43,000 (1-acre) | 43,000 (1-acre) | Assume 0 gpd | 0 | 0 |

| *Location* | *Proposed Project Designated Land Use* | *General Land Use* | *Units in Square Feet in 2015* | *Units in Square Feet in 2020* | *Generation Factor Used to Estimate gpd* | *Gallons per Day[1] (2015)* | *Gallons per Day[1] (2020)* |
|---|---|---|---|---|---|---|---|
| Waterfront Red Car Line/California Coastal Trail | Shrub vegetation | Shrub vegetation | 45,302.4 (1.04 acres) | 45,302.4 (1.04 acres ) | Assume 0 gpd | 0 | 0 |
| Avalon Waterfront District | South water features | Water feature | N/A | N/A | Assume 0 gpd | 0 | 0 |
| | North water feature | Water feature | N/A | N/A | Assume 0 gpd | 0 | 0 |
| | Upper Plaza water feature | Water feature | N/A | N/A | Assume 0 gpd | 0 | 0 |
| Entire Project Area | Trees | Trees | Individual trees: 456 | Individual trees: 456 | Assume 0 gpd | 0 | 0 |
| | 3 parking areas | Parking | 98,000 | 98,000 | 20 gpd/1,000 sf | 1,960 | 1,960 |
| | Various locations of hardscaped plazas, sidewalks, etc. | Parking | 431,244 (9.9 acres ) | 431,244 (9.9 acres) | 20 gpd/1,000 sf | 8,625 | 8,625 |
| | | | | | **TOTAL** | **23,400** | **33,000** |

Notes:

[1]Wastewater generation factors are derived from the *L.A. CEQA Thresholds Guide* (2006).

Compiled by ICF Jones and Stokes, 2008.

**Table 3.12-9.** Solid Waste Generation from the Proposed Project (Estimated)

| *Proposed Project Designated Land Uses Generating Solid Waste* | *Units (Square Feet)/Employees in 2015* | *Units (Square Feet)/Employees in 2020* | *Generation Factor Used to Estimate* | *Solid Waste Generated in 2015 (lbs/day)* | *Solid Waste Generated in 2020 (lbs/day)* |
|---|---|---|---|---|---|
| Restaurant (assuming 100 seats) | Buildings: 0 | 12,000/24[1] | 10.53 lbs/employee/day[2] | 0 | 252.7 |
| Mercado | 58,000/116[1] | 58,000/116[1] | 10.53 lbs/employee/day[2] | 1,221.5 | 1,221.5 |
| Light Industrial | 75,000/83[1] | 150,000/167[1] | 8.93 lb/employee/day[3] | 741.2 | 1,491.3 |
| Adaptive Reuse of Bekins Storage Property | 14,500 /29 [1] | 14,500/29[1] | 10.53 lbs/employee/day[2] | 305.4 | 305.4 |
| Rail Road Green + Other Landscaping | 119,790 (2.75 acres) | 372,438 (8.55 acres) | Assume 0.372 tons/year/acre or 2.5 lbs/day/acre[4] | 6.9 | 21.4 |
| Waterfront Red Car Line/ California Coastal Trail | 0 acres | 32 acres | Assume 0.372 tons/year/acre or 2.5 lbs/day/acre[4] | 0 | 80.0 |
| 3 Parking Areas | 52,000 (1.2 acres) | 98,000 (2.25 acres) | Assume 0.372 tons/year/acre or 2.5 lbs/day/acre[4] | 3.0 | 5.6 |
| Hardscaped Plazas, Sidewalks, etc. | 8 acres | 9.9 acres | Assume 0.372 tons/year/acre or 2.5 lbs/day/acre[4] | 20.00 | 24.8 |
| | | | **TOTAL** | **2297.92** | **3402.6** |

Notes:

[1]Median Employees per Acre for Commercial/Retail land uses (broad polygon selection) for five-county region was 585 square feet per employee; rounded up to 500 square feet per employee to assume worst case scenario. Median Employees per Acre for Light Industrial land uses (broad polygon selection) for five county region was 924 square feet per employee; rounded up to 900 square feet per employee to assume worst case scenario.
[2]Solid Waste generation factors for commercial land use are from the *L.A. CEQA Thresholds Guide* (2006).
[3]Solid Waste generation factors for industrial land use are from the *L.A. CEQA Thresholds Guide* (2006).
[4]Port of Los Angeles, Recycling and Waste Diversions, 2005.

### 3.12.4.1.5 Energy

The determination of impacts on electricity and natural gas supplies depends on an estimation of demand generated by the proposed Project uses compared to availability and capacity of existing supplies and the conveyance infrastructure. Table 3.12-10 presents a Load Summary for the proposed project elements based on the preliminary design of the proposed Project.

**Table 3.12-10.** Load Summary for the Proposed Project

| *Description* | *Load (kVA[1])* |
|---|---|
| Bridge Water Features | 23.2 |
| Upper Plaza Water Feature | 52 |
| Lagoon Water Feature | 3 |
| Lighting Load | 173.06 |
| Miscellaneous Load-FA/Security | 30 |
| Elevator at 16-Story Tower | 103 |
| **Total Load** | **384.26** |

[1]kVA = Kilovolt-Amps

Source: Port of Los Angeles, 2008

The electricity consumption rates, as stated in the *CEQA Air Quality Handbook (SCAQMD* 1993, Table A9-11), are as follows:

- Restaurant: 47.45 kWh/square feet/year
- Commercial/Retail: 13.55 kWh/square feet/year
- Manufacture/Industrial: 5.3 kWh/square feet/year
- Office: 12.95 kWh/square feet/year
- Warehouse: 4.35 kWh/square feet/year
- Miscellaneous: 10.50 kWh/square feet/year

The landscaping, hardscaping and parking element of the proposed Project would require minimal electricity, mainly for lighting purposes. Therefore, the warehouse electricity consumption factor has been used for these elements' electricity consumption calculations.

Table 3.12-11 shows the electricity consumption for the proposed Project and Table 3.12-12 shows the natural gas consumption for the proposed Project.

**Table 3.12-11.** Electricity Consumption of the Proposed Project (Estimated)

| *Proposed Project Designated Land Uses Consuming Electricity* | *Units in 2015 (Square Feet)* | *Units in 2020 (Square Feet)* | *Consumption Factor Used to Estimate (kWh/gsf/year)* | *Electricity Consumption in 2015 (kWh/year)* | *Electricity Consumption in 2020 (kWh/year)* |
|---|---|---|---|---|---|
| Restaurant (assuming 100 seats) | N.A. | 12,000 | 47.45[1] | 0 | 569,400 |
| Commercial | 58,000 | 58,000 | 13.55[2] | 785,900 | 785,900 |
| Light Industrial | 75,000 | 150,000 | 5.3[3] | 397,500 | 795,000 |
| Adaptive Reuse of Bekins Storage Property | 14,500 | 14,500 | 4.35[4] | 63,075 | 63,075 |
| Rail Road Green+ Other Landscaping | 119,790 (2.75 acres) | 372,438 (8.55 acres) | 4.35[4] | 521,087 | 1,620,10[5] |
| Waterfront Red Car Line/California Coastal Trail | 0 acres | (32 acres) | | 0 | 370,512[5] |
| 3 Parking Areas | 52,000 (1.2 acres) | 98,000 (2.25 acres) | 4.35[4] | 226,200 | 426,300 |
| Hardscaped plazas, sidewalks, etc. | 348,480 (8 acres) | 431,244 (9.9 acres) | 4.35[4] | 1,515,888 | 1,875,911 |
| | | | **TOTAL** | **3,509,650** | **6,135,692** |

Notes:

[1]Electricity Consumption factors for Restaurant from SCAQMD (1993).
[2]Electricity Consumption factors for Retail from SCAQMD (1993).
[3]Electricity Consumption factors for Miscellaneous use from SCAQMD (1993).
[4]Electricity Consumption factors for Warehouse use from SCAQMD (1993).
[5]Smatlak (pers. comm. 2008).
[6]Electricity Consumption factors for Office use from SCAQMD (1993).

**Table 3.12-12.** Natural Gas Consumption of the Proposed Project (Estimated)

| *Proposed project Designated Land Uses consuming Electricity* | *Units/ Employees in 2015* | *Units/ Employees in 2020* | *Consumption Factor Used to Estimate* | *Natural Gas Consumption in 2015 (cf/year)* | *Natural Gas Consumption in 2020 (kWh/year)* |
|---|---|---|---|---|---|
| Restaurant assuming 100 seats | N.A. | 12,000 square feet | 57.6 cubic feet (cf))/ gsf/year[1] | 0 | 569,400 |
| Commercial | 58,000 square feet | 58,000 square feet | 34.8 cf/ gsf/year[2] | 2,018,400 | 2,018,400 |
| Light Industrial | 75,000 square feet | 150,000 square feet | 40 cf/ gsf/year[3] | 3,000,000 | 6,000,000 |
| Adaptive Reuse of Bekins Storage Property | 14,500 square feet | 14,500 square feet | 24 cf/ gsf/year[4] | 348,000 | 348,000 |
| Rail Road Green + Other Landscaping | 2.75 acre (119,790 square feet) | 8.55 acre (372,438 square feet) | 34.8 cf/ gsf/year[5] | 4,168,692 | 12,960,842 |
| Waterfront Red Car Line/California Coastal Trail | 0 acres | 32 acres | N.A. | N.A. | N.A. |
| 3 Parking Areas | 52,000 square feet (1.2 acres) | 98,000 square feet (2.25 acres) | 34.8 cf/ gsf/year[5] | 1,809,600 | 3,410,400 |
| Hardscaped plazas, sidewalks, etc. | 8 acres (348,480 sf) | 9.9 acres (431,244sf) | 34.8 cf/ gsf/year[5] | 12,127,104 | 15,007,291 |
| **TOTAL** | | | | **23,471,796** | **40,314,334** |

Notes:

[1]Natural Gas Consumption factors for Restaurant from CEQA Air Quality Handbook (SCAQMD 1993).
[2]Natural Gas Consumption factors for Retail from SCAQMD (1993).
[3]Natural Gas factors for Industrial use from SCAQMD (1993).
[4]Natural Gas Consumption factors for Warehouse use from SCAQMD (1993).
[5]Natural Gas Consumption factors for Miscellaneous use from SCAQMD (1993).
[6]Natural Gas Consumption factors for Office use from SCAQMD (1993).

Appendix F of the CEQA Guidelines states that EIRs are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (see Appendix C of the CEQA Guidelines for those regarding energy conservation). A discussion is provided in Impact UT-3 below.

## 3.12.4.2 Thresholds of Significance

The following significance criteria are based on the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006) and other criteria applicable to Port projects. According to the *L.A. CEQA Thresholds Guide*, a project would normally be considered to have a significant impact on utilities based on several underlying factors that can affect the need for additional infrastructure to maintain service.

The proposed Project would have a significant impact on public utilities if the project would:

**UT-1:** Require or result in the construction or expansion of utility lines or facilities, the construction of which would cause significant environmental effects

**UT-2:** Exceed existing water supply, wastewater, or landfill capacities.

**UT-3:** Require new, off-site energy supply and distribution infrastructure, or require additions to existing facilities that are not anticipated by adopted plans or programs.

## 3.12.4.3 Impacts and Mitigation

### 3.12.4.3.1 Proposed Project

#### Impact UT-1: The proposed Project would not require or result in the construction or expansion of utility lines or facilities, the construction of which would cause significant environmental effects.

The proposed Project is located within an existing industrial area, and significant water, wastewater, gas and electricity mains already exist along the streets. The proposed Project would include commercial and industrial development, demolition of existing structures, acquisition of LADWP property, removal of LADWP liquid bulk storage tanks, remediation of the LADWP site, building a land bridge and Observation Tower, and extension of the CCT and the Waterfront Red Car along Harry Bridges Boulevard, John S. Gibson Boulevard, and Front Street. All these activities would require construction of new onsite utility lines (water, wastewater, and storm drains) to serve the proposed project operations; the relocation and/or extension of some existing utility lines would also be required. These new utilities would tie into the

existing utility lines that currently serve the proposed Project site. The proposed Project would retain, relocate or rebuild, and protect utilities as appropriate as part of the proposed Project (Brown 2008). The proposed Project would include adding several mainlines off of the existing 24-inch recycled water main line so that all landscaping and water features would be supplied with recycled water.

Based on the estimated wastewater flows and the current flow capacity of the existing sewer lines, the existing sewer system would not be able to accommodate the total flow from the proposed Project. This would be a significant impact on the existing conveyance system. Individual project components such as future industrial development projects, restaurant uses, and the restroom facility associated with the Observation Tower would be connected to the existing mains, as part of the proposed Project. Specific needs for industrial tenants would be analyzed at a later stage in separate environmental documents as individual projects are proposed.

The impacts associated with utility line relocation and rebuilding would include lane closures and affect access to commercial and industrial establishments and other land uses in the proposed project vicinity. Construction-related impacts may also involve interruption of service to surrounding developments and would likely result in traffic diversions as a result of trenching and laying down and installation or relocation of utility lines. LAHD would prepare a Public Services Relocation Plan as part of the proposed Project to address the above-mentioned temporary impacts due to construction of utility lines. The Public Services Relocation Plan would be reviewed by the service providers and City departments prior to implementation. All infrastructure improvements and connections would occur within City streets or public right-of-way, would comply with the City's municipal code, and would be performed under permit by the City Bureau of Engineering and/or LADWP. The impacts of the utility line relocation and rebuilding, including services disruption, would be temporary and for a short duration, and any customers affected would be forewarned with notices. Impacts on cultural resources, including buried artifacts, or from soil or groundwater contamination, are addressed in Section 3.4, "Cultural Resources," and Section 3.6, Groundwater and Soils," respectively. Impacts from construction would be less than significant.

### Impact Determination

Impacts of the proposed project operation on the existing sewer conveyance system in the area would be significant without mitigation. Implementation of Mitigation Measure UT-1 would ensure available sewer conveyance capacity.

#### Mitigation Measures

**MM UT-1: Secondary Sewer Line Installation.** Once the design and utility connections are finalized, LAHD will build a secondary sewer line of sufficient capacity to support the nearest, largest sewer line. The construction of the secondary sewer line would be carried out within public right-of-way or existing City streets. This line will comply with the City's municipal code, and will be built under permit by the City Bureau of Engineering.

Residual Impacts

Impacts related to the construction of the secondary sewer line would be within the public right-of-way and with the analyzed Project area of effect (APE). Impacts from the construction of the secondary sewer line are analyzed in the affected resource sections. For instance, impacts related to temporary traffic disturbances are addressed in the MM TC-1, while impacts related to unknown buried cultural resources that may be encountered during trenching are addressed in MM CUL-5. After mitigation, impacts related to both inadequate sewer line capacity and the impacts associated with its installation would be less than significant.

## Impact UT-2: The proposed project construction and operation would not exceed existing water supply, wastewater treatment, or landfill capacities.

### Water Supply

The proposed Project would use water during construction for various purposes, such as dust suppression, mixing and pouring concrete, and other construction-related activities. Typically, the majority of water use during construction is associated with dust suppression during grading or trenching, which is generally performed by water trucks that use non-potable water from off-site sources. The additional water use would not be substantial and no impact on water supply would occur.

Operation of the proposed Project would demand about 44,180 gpd or 50 acre-feet per year (afy) of water in 2015 and about 85,312.5 gpd or 96.5 afy in 2020. The projected year 2015 and 2020 water demand represents an increase of 435 and 645% over the existing conditions, respectively. The projected year 2015 and 2020 water demands represent an increase of 44.5 afy and 91.1 afy from the baseline water demand (4.5 afy), respectively. In accordance with LAHD's commitment to reduce and conserve the amount of water used in the proposed project area, infrastructure would be incorporated to support the use of reclaimed water for landscaping purposes (parks, road medians). The proposed Project would utilize 20.7 afy and 56.5 afy of recycled water in 2015 and 2020, respectively, from the Terminal Island Reverse Osmosis facility. Currently, there is a 24-inch recycled water mainline that runs from Terminal Island to Harry Bridges Boulevard and along Broad Avenue. The proposed Project would include constructing several mainlines off of this existing line so that all landscaping and water features would be supplied with recycled water (per Table 3.12-7 a total of 49,950 gpd). The 2015 water demand of the proposed Project after use of recycled water would represent 0.004% of the estimated water demand of 705,000 afy for the LADWP service area in 2015. The 2020 water demand of the proposed Project after use of recycled water would represent 0.005% of the estimated water demand of 731,000 afy for the LADWP service area in 2020.

Pursuant to State CEQA guidelines Section 15155(a)(1)(G), the proposed Project would consume an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. For this reason, LAHD would need to comply with the water supply assessment (WSA) requirements of the State Water

Code (Section 10910-10915). The WSA is being prepared by LADWP and will not be available until early 2009. The results of the WSA will be included in the Final EIR and the report will be appended to the EIR. However, given the relatively small increase placed on the current water demand, it is anticipated that water will be available for the proposed Project.

Therefore, the proposed Project's increased water demand would not exceed existing or future supplies. In addition, coordination with the LADWP would ensure that the increased demands would be accommodated by existing infrastructure. Implementation of Mitigation Measure MM UT-2 would ensure that the water demand from the proposed Project is minimized.

### Wastewater Treatment

Proposed project activities would generate about 24,400 gpd of wastewater in 2015 and about 34,000 gpd in 2020. The projected year 2015 and 2020 wastewater flows represent an increase of 435 and 645% over the existing conditions, respectively. However, the projected flow represents 0.14 and 0.19%, respectively, of the existing daily flow of 17.5 million gallons per day (mgd) at the TITP. As the TITP currently operates at 58% capacity, these increases would be considered negligible. The proposed Project would not exceed the capacity of the TITP (Lorscheider pers. comm. 2008).

Implementation of Mitigation Measure MM UT-2 would ensure that the wastewater treatment impacts from the proposed Project would be less than significant.

### Solid Waste/Landfills

Construction and demolition activities would generate debris that would require disposal in a landfill. Construction and demolition materials would include asphalt, concrete, building materials, and solids. Construction debris is one of the greatest individual contributors to solid waste generation, making up approximately 22% of the State of California's waste disposal demand (CIWMB 2004b). Due to lower disposal costs, asphalt and concrete are typically recycled for aggregate base or disposed of at inert landfills instead of municipal facilities. In the event unidentified hazardous materials are encountered during proposed roadway improvements and/or proposed project construction, recycling options would be explored. However, if recycling is not an option, disposal of hazardous materials at a Class I landfill would be based on facility and hazardous material requirements.

The proposed Project would generate 2,420,000 cf of construction debris between 2009 and 2020.[2] All recyclable waste would be accounted for, documented, and removed from the proposed project site by a qualified recycling provider. The City

[2] The construction would include 130,000 square feet of demolition of regular buildings. Buildings to be demolished are assumed to be 10-feet high (1-storey) with 50% void space. Hence, construction debris amounts to 650,000 cf due to demolition of regular buildings. The proposed project construction activities also include demolition of the marine oil tanks. The tanks cover an area of 118,000 square feet and are assumed to be 30 feet high. Assuming 50% of the building to be void space, Phase 2 would generate 1,770,000 cf of construction debris. Thus, total construction debris is assumed to be 2,420,000 cf.

of Los Angeles Construction and Recycling Guide provides reuse and recycling options for construction and demolition waste. It also provides a list of companies handling the materials for recycling (City of Los Angeles 2006). Assuming LAHD's current diversion rate of 41.8%, 1,067,970 cf of construction debris would be diverted to the landfill from the proposed Project's construction activities. The construction waste sent to the landfill would be 0.031% of the estimated remaining capacity of 111,200,000 cubic yards of the Sunshine Canyon SLF. Thus, after recycling, the amount of construction waste that would reach the landfill would not be substantial. The proposed Project would not result in significant solid waste impacts during the construction phase. Implementation of mitigation measures MM UT-3 and MM UT-4 would ensure that the impacts of solid waste generated as a result of construction and demolition remains less-than-significant.

The proposed project operations would generate approximately 1.25 tons (2,508.52 lbs/day) of solid waste per day in 2015 and 1.81 tons per day (3,613.2 lbs/day) in 2020. The projected volumes represent an increase of 110.7 and 203.5% over the existing conditions, respectively. The Bureau of Sanitation has a current recycle diversion rate of 62%, with a goal of 70% by 2015 and 100% by 2030. With the current recycle diversion rate of 62%, the amount of solid waste that would go to the Sunshine Canyon landfill in 2015 would represent 0.004% of the permitted daily throughput of 12,100 tons (24.2 million lbs) and 0.006% in 2020. If the goal of 70% diversion is achieved by 2015, that amount would be reduced to 0.003% and 0.005% in 2020.

The open space element of the proposed Project would not generate a substantial amount of solid waste. The proposed green spaces would grasscycle their green waste, that is, leaving clippings on the lawn, and open spaces would have recycle bins and minimal trash. The commercial waste hauler for the proposed project area would collect park trash.

During 2013–2015, the operations of the proposed project components developed under the interim plan would overlap with demolition, and site remediation if deemed necessary, of the LADWP Marine Tanks. During this period, operation of the proposed Project would be required to comply with all existing hazardous waste laws and regulations, including the federal RCRA and CERCLA, and CCR Titles 22 and 26. Please see Section 3.6, "Groundwater and Soils," as well as Section 3.7, "Hazards and Hazardous Materials," for a more detailed discussion of these regulations and the proposed project elements that must comply with them.

The negligible increases in operation-generated solid waste that would be diverted to the Sunshine Canyon SLF are considered less than significant. The proposed Project would adhere to all the applicable City and state goals for minimizing the waste sent to landfills. As stated above, Sunshine Canyon SLF would be able to accommodate the negligible increase in solid waste generated by proposed project operations. Furthermore, if recycle diversion goals are attained by their estimated date, there would be no impact by 2030.

Compliance with mitigation measure MM UT-5 would ensure that the impacts on solid waste remain less than significant.

### Impact Determination

Based on the discussions above, the proposed project operations would result in less-than-significant impacts on existing water supply, wastewater, or landfill capacities.

Mitigation Measures

**MM UT-2: Water Conservation and Wastewater Reduction.** The LAHD and Port tenants will implement the following water conservation and wastewater reduction measures to further reduce impacts on water demand and wastewater flows.

a. The landscape irrigation system will be designed, installed, and tested to provide uniform irrigation coverage for each zone. Sprinkler head patterns will be adjusted to minimize over spray onto walkways and streets. Each zone (sprinkler valve) will water plants having similar watering needs (do not mix shrubs, flowers and turf in the same watering zone). Automatic irrigation timers will be set to water landscaping during early morning or late evening hours to reduce water losses from evaporation. Irrigation run times for all zones will be adjusted seasonally, reducing watering times and frequency in the cooler months (fall, winter, spring). Sprinkler timer run time will be adjusted to avoid water runoff, especially when irrigating sloped property. Sprinkler times will be reduced once drought-tolerant plants have been established.

b. Selection of drought-tolerant, low-water-consuming plant varieties will be used to reduce irrigation water consumption. For a list of these plant varieties, refer to *Sunset Magazine*, October 1988, "The Unthirsty 100," pp. 74–83, or consult a landscape architect.

c. The availability of recycled water will be investigated as a source to irrigate large landscaped areas.

d. Ultra-low-flush water closets, ultra-low-flush urinals, and water-saving showerheads must be installed in both new construction and when remodeling. Low-flow faucet aerators will be installed on all sink faucets.

e. Significant opportunities for water savings exist in air conditioning systems that utilize evaporative cooling (i.e., employ cooling towers). LADWP will be contacted for specific information of appropriate measures.

f. Recirculating or point-of-use hot water systems will be installed to reduce water waste in long piping systems where water must be run for a considerable period before heated water reaches the outlet.

**MM UT-3: Recycling of Construction Materials.** Demolition and/or excess construction materials will be separated on site for reuse/recycling or proper disposal. During grading and construction, separate bins for recycling of construction materials will be provided on site.

**MM UT-4: Recycled Content Materials Use.** Materials with recycled content, such as recycled steel from framing and recycled concrete and asphalt from roadway construction, will be used in project construction. Wood chippers registered through the California Air Resources Board's Portable Equipment Registration Program will

be used on site during construction, using wood from tree removal, not from demolished structures, to further reduce excess wood for landscaping cover.

**MM UT-5: AB 939 Compliance.** The LAHD and Port tenants will implement a Solid Waste Management Program including the following measures to achieve a 50% reduction of current waste generation percentages by the buildout year of 2020 and ensure compliance with the California Solid Waste Management Act (AB 939).

a. Provide space and/or bins for storage of recyclable materials within the proposed project site. All garbage and recycle bin storage space will be enclosed, and plans will show equal area availability for both garbage and recycle bins within storage spaces.
b. Establish a recyclable material pick-up area for commercial buildings.
c. Participate in a curbside recycling program to serve the new development.
d. Develop a plan for accessible collection of materials on a regular basis.
e. Develop source reduction measures that indicate the method and amount of expected reduction.
f. Implement a program to purchase materials that have recycled content for project construction and operation (i.e., lumber, plastic, office supplies).
g. Provide a resident-tenant/employee education pamphlet to be used in conjunction with available Los Angeles County and federal source reduction educational materials. The pamphlet will be provided to all commercial tenants by the leasing/property management agency.
h. Include lease language requiring tenant participation in recycling/waste reduction programs, including specification that janitorial contracts support recycling.

Residual Impacts

Impacts would be less than significant.

## Impact UT-3: The proposed Project would not require new, off-site energy supply and distribution infrastructure, or require additions to existing facilities that are not anticipated by adopted plans or programs.

Energy (diesel fuel and electricity) would be used during construction of the proposed Project. Energy expenditures during construction would be short term, occurring periodically during each of the proposed project construction phases. Construction would not result in substantial waste or inefficient use of energy because construction would be competitively bid, which would facilitate efficiency in all construction stages. Current LAHD bid specifications include provisions to reduce energy consumption, such as staging work during non-peak hours when appropriate. Additionally, construction of modern buildings and structures incorporates energy-efficient designs that are mandated by current building codes. LAHD policies such as the Construction Recycling

Program would aim to make construction and development projects more energy efficient.

Proposed project operations would generate demands for electricity associated with commercial use, industrial use, parking areas, the Observation Tower, street lighting, and Waterfront Red Car uses. The Wilmington leg of the Waterfront Red Car Line would consume an estimated 370,500 kWh of electricity per year (Smatlak pers.comm. 2008). Proposed project activities would consume about 3,614,650 kWh of electricity in 2015 and about 6,240,700 kWh in 2020. The projected year 2015 and 2020 electricity consumption rates represent an increase of 333 and 647% over the existing conditions, respectively. The proposed Project's electricity demand represents 0.12 and 0.22% of the total daily supply from LADWP resources in 2015 and 2020, respectively (8,129 MW available in 2015 and 7,721 MW available in 2020). The proposed Project would also have a total electrical load of 384.26 kVA (see Table 3.12-10). Newly constructed buildings would adhere to the Port's Green Building Policy of implementation of LEED-certified ratings wherever applicable. LAHD also plans to install solar panels on the shade pavilion as part of the proposed Project with the goal of achieving up to 14% of the proposed Project's energy demand needs, which has not been factored into the consumption numbers above. Thus, the total proposed project electricity demand would be minimal in relation to the overall existing output.

There are no known electricity deficiencies in the study area and LADWP would be able to supply the electricity demand generated by the proposed Project (Gupta pers. comm. 2008). The study area has existing power lines within or immediately adjacent to the proposed Project that could be extended so that extensive off-site improvements would not be required (Gupta pers. comm. 2008). However, the proposed Project would require an onsite transformation facility to step down the voltage of LADWP high voltage distribution lines (Gupta pers. comm. 2008). Thus, a 300 kVA transformer facility is proposed as part of the proposed Project.

LADWP has drafted an Integrated Resource Plan that anticipates load growth and plans new generating capacity or demand side management programs to meet load requirements for future customers. Furthermore, the proposed Project would incorporate energy conservation measures in compliance with California's Building Code CCR Title 24 that requires building energy efficient standards for new construction (including requirements for new buildings, additions, alterations, and, in nonresidential buildings, repairs). Incorporation of these design standards, as required by state law, would reduce wasteful energy consumption. In addition, energy conserving design features discussed under the Methodology section above would help further minimize effects of the proposed Project on energy supply.

Proposed project operations would generate demands for natural gas associated with commercial use, industrial use, parking areas, the Observation Tower, street lighting, and open space. Proposed project activities would consume about 64,964 cf per day (23,711,800 cf per year) of natural gas in 2015 and about 111,108 cf per day (40,554,300 cf per year) in 2020. The projected year 2015 and 2020 electricity consumption rates represent an increase of 400 and 756%, respectively, over the existing conditions. The proposed Project's natural gas demand represents 0.001 and

0.002% of the total daily capacity of the Gas Company in 2015 and 2020, respectively (4,675 MMcf per day available in 2015 and 2020). This natural gas demand generated from the proposed Project would be minimal in the context of the scale of operations of the utilities. Additionally, specific tenant needs for industrial components would be analyzed at a later stage in separate environmental documents. The increased demand for natural gas would be accommodated by the Gas Company via the existing infrastructure located adjacent to and within the proposed project site. The proposed Project would provide new energy distribution infrastructure required to support proposed project operations. Natural gas demands for the proposed Project (space heating and water heating) would not exceed available supplies because the increase in square footage is negligible compared to the existing square footage being served by the utility providers.

### Impact Determination

The proposed Project would not require new, off-site energy supply and distribution infrastructure, or require additions to existing facilities that are not anticipated by adopted plans or programs. Impacts would be less than significant.

#### Mitigation Measures

No mitigation is required.

#### Residual Impacts

Impacts would be less than significant.

## 3.12.4.3.2 Summary of Impact Determinations

Table 3.12-13 summarizes the impact determinations of the proposed Project related to utilities, as described in the detailed discussion in Section 3.12.4.3.1.

**Table 3.12-13.** Summary Matrix of Potential Impacts and Mitigation Measures for Utilities Associated with the Proposed Project

| *Environmental Impacts* | *Impact Determination* | *Mitigation Measures* | *Impacts after Mitigation* |
|---|---|---|---|
| **3.12 Utilities** | | | |
| **UT-1:** The proposed Project would not require or result in the construction or expansion of utility lines or facilities, the construction of which would cause significant environmental effects. | Significant | **MM UT-1: Secondary Sewer Line Installation.** Once the design and utility connections are finalized, the LAHD will build a secondary sewer line of sufficient capacity to support the nearest, largest sewer line. The construction of the secondary sewer line would be carried out within public right-of-way or existing City streets. This line will comply with the City's municipal code, and will be built under permit by the City Bureau of Engineering. | Less than significant |
| **UT-2:** The proposed project construction and operation would not exceed existing water supply, wastewater treatment, or landfill capacities. | Less than significant | **MM UT-2: Water Conservation and Wastewater Reduction.** The LAHD and Port tenants will implement the following water conservation and wastewater reduction measures to further reduce impacts on water demand and wastewater flows.<br>a. The landscape irrigation system will be designed, installed, and tested to provide uniform irrigation coverage for each zone. Sprinkler head patterns will be adjusted to minimize over spray onto walkways and streets. Each zone (sprinkler valve) will water plants having similar watering needs (do not mix shrubs, flowers and turf in the same watering zone). Automatic irrigation timers will be set to water landscaping during early morning or late evening hours to reduce water losses from evaporation. Irrigation run times for all zones will be adjusted seasonally, reducing watering times and frequency in the cooler months (fall, winter, spring). Sprinkler timer run time will be adjusted to avoid water runoff, especially when irrigating sloped property. Sprinkler times will be reduced once drought-tolerant plants have been established.<br>b. Selection of drought-tolerant, low-water-consuming plant varieties will be used to reduce | Less than significant |

| *Environmental Impacts* | *Impact Determination* | *Mitigation Measures* | *Impacts after Mitigation* |
|---|---|---|---|
| | | irrigation water consumption. For a list of these plant varieties, refer to *Sunset Magazine*, October 1988, "The Unthirsty 100," pp. 74–83, or consult a landscape architect.<br>c. The availability of recycled water will be investigated as a source to irrigate large landscaped areas.<br>d. Ultra-low-flush water closets, ultra-low-flush urinals, and water-saving showerheads must be installed in both new construction and when remodeling. Low flow faucet aerators will be installed on all sink faucets.<br>e. Significant opportunities for water savings exist in air conditioning systems that utilize evaporative cooling (i.e., employ cooling towers). LADWP will be contacted for specific information of appropriate measures.<br>f. Recirculating or point-of-use hot water systems will be installed to reduce water waste in long piping systems where water must be run for a considerable period before heated water reaches the outlet.<br>**MM UT-3: Recycling of Construction Materials**. Demolition and/or excess construction materials will be separated on site for reuse/recycling or proper disposal. During grading and construction, separate bins for recycling of construction materials will be provided on site.<br>**MM UT-4: Recycled Content Materials Use**. Materials with recycled content, such as recycled steel from framing and recycled concrete and asphalt from roadway construction, will be used in project construction. Wood chippers registered through the California Air Resources Board's Portable Equipment Registration Program will be used on site during construction, using wood from tree removal, not from demolished structures, to further reduce excess wood for landscaping cover.<br>**MM UT-5: AB 939 Compliance**. The LAHD and Port tenants will implement a Solid Waste Management Program including the following measures to achieve a 50% reduction of current waste generation percentages by the build out year of 2020 and ensure compliance with the California Solid Waste Management Act (AB 939).<br>a. Provide space and/or bins for storage of recyclable materials within the proposed project site. All garbage and recycle bin storage space will be | |

| *Environmental Impacts* | *Impact Determination* | *Mitigation Measures* | *Impacts after Mitigation* |
|---|---|---|---|
| | | enclosed and plans will show equal area availability for both garbage and recycle bins within storage spaces.<br>b. Establish a recyclable material pick-up area for commercial buildings.<br>c. Participate in a curbside recycling program to serve the new development.<br>d. Develop a plan for accessible collection of materials on a regular basis.<br>e. Develop source reduction measures that indicate the method and amount of expected reduction.<br>f. Implement a program to purchase materials that have recycled content for project construction and operation (i.e., lumber, plastic, office supplies).<br>g. Provide a resident-tenant/employee education pamphlet to be used in conjunction with available Los Angeles County and federal source reduction educational materials. The pamphlet will be provided to all commercial tenants by the leasing/property management agency.<br>h. Include lease language requiring tenant participation in recycling/waste reduction programs, including specification that janitorial contracts support recycling. | |
| **UT-3**: The proposed Project would not require new, off-site energy supply and distribution infrastructure, or require additions to existing facilities that are not anticipated by adopted plans or programs. | Less than significant | No mitigation is required | Less than significant |

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### 3.12.4.4 Mitigation Monitoring

| | |
|---|---|
| **Impact UT-1:** The proposed Project would not require or result in the construction or expansion of utility lines or facilities, the construction of which would cause significant environmental effects. | |
| Mitigation Measure | **MM UT-1: Secondary Sewer Line Installation.** |
| Timing | During engineering design and prior to approval of utility plans by the City Engineer, implemented during and after construction |
| Methodology | Construct a secondary sewer line to provide additional wastewater conveyance capacity |
| Responsible Parties | LAHD and Contractor(s) |
| Residual Impacts | Less than significant |
| **Impact UT-2**: The proposed project would not exceed existing water supply, wastewater, or landfill capacities. | |
| Mitigation Measure | **MM UT-2: Water Conservation and Wastewater Reduction.**<br>**MM UT-3: Recycling of Construction Materials.**<br>**MM UT-4: Recycled Content Materials Use**. .<br>**MM UT-5: AB 939 Compliance**. |
| Timing | During project design and prior to approval of development and construction plans, implemented during and after construction |
| Methodology | Implement water conserving features, use recycled materials for and during construction, and develop a recycling program for the operational phase to reduce project waste |
| Responsible Parties | LAHD and Contractor(s) |
| Residual Impacts | Less than significant |

## 3.12.5 Significant Unavoidable Impacts

There would be no significant unavoidable impacts.