

4.13 Utilities and Service Systems

This section addresses potential impacts that development under the Inner Harbor Specific Plan could have to public utility and service systems, such as water supply, and solid and non-hazardous waste generation and disposal. This section also presents a project-level analysis of the Harbor View project, which is located largely within the Specific Plan Area. The project impacts related to surface water and stormwater runoff are also discussed in Section 4.9, *Hydrology and Water Quality*. Impacts related to electricity and natural gas supply and demand are discussed in Section 4.4, *Climate Change*.

4.13.1 Environmental Setting

Water

Regional Setting

Redwood City receives 100 percent of its potable water supply from the Hetch Hetchy, a part of the San Francisco's Regional Water System (RWS). The San Francisco Public Utilities Commission (SFPUC) manages this system. Hetch Hetchy is fed mostly from Sierra Nevada snowmelt but also includes rainfall and runoff collected in a number of reservoirs: Calaveras, San Antonio, Crystal Springs, San Andreas, and Pilarcitos. In addition to capturing runoff, these reservoirs provide storage for emergency water supplies. The remaining water supply into Hetch Hetchy comes from flows diverted from the Tuolumne River (which flows from the central Sierra Nevada to the Central Valley).

Municipal Water Supply

Infrastructure

The Redwood City water system provides water to both Redwood City and portions of San Mateo County. This system covers approximately 17 square miles and includes +/- 262 distribution pipelines, 10 pump stations, 26 pressure reducing stations, and 12 water storage facilities. The system is operated by the Redwood City Public Works Services Division. The service area's elevation varies from sea level to over 900 feet. The City recently connected its 17 pressure zones to storage tanks. This allows water to be pumped from one zone to another if any regional water supply is disrupted.

The potable water supply is managed by the Redwood City Water Department. In October 2011, West Yost Associates completed the City of Redwood City Water Master Plan. The Master Plan evaluated the City's existing water distribution system and its ability to meet the recommended operation and design criteria. The Inner Harbor Plan Area is located within the "Main City" water zone. This water zone is supplied by the SFPUC via gravity. The Master Plan evaluated the storage capacity of the various zones. The purpose of storage is to equalize demands on the water supply source, production facilities, and transmission mains; provide emergency storage; and to provide water to fight fires. Ten storage facilities are located in the higher elevations of Redwood City and two are located in the lower elevation within Redwood Shores. The current combined storage capacity is 21.24 MG. The Main City zone was identified as having a water storage

capacity deficit of 6.3 MG. The City is looking to construct two new storage tanks: one with 3.3 MG capacity and one with 3.0 MG capacity. Blomquist Street, west of Seaport Boulevard is one of the proposed locations for the 3.0 MG tank. The tank is to be constructed at grade and include a booster pump. The Master Plan estimates the booster station to be sized at 10 MGD (three duty pumps, each with a flow rate of 2,300 gpm).

Supply Entitlements

This section describes the existing water supply entitlements, rights, and/or water service contracts relevant to the SFPUC water supply. In 1984, 30 Bay Area water suppliers (including Redwood City) signed a Settlement Agreement and Master Water Sales Contract (“Master Contract”) with San Francisco. The Master Contract is supplemented by an individual Water Supply Contract between each wholesale customer and the SFPUC.¹ The Master Contract was set to expire in July 2009. On April 28, 2009, the SFPUC approved a Water Supply Agreement (“Supply Agreement”) to replace the 1984 Master Contract between San Francisco and its wholesale customers. The new Agreement is intended to serve through the year 2034, with provisions for two 5-year extensions. One of the key terms of the Agreement includes the wholesale customers’ agreement to the allocation of 184 million gallons per day (mgd) of water supply between them, known as the Water Supply Assurance (“Supply Assurance”). This Supply Assurance outlasts the lifespan of the Supply Agreement because the Supply Assurance has no expiration date. The City’s individual contracted Supply Assurance is 12,243 acre-feet per year (af/yr). Over six years (2008-2014), the City consumed an average of 1,616 af/yr under the contractual amount (Redwood City, 2015a). Another key term of the Agreement is that San Francisco will complete its Water System Improvement Program (WSIP) by 2015.²

Municipal Water Demand

In accordance with the State of California Urban Water Management Planning Act the City of Redwood City developed and adopted its 2010 Final Urban Water Management Plan (UWMP) in June 2011. The purpose of the UWMP is to facilitate local and regional water planning activities and support the City’s long-term water resource planning goals. The population projections outlined in the 2010 General Plan match the growth assumptions contained in the 2010 UWMP.

The 2010 UWMP contains precise demand projections, which take account of conservation measures and efficiencies that have been and will be implemented (see discussion below). The 2010 UWMP projects that the City will receive its Individual Supply Guarantee of 12,243 af/yr during normal water years, and that the supply will be reduced pursuant to the Water Shortage Allocation Plan in dry and multiple dry years. The 2010 UWMP presents the current and planned water supplies for Redwood City, as depicted in **Table 4.13.1**.³

¹ The number of entities that purchase water from the SFPUC has changed since the initial signing of the Master Contract. Presently, there are 27 wholesale customers that receive water from the SFPUC Regional System.

² The WSIP includes capital improvements aimed at enhancing the SFPUC’s ability to meet its water service mission of providing high-quality water to customers in a reliable, affordable, and environmentally sustainable manner.

³ Nothing in this EIR or in the Inner Harbor Specific Plan constitutes a reservation by the City of potable water capacity for the proposed project, since water is allocated on a first-come, first-served basis.

**TABLE 4.13-1
CURRENT AND PLANNED WATER SUPPLIES (ANNUAL FISCAL YEAR)**

Water Supply Sources	2009/2010 AFY	2014/2015 AFY	2019/2020 AFY	2024/2025 AFY	2029/2030 AFY
SFPUC	12,243	12,243	12,243	12,243	12,243
Groundwater ¹	0	0	0	0	0
Transfers/Exchanges	0	0	0	0	0
Desalination	0	0	0	0	0
Recycled Water ²	2,000	2,000	3,238	3,238	3,238
TOTAL	14,243	14,243	15,481	15,481	15,481

¹ Defined as municipal potable source only. Does not include existing or future private wells.

² Redwood City recycled water is not a potable supply and is currently available for non-potable uses only.
Source: 2010 Urban Water Management Plan (Redwood City, 2011).

Water Demand Reduction

The City has actively reviewed alternate water sources and methods to reduce its water demand and reliance on the RWS. The City does not include local groundwater as a source of supply in its 2010 UWMP. Locally, groundwater is not used as a source of municipal potable water supply due to water quality, quantity, reliability, and long-term production capacity concerns.

Beyond groundwater, the City has incorporated extensive, active water conservation and recycling programs. The active measures include incentives and rebates for low-flow toilets and water efficient faucets, washing machines, shower heads, and irrigation methods. The recycling program includes a water treatment facility and series of distribution pipelines (discussed below). With these plans in place the City of Redwood City currently meets the 2020 water demand reduction targets as required by the California Water Conservation Act of 2009. On a regional level the SFPUC, Santa Clara Valley Water District, East Bay Municipal Utility District, Contra Costa Water District, and Zone 7 Water Agency are jointly exploring the development and creation of a regional desalination and water transfer facility.

Plan Area Water Infrastructure

The Inner Harbor Area is currently served by two water mains. One main is a 12-inch Asbestos Cement Pipe (ACP) that extends from the Walnut Street cul-de-sac, under Highway 101 through the west side of the Maple Street loop and then extends east through Blomquist Street where it ties into a 16-inch Welded Steel Pipe (WSP) in Seaport Boulevard. Both the ACP and WSP have an installation date of 1978. The second main is an 8-inch ACP that will service the Replacement Jail (currently under construction) at Chemical Way and Maple Street. It then extends through Blomquist Street and ties into an existing 8-inch ACP in Seaport Boulevard. This 8-inch ACP has installation dates that range from 1957 to 1966. Several services are provided to parcels located on Blomquist Street, but outside the limits of the Inner Harbor Area.

There are no apparent water lines/mains shown in the upper looped portion of Maple Street, to the Docktown Marina, nor to the Ferrari Property. It is anticipated that any new development along Maple Street or the Docktown Marina would require a water line extension around the Maple

Street loop while the Ferrari property could possibly receive service from Penobscot Drive in Seaport Centre. The Seaport Centre lines were constructed mid-1980. Penobscot Drive contains an existing 10-inch PVC (polyvinyl chloride) stub in the nearby cul-de-sac. A connection to the 10-inch PVC line would require a coordination and approval from PG&E for a crossing under their main overhead transmission lines. The pipe may also need to cross the existing levee, which would require a special design and permit. A new water line connection at Seaport Boulevard would be another option for the Ferrari property. Either option would require an easement. Although the Water Master Plan does not indicate any existing hydraulic deficiencies, the aging ACP and WSP pipelines throughout these areas is a concern. Pipe materials such as asbestos cement have a generally accepted life of 50 years. The City implements an ongoing capital improvement program for the renewal of aging infrastructure, which includes programs for the repair, replacement, and rehabilitation of the water distribution network.

The size of municipal water systems is primarily determined by the need to meet fire flow. The California Fire Code sets the flow rate requirements (based upon the building construction type and floor area) measured at 20 psi residual pressure. The East 101 Infrastructure Plan calls for significant improvements East of Highway 101 to improve fire flows, as well as construction of a new regional ground-level storage and associated booster pump station to provide fire flow and emergency storage. The existing 12-inch diameter pipeline that runs through Blomquist Avenue and an easement on the County Correctional Facility is slated to be upgraded to 20-inch diameter (West Yost, 2015).

Recycled Water

The City of Redwood City has adopted a recycled water program to ensure prudent water use and ongoing water conservation. The program's implementation allows the shift away from using high-quality water for non-potable uses. In 2008, the City adopted a Recycled Water Use Ordinance. The Ordinance is broken into both "Required" and "Encouraged" use categories, in terms of the types of projects and activities. The recycled water system is owned and operated by the City. Silicon Valley Clean Water (SVCW, formerly known as South Bayside System Authority or SBSA) and Redwood City entered into agreements for the production and distribution of recycled water. The recycled water system has been designed to deliver up to 3,238 af/yr by 2030. Current demand on the recycled water system is approximately 750 af/yr (Redwood City, 2015a). The project site is within the adopted Service Area. The SVCW treatment plant supplies recycled water to the Inner Harbor neighborhood via an existing 24-inch diameter pipeline located along the north side of U.S. 101. This pipeline extends north on Maple Street and east on Blomquist Street. Two new pipelines are proposed as part of the Inner Harbor Specific Plan. One pipeline, a new eight-inch line, will tie into the existing 24-inch and extends north and east along the Blomquist Street extension, and north again on the planned Maple Street extension. A second 8-inch line will connect to the existing line in Galveston Drive and through Penobscot Drive into the Water Distribution-2 site. A future regional recycled water system tank and booster pump stations are planned to serve the Seaport and Downtown areas of Redwood City.

Wastewater Collection and Treatment

Municipal Wastewater System

The City wastewater system is composed of treatment and collection components. The Redwood City Public Works Department is responsible for the operation and maintenance of the sanitary sewer collection system serving Redwood City. The Silicon Valley Clean Water (SVCW) Wastewater Treatment Plant provides wastewater treatment and maintains the force main that conveys wastewater from the Maple Street Pump Station to the treatment plant. The City's sewer collection system consists of approximate 192 miles of gravity and force mains. Most of the gravity piping system is composed of 6- to 8-inch diameter pipe sizes. The system includes 31 pump stations located in the Bayfront Area (26 of which are located in Redwood Shores and the remaining 5 located in Seaport/Pacific Shores). Most of the City's sewer flows are directed via gravity to the Maple Street Pump Station, which is then transmitted to and treated in the SVCW Wastewater Treatment Plant in Redwood Shores, and eventually discharged into the San Francisco Bay. The Maple Street Pump Station is under the jurisdiction of SVCW, which pumps from the Maple Street Pump Station to its transmission force main (48-inch to 54-inch diameter pipes) to the Wastewater Treatment Plant located in Redwood Shores.

Once treated, the effluent is discharged through a 66-inch diameter pipeline to an outfall diffuser (about a mile offshore) into a deep-water channel of the San Francisco Bay. Under SVCW's 10-year capital improvement plan to replace and upgrade aging infrastructure, the SVCW has begun construction on their 48-inch Force Main Reliability Improvement Project which would connect the San Carlos and Maple Street pump stations. A portion of this force main is within the Inner Harbor Plan Area. Construction is anticipated to be completed in 2015. This pipe will replace the existing line(s) that have had a history of leakage and damage due to the unstable Bay Mud ground conditions. In addition, SVCW is planning on replacing all four of its pump stations with three new stations (consolidating two of the stations into one). SVCW's proposed Pump Station No. 2 (the Maple Street Pump Station) will include a screening facility to handle material from the County Jail under construction in the Inner Harbor Plan Area. Construction of the screening facility is anticipated to start in 2015. The new pump stations combined with the new force main will be designed to convey the wastewater through the year 2040.

Wastewater Collection System Capacity

The City's current General Plan indicates plans for implementing current capital improvement projects that range from rehabilitation of existing pump stations to replacement of aging sewer infrastructure (described above). The City's 2013 Updated Sanitary Sewer Plan (Update Plan) confirmed that the City's collection system has adequate capacity for the future Peak Dry Weather Flow. Eighteen (18) capacity improvements/projects were identified and prioritized as required to eliminate the sewer system surcharge which occurs during selected design storms – Peak Wet Weather Flow (PWWF) conditions. Of those proposed improvements the City has completed the highest priority capacity project and conducts annual flow monitoring to assess pipeline conditions and troubleshoot for potential inflow and infiltration problems.

The City's wastewater is treated in the SVCW wastewater treatment plant. SVCW operates under a joint powers authority (JPA) with four member agencies: the cities of Redwood City, Belmont, and San Carlos, and the West Bay Sanitary District (serving Menlo Park, Atherton, Portola Valley, and parts of East Palo Alto and San Mateo County). The JPA entities own the SVCW. SVCW is responsible for the operation of four pump stations, the force main, and the wastewater treatment plant.

The wastewater treatment plant has an operating capacity of 29 million gallons per day (mgd) for average dry weather flow. The plant is permitted by the RWQCB to discharge 29 mgd Average Dry Weather Flows (ADWF) into San Francisco Bay. The current permitted PWWF capacity of the SVCW facility is 71 mgd (Redwood City, 2010). Redwood City has been allocated about 13.8 mgd of ADWF capacity at the SVCW wastewater treatment plant. Redwood City has been allocated 30.5 mgd of PWWF treatment capacity at the SVCW treatment plant. The SVCW facility currently has a PWWF capacity of 71 mgd for all of its member agencies.

Plan Area Wastewater Infrastructure

The 2013 Update Plan modeled the City sewer system with a PWWF scenario under build-out conditions that includes the future capacity planned by the Maple Street Pump Station improvements. The model showed a surcharging in the collection system that violated planning criteria (5 feet of freeboard between rim and HGL) but did not predict any sanitary sewer overflows – flows that left the system. Without the capacity improvements, sewer overflows were predicted in three areas, all located on the south side of Highway 101 and outside the Inner Harbor Plan Area. The 2013 Update Plan indicated that under PWWF conditions the gravity mains and force mains studied in the Seaport area showed sufficient operational capacities for the 10-year storm event.

SVCW's new 48-inch force main will connect the San Carlos and Maple Street pump stations. A portion of this force main will impact the Plan Area as it runs from the Maple Street Pump Station toward Inner Bair Island. The force main will exit the pump station in Maple Street, continue north in Maple Street to the Docktown Marina, then run underneath Redwood Creek to Inner Bair Island (owned by the U.S. Fish & Wildlife Service).

The Plan Area includes two existing 8-inch vitrified clay pipe (VCP) gravity mains located beneath Maple Street. One of the VCPs drains into the force main and the Maple Street Pump Station; the second VCP gravity mains joins the gravity main beneath Blomquist Street. These gravity lines leave Blomquist and continue south through an easement and under Highway 101. Also, an existing 10-inch ACP force main runs in Seaport Boulevard to Blomquist Street and into the Maple Street Pump Station. As part of the County Correctional Facility project, a portion of the 10-inch ACP force main in Maple Street has been replaced with a 20-inch gravity main.

Docktown Marina

There are no official sewer laterals to the watercraft at the Docktown Marina, although the City has reported that there is a privately constructed lateral that connects the City's main in Maple

Street to several connections in that area. The sewage from the Docktown residences is removed by a pump boat.

Stormwater

The Redwood Creek and Steinberger Slough confluence physically defines the Inner Harbor Plan area. Redwood Creek flows from the north side of the City, under US 101, combines with Steinberger Slough, and then flows into San Francisco Bay. Redwood Creek and Steinberger Slough, within the extents of the Inner Harbor Specific Plan area, include riprap protection and marine docks. Redwood Creek is owned by the City of Redwood City, while Steinberger Slough's ownership is split, with Graniterock owning the upper/easterly portion and the City the remainder. Both the creek and the Slough are within the jurisdiction of the California Department of Fish and Wildlife, San Francisco Bay Regional Water Quality Control Board, the U.S. Army Corps of Engineers, and the State Lands Commission.

The Inner Harbor Specific Plan area stormwater infrastructure includes a combination of overland flow, gravity mains, force mains, and pump stations. Pumping is required due to the combination of tidal action and the low elevation. The neighborhood is part of four watersheds: Maple Street (gravity outfall), Maple Street K-Mart (pump station), Oddstad (pump station), and Seaport Boulevard (pump station).

Solid Waste

Service, Capacity and Generation

BFI Peninsula in San Carlos provides solid waste collection, recycling, transportation, and disposal services to Redwood City and other nearby jurisdictions. Residential and commercial solid waste from Redwood City is taken to the South Bayside Integrated Facility, a transfer station located on Shoreway Road in San Carlos.

The South Bayside Integrated Facility accepts Class III wastes (non-hazardous solid waste). Its current permitted through-put capacity is 3,000 tons per day. Total annual waste disposal for Redwood City in 2012 was estimated at 81,785 tons.

From the Integrated Facility, recyclable materials are transferred to the adjacent BFI Recyclery, and other materials are transferred to Ox Mountain Landfill, a Class III landfill in Half Moon Bay. The Ox Mountain Landfill has a permitted through-put capacity of 3,598 tons per day, and a maximum permitted capacity of 69.0 million cubic yards of material. The City is a member of the South Bayside Waste Management Authority which has a disposal agreement with Ox Mountain that commits capacity at the landfill through December 31, 2019. The Ox Mountain Landfill is currently permitted to operate through January 2018, pending a renewal of its existing permit to extend its operation period. Approximately 80 percent of Ox Mountain Landfill's total potential capacity remains (approximately 26 million cubic yards).

Solid Waste Generation, Recycling and Diversion

As indicated above, Redwood City as a whole generates approximately 81,785 tons of solid waste per year. In 2005, Redwood City adopted a waste reduction and recycling directive "to make resource conservation an integral part of the physical operation of the waste reduction and recycling programs...". Recyclable household waste, as well as compostable plant and food materials, are picked up every week at residential curbsides; also, there are a variety of recyclable material drop-off locations in Redwood City and San Mateo County. Redwood City, along with a number of local organizations, also sponsors residential and commercial recycling information and reduction programs. To increase recycling in Redwood City, in 2009 the City initiated a new contract with Recology, a solid waste and recycling management company, to manage the solid waste for all areas of the city.

For 2006, the most recent year for which figures are available, the City reported a 61-percent diversion rate (which has been approved by CIWMB). For 2007 and subsequent years, the CIWMB compares reported disposal tons to population to calculate per capita disposal expressed in pounds per person per day (i.e., how much nonrecyclable trash a person disposes of in a day). In 2008, the per capita disposal rate for Redwood City residents was 6.5 pounds per day; for employees in Redwood City, the rate was 9.9 pounds per day. These rates already meet the CIWMB targets for Redwood City of 9.1 pounds per day maximum per resident and 14.4 pounds per day maximum per employee.

Power, Gas and Telecommunications

The topics addressed in this section of this *Environmental Setting* are included for the reader's information about other physical utilities in the Specific Plan Area. The significance criteria for utilities and service systems (see Section 4.13.4) do not address power, natural gas or telecommunications. Relevant factor of energy/power usage is addressed in Section 4.6, *Greenhouse Gas Emissions and Energy*.

Power to the City of Redwood City is provided by Pacific Gas & Electric Company (PG&E), a natural gas and electric company. Electricity is generated from hydroelectric, fossil fuels, nuclear, wind, and geothermal facilities. Electrical transmission lines are generally located in the public right of way. Per the City's 2010 General Plan, as of 2008, no new major transmission lines are planned in Redwood City. In the Inner Harbor Plan Area, the north and west portions of the Maple Street looped road are serviced by overhead power poles/lines while the remainder of the area appears to be serviced by underground facilities.

The City's natural gas is supplied by three main pipelines. One runs parallel to Highway 101 and two lines run adjacent to Highway 280. Within the Plan Area, the gas lines appear limited and do not extend into the looped portion of Maple Street.

Broadband service is provided by CableCom of California, a national provider of construction, technical, and engineering services in the telecommunications field. However, fiber optic/cable lines are not provided in the Inner Harbor Plan area.

Overall, the majority of the Inner Harbor Area would receive service through the extension and/or upgrades in the existing system, however, the Ferrari Property may be able to access these facilities through the Seaport Centre development.

4.13.2 Regulatory Setting

Water

U.S. Safe Drinking Water Act

The U.S. Safe Drinking Water Act (SDWA), established on December 16, 1974, is the main federal law that ensures the quality of drinking water by setting standards for drinking water quality and by providing guidance to the states, localities, and water suppliers who implement those standards.

Senate Bill 610 and Senate Bill 221

The purpose and legislative intent of Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) is to preclude projects from being approved without specific evaluations being performed and documented by the local water provider that indicate that water is available to serve the project. SB 610 primarily affects the Water Code, and SB 221 principally applies to the Subdivision Map Act. SB 610 requires the preparation of a Water Supply Assessment (WSA) for large-scale development projects.⁴ The WSA evaluates the water supply available for new development based on anticipated demand. For the broad range of projects that are subject to this law, the statutory WSA must be requested by the lead agency from the local water provider at the time the lead agency determines that an Environmental Impact Report (EIR) is required for the project under CEQA. The water agency must then provide the assessment within 90 days (but may request a time extension under certain circumstances). The WSA must include specific information including an identification of existing water supply entitlements and contracts. The governing board of the water agency must approve the assessment at a public hearing.

SB 610 describes the UWMP that can be used by a water supplier to meet the standards of the statute and to ensure near- and long-term viability and reliability of local water supplies. The City's 2010 UWMP was approved by the City Council and forwarded to the California State Department of Water Resources (DWR).

SB 221 requires the local water provider to provide "written verification" of "sufficient water supplies" to serve the project. SB 221 applies only to residential projects of 500 units or more (infill or low-income or very-low-income housing subdivisions are exempt) and requires the land use planning agency to include as a condition of approval of a tentative map, parcel map or

⁴ All projects that meet any of the following criteria require a WSA: 1) a proposed residential development of more than 500 dwelling units; 2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 ft² of floor space; 3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 ft² of floor space; 4) a proposed hotel or motel, or both, having more than 500 rooms; 5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; 6) a mixed-use project that includes one or more of the projects specified in this subdivision; or 7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

development agreement a requirement that “sufficient water supply” be available. Sufficiency under SB 221 differs from SB 610 in that it is determined by considering the availability of water over the past 20 years; the applicability of any urban water shortage contingency analysis prepared per Water Code Section 10632; the reduction in water supply allocated to a specific use by an adopted ordinance; and the amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer. In most cases, the WSA prepared under SB 610 would meet the requirement for proof of water supply under SB 221.

Senate Bill 365

Existing provisions of the California Water Code declare that the use of potable water for certain non-potable uses “is a waste or an unreasonable use of water.” SB 365 amends and expands the Water Code to strengthen the provision that the use of potable water for the irrigation of residential landscaping, floor-trap priming, cooling towers, or air-conditioning devices, is wasteful and unsound if reclaimed water suitable for these purposes is available. SB 365 also gives the power to any public agency, including a State agency, city, county, district, or any other political subdivision of the State, to require the use of reclaimed water for these purposes if certain conditions are met. The conditions that must be met are:

- Reclaimed water meeting the requirements of existing law (Section 13550 of the Water Code) is available to the user;
- The use of reclaimed water does not cause any loss or diminution of any existing water right;
- Public health concerns regarding exposure to mist or spray must be addressed, if appropriate; and
- The water user must prepare an engineering report pursuant to Title 22 regulations governing the use of reclaimed water.

The requirements of the law are applicable to all new industrial facilities and subdivisions for which the Department of Health Services has approved the use of reclaimed water, and for which a building permit is issued on or after March 15, 1994; or, if a building permit is not required, new structures for which construction begins on or after this date.

Assembly Bill 901

Assembly Bill 901 (AB 901) requires the urban water management plan to document the quality of a supplier’s available water source(s) and provide an assessment of the ways in which water quality affects its water management strategies and supply.

Assembly Bill 325

Assembly Bill 325 (AB 325), the Water Conservation in Landscaping Act, directs local governments to require the use of low-flow plumbing fixtures and the installation of drought-tolerant landscaping in all new development. Pursuant to the Act, the Department of Water

Resources developed a Model Water Efficient Landscape Ordinance that took effect in Redwood City as of January 1, 2010, and would apply to the proposed project.

State Health and Safety Code Section 64562

Section 64562 of the California Health and Safety Code requires each public water system to have sufficient water available from its water sources and distribution reservoirs to supply adequately, dependably, and safely the total requirements of all its users under maximum demand conditions before an agreement can be made to permit additional service connections to that system.

Water Code Sections 10608 et seq. (“SB 7” or “SB X7 7”)

Water Code Sections 10608 require urban retail water suppliers to set and achieve water use targets that will help the state achieve 20 percent per capita urban water use reduction by 2020.

Redwood City Water System Regulations

Chapter 38 of the Redwood City Code sets forth regulations regarding the water system serving the City of Redwood City and other areas outside City limits. The chapter establishes water service areas and limits allowable connections that cross service area boundaries. This chapter also establishes fees for water service and for new connections, including a facilities fee to provide for the use and construction of existing and future water system capital facilities (Section 38.14).

Redwood City Recycled Water Ordinance

Chapter 38, Article VIII of the Redwood City Code outlines local regulations regarding the use of recycled water. Section 38.52 sets forth required usage of recycled water within a defined “Recycled Water Service Area”, the extent of which is subject to periodic update by resolution of the City Council of Redwood City. The ordinance requires use of recycled water in a variety of existing and new land uses/developments. Within the recycled water service area, existing and remodeled commercial and industrial buildings must use recycled water for exterior landscaping. Further, new commercial, industrial, and institutional and multifamily residential projects must use recycled water for landscaping, and must also install a dual plumbing system so that recycled water can be utilized for restroom facilities. In addition to these mandatory uses, Section 38.53 sets forth a number of voluntary uses inside and outside of the Recycled Water Service Area for commercial, residential, institutional, and governmental uses.

Wastewater Collection and Treatment

Federal and State Laws

Federal and state laws relating to wastewater primarily focus on the regulation of pollutant discharges that could contaminate surface waters or groundwater. As such, the federal Clean Water Act and National Pollutant Discharge Elimination System (NPDES), as well as the state Porter-Cologne Water Quality Control Act, all regulate wastewater treatment and the discharge of treated effluent. (See Section 4.8, *Hydrology and Water Quality, Regulatory Setting*).

City of Redwood City Code, Chapter 27

Chapter 27 of the Redwood City Code establishes standards, conditions, and requirements related to the use of the City's sanitary sewer facilities. The Chapter establishes allowable limits for discharge into the sanitary sewer facilities, including limits on the quantity and composition of discharged wastewater. The Chapter also establishes fees for use and for the development of capital facilities related to wastewater.

Solid Waste

Assembly Bill 939

Assembly Bill 939 (AB 939), enacted in 1989 and known as the Integrated Waste Management Act, requires each city and/or county to prepare a Source Reduction and Recycling Element to demonstrate reduction in the amount of waste being disposed to landfills, with diversion goals of 50 percent by the year 2000. Diversion includes waste prevention, reuse, and recycling. Senate Bill (SB) 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 required cities to divert 25 percent of their solid waste from landfills by 1995, and 50 percent by the year 2000. As noted above, Redwood City was diverting approximately 61 percent of its waste stream by 2006. The CIWMB works with municipalities to help improve recycling programs. The State generally places the burden of responsibility for waste stream reduction on local municipalities (i.e., cities and counties), and Redwood City has met the CIWMD requirements while incorporating expanded recycling requirements and policies into its General Plan.

Redwood City General Plan

- The *Built Environment Element* of the Redwood City General Plan includes the utilities and service system policies below, which relate to the Specific Plan and/or the Harbor View project and were adopted for the purpose of avoiding or mitigating an environmental effect issues. Policies listed below that are also considered land use policies are addressed in Section 4.9, *Land Use and Planning*, in this chapter of the EIR. Policy BE-40.2: Maintain the city's water system to ensure adequate fire flow.
- Policy BE-40.6: Support the expansion of the city's Recycled Water Service Area, and actively promote widespread use of recycled water in and around Redwood City.
- Policy BE-41.2: Work with South Bayside System Authority (SBSA) member agencies to ensure that the treatment facility has sufficient capacity to meet future wastewater treatment needs.
- Policy BE-41.3: Minimize groundwater infiltration and inflow to the wastewater collection system to maintain sufficient peak wet weather capacity and continue to explore other possible options to reduce peak wet weather flow.

- Policy BE-42.1: Require that improvements and maintenance to electric and gas transmission and distribution systems that are made to accommodate new growth be performed in a manner that maintains safety, reliability, and environmental compatibility.
- Policy BE-42.2: Support efforts to increase the use of renewable energy and low-emission power sources. Encourage the installation and construction of renewable energy systems and facilities such as wind, solar, hydropower, geothermal, and biomass facilities.
- Policy BE-43.2: Require new buildings, particularly taller buildings, to be designed with sufficient space to accommodate wireless communications equipment.
- Policy BE-44.2: Continue to require the placement of utilities underground with new development.
- Policy BE-45.1: Meet or exceed State mandates regarding the diversion of waste from landfills.
- Policy BE-45.2: Encourage recycling, composting, and source reduction by residential and non-residential sources in Redwood City.
- Policy BE-45.3: Promote green building practices with respect to recycling material from building demolition and using recycled building materials in new construction.

4.13.3 Project Baseline

Baseline conditions reflect the condition of the Specific Plan area and Harbor View project site as it existed at the time of the issuance of the Notice of Preparation of the EIR on November 6, 2014. Specific conditions are described above in *Environmental Setting* and documented in the infrastructure reports compiled and summarized for the Plan Area by Fuscoe Engineering in October 2013 (published February 2014) and the Utilities Engineering Report prepared by West Yost Associates (West Yost, 2015).

4.13.4 Significance Criteria

Based on CEQA Guidelines Appendix G, a project would cause significant adverse impacts to public utilities and service systems if it would:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- d) Not have sufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded entitlements are needed;

- e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- f) Be served by a landfill without sufficient permitted capacity to accommodate the project's waste disposal needs; or
- g) Not comply with federal, State and local statutes and regulations related to solid waste.

Approach to Analysis

Inner Harbor Specific Plan

The analysis of the Specific Plan in this document uses the findings from the *Inner Harbor Specific Plan Utilities Engineering Report* (West Yost, 2015) as well as Plan characteristics and the general type of development that might occur with implementation of the plan. Future development is also evaluated on the basis of how the current regulatory framework affects future development that would occur with the plan.

Harbor View Project

The analysis of the Harbor View development project in this section relies largely on the data described above for the Specific Plan and from the Utility Feasibility Study (BKF Engineers, 2015). Further engineering analyses are required and an engineering report will be prepared for this project. Increases in population and land use changes specific to the development project are estimated to which the evaluation of the potential effects on utilities and service systems was applied. As discussed in Section 4.11, *Population, Housing and Employment*, the Harbor View project would result in more total employee population than what would occur under with the Specific Plan (5,600 compared to 4,814), but would have less total population than would occur under the Specific Plan (5,600 compared to 6,024).

Cumulative

The Specific Plan and Harbor View project's contribution to cumulative impacts on utilities and service systems would be considered significant if, either together or independently, combined with other cumulative projects, their contribution to a significant cumulative effect (if one is found) is determined to be considerable.

4.13.5 Program-Level Impacts of the Inner Harbor Specific Plan

Water and Recycled Water System Distribution and Supply

Impact UTIL-1.SP: The water demand generated by development under the Specific Plan could exceed water supplies available from existing entitlements and resources (Criteria (b) and (d)). (Less than Significant)

Water and Recycled Water Distribution

Potable water is supplied to the Specific Plan area from the City's Main Pressure Zone. The Main City Pressure Zone is supplied by several turnout connections to the San Francisco Public Utility Commission's (SFPUC's) Regional Water System, located south of the Specific Plan area. The Main City Pressure Zone has three existing storage reservoirs, with a total of 11.75 million gallons (MG) of storage, and a usable storage volume of just under 9 MG. The reservoirs serve the pressure zone by gravity and are located on the southwest side of the pressure zone, approximately two miles from the Specific Plan area.

The City anticipates constructing two new water storage tanks: one with 3.3 MG capacity and one with 3.0 MG capacity. Blomquist Street, west of Seaport Boulevard is one of the proposed locations for the 3.0 MG tank. The tank is to be constructed at grade and includes a booster pump for up to 22 MGD. In addition, a 20-inch transmission main is proposed for construction. While the new regional improvements are expected to provide a sufficient water storage/supply, the existing water distribution system within the Inner Harbor Plan area would require local improvements to meet future demand and address existing deficiencies. The Inner Harbor Specific Plan area will benefit from the planned regional transmission mains, and a regional tank and pump station, which will provide hydraulic capacity and storage for fire flow and for emergencies. Since the Inner Harbor Specific Plan area is anticipated to meet fire flow without installation of the regional facilities, but will benefit from the tank during emergencies (e.g., SFPUC supply interruption), the proposed allocation of cost for the Specific Plan area's contribution for regional facilities will be determined accordingly.

Due to limited development within the Specific Plan area, few water mains have been installed. It is anticipated that a new water line extension would be installed on Maple Street while the – property at Water-Dependent Development 2 could receive service from Penobscot Drive and Seaport Boulevard. The following new potable water pipelines are needed for the Specific Plan area:

- 1,700 feet of new 10-inch inside diameter pipelines to serve Water Dependent Development 2 and Open Space Wetland areas.
- 520 feet of new 12-inch inside diameter pipeline to serve Water Dependent Development 1 area.

Recycled water would be supplied to the Specific Plan area from the SVCW treatment plant in Redwood Shores via an existing 24-inch diameter pipeline located along the north side of the Bayshore Freeway (Highway 101). A future regional recycled water system tank and booster pump station are planned to serve the Seaport and Downtown areas of Redwood City and will be required to maintain adequate pressure in the recycled system under peak hour conditions. The model was used to identify areas in which pressures are less than the minimum 45 psi (without the tank in service) required for operation of the recycled water system (See Figure 3-3 in West Yost 2015 Report). The tank would serve customers in these areas and customers would be expected to fund tank and booster pump station improvements. All parcels in the Inner Harbor

Specific Plan area would benefit from the regional tank and pump station, and therefore, would contribute to their costs.

Due to limited development within this area, few recycled water mains have been installed. The majority of the Inner Harbor Plan area would access the recycled water system by extending to the existing transmission pipelines. Two new pipelines are proposed as part of the Inner Harbor Specific Plan. One pipeline, a new eight-inch line, will tie into the existing 24-inch and extends north and east along the Blomquist Street extension, and north again on the planned Maple Street extension. A second 8-inch line will connect to the existing line in Galveston Drive and through Penobscot Drive into the Water Distribution-2 site.

Water Supply

The Specific Plan meets the definition of a “project” under SB 610, (i.e., residential development projects of more than 500 dwelling units or other types of developments such as commercial buildings, industrial parks, etc.) and therefore requires a Water Supply Assessment (WSA). Water demand projections for the Specific Plan were based on the adopted *City Engineering Standards for Water Demand Project Criteria*. **Table 4.13-2** presents the existing and projected water demand for the Specific Plan area. The WSA is provided in **Appendix I** to this EIR.

**TABLE 4.13-2
 NET POTABLE AND RECYCLED WATER DEMANDS FOR THE SPECIFIC PLAN**

Potable Water	Water Use
Proposed Condition GPD	111,296
Existing Condition GPD	86,726
Net Increase in Water Use GPD	24,570
Net Increase in Water Use AFY	27.5
Recycled Water	
Proposed Condition GPD	270,841
Existing Condition GPD	26,882
Net Increase in Water Use GPD	243,959
Net Increase in Water Use AFY	272.9

Source: Redwood City, 2015

The WSA examined the proposed project’s water demand over a 20-year period and concluded that the City has sufficient water to meet the expected future water demands of the Specific Plan. The net increase of 27.5 af/yr in potable water supply fits within the development projections established within the Redwood City’s 2010 Urban Water Management Plan (UWMP). Additionally, the City is not currently constrained in supplying additional recycled water supplies to customers.

The City can supply the Specific Plan water needs in non-shortage years. In a single dry year scenario, the Project would increase cutbacks of existing customers by an additional 0.27 percent.

In a multiple dry year scenario, the project would increase water cutbacks by an additional 0.31 percent. However, the UWMP does account for some new growth in its residential and commercial sectors, which includes the Specific Plan area. Therefore, because the Plan’s net increase in potable water use of 27.5 af/yr is included in the projections stated in the UWMP, it would not result in an increase in cutbacks over those established in the UWMP.

Implementation of the Specific Plan would not result in water demand that exceeds water supplies available from existing entitlements and resources. The City has adequate water supply to provide this projected demand in addition to its existing commitments. Adoption and development under the Specific Plan would have a less-than-significant impact on water demand. In addition, the project would not require or result in the construction of new water system distribution facilities or expansion of existing facilities.

Mitigation: None Required

Wastewater Collection and Treatment

Impact UTIL-2.SP: Development under the Specific Plan could exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board (RWQCB) or result in a determination that new or expanded wastewater treatment facilities would be required (Criteria (a), (b), and (e)). (Less than Significant)

Wastewater Treatment Plant Capacity

Development under the Specific Plan would increase the amount of wastewater generated within the Specific Plan Area. Average dry weather flows currently generated in the Specific Plan Area are approximately 112,620 gallons per day (gpd) (West Yost, 2015). Buildout of the Specific Plan is estimated to increase wastewater generation to approximately 292,700 gpd, or an increase of 180,080 gpd ADWF and 728,580 gpd peak wet weather flows (PWWF) (West Yost, 2015) as shown in **Table 4.13-3**.

**TABLE 4.13-3
 EXISTING AND PROPOSED AVERAGE DRY WEATHER FLOWS (ADWF) AND PEAK WET WEATHER FLOWS (PWWF) IN SPECIFIC PLAN AREA**

Proposed Area	Existing ADWF, gpd	Proposed ADWF, gpd	Proposed PWWF, gpd
Inner Harbor 1	25,630	82,500	225,000
Inner Harbor 2	16,100	127,500	357,700
Water Dependent Development 1	12,890	9,000	91,000
Water Dependent Development 2	0	15,900	66,700
Public Facilities	58,000	57,800	100,800
TOTAL	112,620	292,700	841,200

SOURCE: Inner Harbor Specific Plan Utilities Engineering Report (West Yost, 2015).

As described above, the City's wastewater is treated in the SVCW wastewater treatment plant. The plant has an operating capacity of 29 million gallons per day (mgd) for average dry weather flow. The plant is permitted by the RWQCB to discharge 29 mgd Average Dry Weather Flows (ADWF) into San Francisco Bay. The current permitted PWWF capacity of the SVCW facility is 71 mgd (Redwood City, 2010). Redwood City has been allocated about 13.8 mgd of ADWF capacity at the SVCW wastewater treatment plant. The City's available treatment capacity is adequate to meet the estimated net increase of 180,080 gpd ADWF with the Specific Plan. Redwood City has been allocated 30.5 mgd of PWWF treatment capacity at the SVCW treatment plan. The SVCW facility currently has a PWWF capacity of 71 mgd for all of its member agencies. Management of PWWF is the joint responsibility of the individual member agencies and SVCW. The SVCW is currently evaluating options for managing PWWF, which is a function of rainfall, which causes infiltration and inflow into the collection system and is not caused or increased by development, unless development results in a substantial increase in impervious surfaces, which would not be the case with the Specific Plan area. Therefore, the impact of the development under the Specific Plan on treatment capacity would be less than significant.

The SVCW's 10-year capital improvement plan would ensure that the facility is able to continue to meet the wastewater treatment requirements established by the RWQCB for discharge into San Francisco Bay, even with the additional wastewater generated by development proposed under the Specific Plan, resulting in a less-than-significant impact.

Wastewater Conveyance

The SVCW's 10-year capital improvement plan calls for the construction of a new pipe and reconstruction/ replacement of pump stations (West Yost, 2015). SVWC's new 48-inch force main will connect the San Carlos and Maple Street pump stations. A portion of this force main will impact the Inner Harbor area as it runs from the Maple Street Pump Station toward Inner Bair Island. The force main will exit the Maple Street pump, continue north in Maple Street, then run underneath Redwood Creek to Inner Bair Island. Because the location of the Specific Plan area surrounds the Maple Street Pump Station, which functions as the terminus of the City's collection system, very little infrastructure is required to convey sanitary flows from the Specific Plan area to this pump station and on to treatment.

A hydraulic model of the City's sanitary sewer system was developed in the InfoWorks CS software for the City's 2008 Sewer Master Plan. The hydraulic model was updated and re-calibrated by West Yost in 2013 as part of the Sewer Master Plan Update. In order to evaluate the required sanitary sewer infrastructure for the Specific Plan area, the proposed sewer flows for each proposed development area were loaded into the collection system model and described in the Inner Harbor Specific Plan Utilities Engineering Report (West Yost, 2015). The analysis presented below is derived from this report.

When proposed and existing infrastructure are evaluated using existing flows for the remainder of the City, all existing infrastructure relevant to the study area is found to be sufficient to meet both Peak Dry Weather Flow (PDWF) and Peak Wet Weather Flow (PWWF). The analysis indicates that the Specific Plan is adding approximately 66,700 gpd (47 gpm) to an existing PWWF of

194,000 gpd (135 gpm). Given that the firm capacity of Pump Station #27 is 610 gpm, the analysis indicates that the Specific Plan additional PWWF would not exceed the capacity of the pump station.

When proposed and existing infrastructure are evaluated using buildout flows for the remainder of the City, all infrastructure relevant to the study area is found to be sufficient to meet both PDWF and PWWF. Although build-out flows from the un-modeled portion of the City were not evaluated in this study, Pump Station #27 would have sufficient capacity assuming that build-out flows do not greatly exceed existing flows.

While the construction of the new SVCW improvements are expected to provide a sufficient capacity, the existing sewer distribution system within the Inner Harbor Plan area would require improvements to meet future demands and address existing deficiencies. The proposed Water Dependent Development 2 would require the addition of an 8-inch diameter gravity main running north from the proposed development area to the existing 10-inch diameter gravity main in Penobscot Drive. In addition to the improvements described above, the City requires that an Infiltration & Inflow reduction offset be calculated and implemented on all development parcels. See Section 4.5.2 of project's Utilities Engineering Report (West Yost, 2015) for more information. Project compliance with NPDES General Construction Activities Permit requirements would prevent significant construction-related impacts to water quality and ensure that all construction activities minimize the potential to adversely affect receiving waters.

Because the project would not exceed wastewater treatment requirements of the applicable RWQCB nor result in a determination by the wastewater treatment provider that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments, adoption and development under the Specific Plan would have a less than significant impact. Implementation of the Specific Plan would require improvements to the existing sewer distribution system to meet future demands. Because these improvements would be implemented as part of the project, adoption and development under the Specific Plan would have a less-than-significant impact on sanitary sewer service and treatment.

Mitigation: None Required

Stormwater Drainage Facilities

Impact UTIL-3.SP: Development under the Specific Plan could require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Criterion (c)). (Less than Significant)

Redwood Creek has a 30-year storm event capacity. The Inner Harbor Plan area resides within the 100-year flood zone as determined by the Federal Emergency Management Agency (FEMA). Preliminary FEMA maps could be in effect in 2016. Inner Harbor's proximity to Redwood Creek and the South San Francisco Bay makes it vulnerable to both floodwater and anticipated sea level

rise. The area is expected to be impacted due to a potential rise in sea level. Without improvements, the result would be an increase in both frequency and depth of inundation with the flooding of the low-lying lands and infrastructure. Analysis of impacts due to sea level rise is presented in Section 4.8, *Hydrology and Water Quality*.

A hydraulic model of the existing stormwater system was developed and described in the Inner Harbor Specific Plan Engineering Report (West Yost, 2015).

The City's current engineering standard requires the conveyance of the 100-year design storm flows in the City's pipe system with 0.50 feet of freeboard to the gutter flow line. The Specific Plan area was assumed to be raised at least one foot above the Effective Federal Emergency Management Agency (FEMA) 100-year still water elevation of 10.0 ft. (NAVD88) in the San Francisco Bay, per the requirements set forth in the Specific Plan itself. Although the proposed land uses will result in an overall reduction in imperviousness, when compared to the existing condition, the requirement for pipeline conveyance of the 100-year event triggers numerous improvements to the system, which include upsizing pipelines and increasing pumping capacity. These improvements are detailed in Section 5.5 of the Inner Harbor Specific Plan Engineering Report (West Yost, 2015) included in Appendix G.

As indicated in the recent analysis of the existing drainage system by West Yost, and discussed in Impact HYD-5.SP (potential to exceed capacity of existing or planned stormwater infrastructure) in Section 4.8, *Hydrology and Water Quality*, existing facilities are sufficient for a 10-year event but would need to be improved to accommodate a 100-year flow with implementation of the Plan (West Yost, 2015). The potential effects that could occur during the construction of the new infrastructure include factors of construction period noise, emissions from construction equipment, earth movement and dust, water quality, and construction traffic. Each of these construction-related factors are thoroughly analyzed in these respective sections of this EIR analysis chapter, and mitigation measures are identified where warranted. This impact is less than significant.

Mitigation: None Required

Solid Waste Services

Impact UTIL-4.SP: Development under the Specific Plan could violate applicable federal, state, and local statutes and regulations related to solid waste; or generate solid waste that would exceed the permitted capacity of the landfills serving the area (Criteria (f) and (g)). (Less than Significant)

Adoption and development under the Specific Plan would generate construction/demolition debris. In addition, the residential and employee population increase associated with adoption and development under the Specific Plan would increase demand for recycling and solid waste services.

As stated above, the Ox Mountain Landfill is currently permitted to operate through January 2018, pending a renewal of its existing permit to extend its operation period and the City has an existing agreement that commits capacity at the landfill. It is anticipated that the City will continue to have use of capacity at the Ox Mountain Landfill (Redwood City, 2010). With approximately 80 percent of its total potential capacity remaining (approximately 26 million cubic yards) development under the Specific Plan would have a less-than-significant impact on solid waste services and landfill capacity. The Specific Plan would not impede the ability of the City to meet waste diversion requirements or cause the City to violate other applicable federal, state, and local statutes and regulations related to solid waste, resulting in a less-than-significant impact on solid waste services.

Mitigation: None Required

4.13.6 Project-Level Impacts of the Harbor View Project

Impact UTIL-1.HV: Development of the Harbor View project could exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required (Criteria (a) and (b)). (Potentially Significant)

The project site is current serviced by all main utility infrastructures. Site development would involve relocation of an existing 10-inch sanitary sewer pipe that currently runs through the footprint of two of the proposed office buildings.

The Harbor View project proposes to redevelop the site with a gross office building area of approximately 1,250,468 sq.ft., prompting a potential increase in the demand for wastewater treatment.⁵ The existing sewage generation for the project site is 16,101 gpd. The proposed project would have a daily sewage generation of approximately 154,661 gpd thereby increasing sewage generation by approximately 138,560 gpd (BKF Engineers, 2015). Redwood City has been allocated about 13.8 mgd of ADWF capacity at the SVCW wastewater treatment plant. The City's available treatment capacity is adequate to meet the estimated net increase of 138,560 gpd with the Harbor View project. The City requires a sewage mitigation fee for projects that increase sewage generation from existing conditions. The fee amount is based on the calculated length of sewer pipe mitigation.

Mitigation Measure UTIL-1.HV: The length of pipe to be mitigated would be determined by calculating the increase in average daily sewage generation and dividing that number by 37.6. Once the mitigation pipe length is determined, the applicant has the option to mitigate the required length of pipe, or pay a fee based on \$300/linear feet (lf) of mitigate pipe length. Based on the increase in sewage generation of 138,560 gpd, the length of sewer pipe mitigation is 3,685 lf. Since the project is already relocating 1,013 lf of sewer pipe, the

⁵ The Harbor View project is conservatively analyzed throughout this EIR as 1,400,000 square feet of commercial office use. The project sponsor's application to the City proposes 1,250,468 square feet of commercial office use.

mitigation fee should be based on a length of $3,685 - 1,013 = 2,672$ lf. The estimated mitigation fee is $2,672 \text{ lf} \times \$300/\text{lf} = \$801,600$.

Significance after Mitigation: Less than Significant

The SVCW's 10-year capital improvement plan would ensure that the facility is able to continue to meet the wastewater treatment requirements established by the RWQCB for discharge into San Francisco Bay, even with the additional wastewater generated by development proposed under the Harbor View project, resulting in a less-than-significant impact.

Water Supply

Impact UTIL-2.HV: The water demand generated by development of the Harbor View project could exceed water supplies available from existing entitlements and resources or require or result in the construction of new water treatment facilities or expansion of existing facilities (Criterion (b) and (d)). (Less than Significant)

The project site is current serviced by all main utility infrastructures. Site development would involve relocation of existing water lines that currently run where a new building is proposed. The project site is also located within the City's recycled water area and would therefore install dual plumbing in buildings to provide recycled water to non-potable fixtures (i.e., toilets, urinals, hose bibs, etc.).

New regional improvements are expected to provide a sufficient water storage/supply for the City including two new water storage tanks: one with 3.3 MG capacity and one with 3.0 MG capacity. Blomquist Street, west of Seaport Boulevard is one of the proposed locations for the 3.0 MG tank. The tank is to be constructed at grade and includes a booster pump for up to 22 MGD. In addition, a 20-inch transmission main is proposed for construction. The Inner Harbor Specific Plan area, including the Harbor View project, will benefit from the planned regional transmission mains, and a regional tank and pump station, which will provide hydraulic capacity and storage for fire flow and for emergencies.

Due to limited development within this area, few recycled water mains have been installed. The Harbor View project would access the recycled water system by extending to the existing transmission pipelines. Recycled water would be supplied to the Harbor View project from the SVCW treatment plant in Redwood Shores via an existing 24-inch diameter pipeline located along the north side of the Bayshore Freeway (Highway 101). A future regional recycled water system tank and booster pump station are planned to serve the Seaport and Downtown areas of Redwood City and will be required to maintain adequate pressure in the recycled system under peak hour conditions. The tank would serve customers in these areas and customers would be expected to fund tank and booster pump station improvements. The Harbor View project would benefit from the regional tank and pump station, and therefore, would contribute to their costs.

The Harbor View project results in a potential increase in the demand for potable water. The existing water demand for the site is 26,682 gpd. Under project conditions, the proposed potable water demand would be approximately 32,512 gpd and 156,307 gpd of recycled water for a total water demand of 188,819 gpd (BKF Engineers, 2015). This would increase the potable water demand by approximately 5,830 gpd.

A WSA was conducted for the Harbor View project and is provided in Appendix I to this EIR. The WSA determined that the City has sufficient water to meet the expected future water demands of the project. The Harbor View project has a total potable water demand of 36.4 acre feet per year (af/yr) which is a net decrease of 1.1 af/yr in potable water demand as projected in the Inner Harbor Specific Plan for the area, and fits within the development projections established in Redwood City's 2010 Urban Water Management Plan. Further, the City is not currently constrained in supplying additional recycled water supplies to customers (Redwood City, 2015b). Therefore, the water demand generated by the development of the Harbor View project would result in a less-than-significant impact to water supply. In addition, the project would not require or result in the construction of new water system distribution facilities or expansion of existing facilities.

Mitigation: None Required

Stormwater Drainage Facilities

Impact UTIL-3.HV: Development of the Harbor View project could require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Criterion (c)). (Less than Significant)

The project site is current serviced by all main utility infrastructures. Site development would involve relocation of existing stormwater drains that currently exist where a new building is proposed. Stormwater treatment is discussed further in Section 4.8, *Hydrology and Water Quality*.

The project would increase the existing area of pervious surface on the site from 66 percent to 74 percent, given the substantial amount of landscaping proposed on the site, including on the High Garden. Development of the project would connect to existing infrastructure onsite with some increased capacities and design of the infrastructure would be required to meet minimum standards, including the City's Stormwater Management and Discharge Control Program (SMDCP).

Construction activities would be required to comply with NPDES General Construction Activities Permit requirements. The project applicant would be required to prepare a SWPPP for General Construction Activities to reduce potential impacts to surface water quality during construction. The erosion control and storm water quality BMPs that would be employed to minimize pollutants in storm water runoff would be effective in preventing the discharge of NPDES

pollutants to downstream waters. Project compliance with NPDES General Construction Activities Permit requirements are required by law and have proven effective in protecting water quality at construction sites. Routine inspection of all BMPs is required under the provisions of the Construction General Permit.

In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Implementation of the SWPPP at the project site would prevent significant construction-related impacts to water quality by ensuring that all construction activities include the implementation of BMPs that minimize the offsite discharge of sedimentation and other pollutants. Moreover, the potential effects that could occur during the construction necessary to connect the project to existing infrastructure onsite have been thoroughly analyzed in these respective sections of this EIR analysis chapter, and mitigation measures are identified where warranted. This includes factors of construction period noise, emissions from construction equipment, earth movement and dust, water quality, and construction traffic.

Based on the improvements to the site and the adherence to the regulatory requirements described above, the construction of new or expanded stormwater facilities would have a less-than-significant environmental impacts.

Mitigation: None Required

Solid Waste Services

Impact UTIL-4.HV: Development of the Harbor View project could violate applicable federal, state, and local statutes and regulations related to solid waste; or generate solid waste that would exceed the permitted capacity of the landfills serving the area (Criteria (g) and (h)). (Less than Significant)

The Harbor View project could generate approximately 5,600 employees on the project site, thereby prompting a potential increase in the demand for solid waste services. Based on average solid waste generation rates for the proposed project, the Harbor View project could generate approximately 8,400 lbs/day of solid waste.⁶

As stated above, the Ox Mountain Landfill is currently permitted to operate through January 2018, pending a renewal of its existing permit to extend its operation period and the City has an existing agreement that commits capacity at the landfill. It is anticipated that the City will continue to have use of capacity at the Ox Mountain Landfill (Redwood City, 2010). With approximately 80 percent of its total potential capacity remaining (approximately 26 million cubic yards) development of the Harbor View project would have a less-than-significant impact

⁶ Average solid waste generation rates are estimated at 0.006 pound/square foot/day for office uses and does not distinguish between waste that is disposed of and waste that is recycled (CalRecycle, 2015). The conservative analysis throughout this EIR factors 1.4 million square feet of office use for the Harbor View project.

on solid waste services and landfill capacity. The project would not impede the ability of the City to meet waste diversion requirements or cause the City to violate other applicable federal, state, and local statutes and regulations related to solid waste, resulting in a less-than-significant impact on solid waste services.

Mitigation: None Required

4.13.7 Cumulative Impacts

Impact UTIL-1.CU: Construction activity and operations for the development under the Specific Plan and/or the Harbor View project in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity of the Plan Area and Harbor View project site, would not contribute considerably to cumulative impacts to utilities and service systems. (Less than Significant)

The cumulative geographic context for utilities and service systems considerations for Development under the Specific Plan consists of the Specific Plan Area in addition to all areas of the City, as utilities and service systems are provided citywide.

Cumulative projects considered are those in the Specific Plan vicinity that would also involve construction activity, including those in the development forecasts conducted for this EIR based on the countywide transportation model and the US 101/SR84 (Woodside Road) Interchange Improvement Project and other approved, pending, and reasonably foreseeable future projects citywide, including the nearby San Mateo County Replacement Jail and several recent, existing, and anticipated projects underway in downtown Redwood City under the Downtown Precise Plan (see Section 4.0.4, *Cumulative Analysis*, in this chapter for detail). These cumulative development projects would increase demand for water and wastewater conveyance, storage and supply. These developments, however, would provide additional tax revenue and other development fees that would go toward paying for increased utilities and service systems. Adherence to the General Plan policies BE-41 through BE-45 could reduce the potential for significant impacts. Further, improvements discussed throughout this chapter result in improved capacity and conveyance of utilities and service systems, infill capacity. Overall, cumulative development, in combination with development under the Specific Plan and/or development of the Harbor View project would result in a less-than-significant cumulative impact on utilities and service systems. The effect of the development under the Specific Plan and/or the Harbor View project, in combination with other cumulative development, would not be cumulatively significant.

Mitigation: None Required.

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