

Appendix IS-8

Water and Sewer Memorandum



Technical Memo

Water Service. Water services for the City of Long Beach are provided by the Long Beach Water Department (LBWD) through an underground water distribution pipe network. The LBWD water distribution network totaled 912 miles of water mains with approximately 90,000 service connections¹.

Long Beach Water Department (LBWD) receives its domestic water supply from three sources: Groundwater, Imported, and Recycled. The following table identifies existing and projected water supply projections²:

TABLE 1: EXISTING AND PROJECTED WATER SUPPLIES (IN ACRE-FEET)²

Water Supply	2020	2025	2030	2035	2040
Groundwater	33,001	33,501	34,001	34,501	35,001
Imported	35,100	35,100	35,100	35,100	35,100
Recycled	9,190	9,190	9,190	9,190	9,190
Total	77,291	77,791	78,291	78,791	79,291

As illustrated in Table 1, the major source of water for the LBWD includes imported water purchased from the Metropolitan Water District of Southern California (MWDSC), pumped groundwater treated by the LBWD, and recycled water and. The LBWD is performing research into other possible measures to increase or maintain water supplies, including seawater desalinization and water conservation measures to reduce water demand.

According to the 2015 Urban Water Management Plan, LBWD projects that water supplies will be sufficient to meet all demands through the year 2040. The following table illustrates the projected water supplies vs the projected demands for LBWD.

TABLE 2: WATER SUPPLIES EXCEED DEMANDS*

	2020	2025	2030	2035	2040
Total Supplies	77,291	77,791	78,291	78,791	79,291
Total Demands	63,643	63,410	63,454	63,609	64,137
Surplus	13,648	14,381	14,836	15,182	15,154

**Includes both potable and recycled water supplies/demands*

Existing Water Service: The project area is bounded by Ocean Boulevard to the north, Pine Avenue to the West, Seaside Way to the South, and existing improvements to the east, including a pedestrian bridge, a promenade and a building. Records indicate that there are existing water mains within Ocean Boulevard, Pine Avenue, and Seaside Way and several laterals within the project site. The water mains consist of a 12-inch pipe in Ocean Boulevard, running east-west, a 12-inch pipe running north-south within Pine Avenue, and a 12-inch pipe running east-west within Seaside Way. The existing laterals for the project range from 6-inch pipes to 2-inch pipes; however it is anticipated that new points of connections will be required for the proposed development.

Proposed Water Service: It is anticipated that the proposed development will utilize approximately 4065 fixture units and require 650 gpm. The proposed laterals for the development will range from 1-inch to 8-inch pipes. The proposed laterals for the project will provide service for the domestic, fire, and irrigation systems. There are other existing utilities within the surrounding streets; however

it is not anticipated that the water connections will pose a significant challenge considering the lines are pressurized. Upon connection to the new development booster pumps will be utilized to achieve the required pressures for the building since the existing street pressure for the surrounding area of 65 psi.

Fire Flow: The City Fire Code utilized the 2016 California Fire Code (CFC), with some amendments and modifications, as part of the City's Municipal Code. The purpose of the CFC is to prescribe minimum fire safety requirements for new and existing buildings, facilities, storage and processes. The regulations address fire prevention, fire protection, and life safety among other requirements.

The proposed project will comply with the City of Long Beach Fire Code and satisfy the flow requirements set forth in the code. Moreover the project will install a sprinkler system and fire hydrants in accordance with the CFC.

Sewer Service: The LBWD is responsible for Operation and Maintenance on 712 miles of gravity sewer, 26 pump stations, 7.6 miles of force main, 115,116 lateral connections and 16,158 sewer maintenance holes (generally manholes). The system generates roughly 45 million gallons per day (mgd) of wastewater. Most of the wastewater is delivered to the LACSD's Joint Water Pollution Control Plant (JWPCP), 24501 South Figueros Street, Carson, California. Some of the wastewater is delivered to the LACSD's Long Beach Reclamation Plant, 7400 East Willow Street, Long Beach, California. The Long Beach Reclamation Plant produces reclaimed water for irrigation purposes at the City's parks, golf courses, cemeteries and numerous garden nurseries. Other users include California State University Long Beach, Long Beach City College, the Long Beach Unified School District and Caltrans sites on the 405 and 605 Freeways and THUMS (a collaboration of oil producers operating four off-shore oil islands).³

Existing Sewer Service: According to LBWD records there are existing sewer mains within Ocean Boulevard and Seaside Way. The sewer main within Seaside Way is a 10-inch Vitrified Clay Pipe (vcp) and will service the proposed development. There is an existing 8-inch sewer lateral that is currently cut and capped at the southeastern edge of the property. This existing lateral, most likely, served as the main connection point for the previous Jergins Trust Building that was demolished around 1989. The proposed development will either utilize the existing lateral or install a new lateral at a new point of connection near the existing lateral.

The proposed development will connect to the existing 10-inch vcp line within Seaside Way; however from the existing manhole located at the southeastern corner of the project site, the sewer line constricts to a 8-inch vcp line for the segment of pipe that stretches all the way to Locus Avenue. There is no record as to why the smaller (8-inch) sewer line was allowed to remain in place while the 10-inch line was installed; however this will result in a bottleneck for the project and will require replacement.

Proposed Sewer Service: It is anticipated that the proposed development will discharge approximately 69,509 gpd (0.11cfs) of average daily flow and 139,018 gpd (0.22 cfs) of peak flow into the existing system through a 8-inch vcp lateral. With the introduction of the new flow from the proposed development, the downstream 8-inch main line will need to be upsized to match the upstream 10-inch line. The replacement line will have the same alignment (horizontal and vertical) of the existing line and utilize the same connection points.

There are a significant number of utilities within Seaside Way, therefore should the sewer lateral move significantly from the current location of the existing sewer lateral, utility conflicts may present a challenge; however if the sewer lateral remains in the near vicinity of the existing lateral, there should not be utility conflict challenges.

¹ Long Beach Water Department (LBWD). Fiscal Year 2016 Comprehensive Annual Financial Report.

² Long Beach Water Department, 2015 Draft Urban Water Management Plan, Table 12-Existing and Projected Water Supplies (af/yr). af/yr = acre-feet per year.

³ Long Beach Sewer System Management Plan (SSMP) Final Report, April 2014