

UTILITIES AND SERVICE SYSTEMS

4.14 UTILITIES AND SERVICE SYSTEMS

This chapter describes the existing utilities and service systems for Hayward and evaluates the potential environmental consequences of future development that could occur by adopting and implementing the proposed project. Water supply, wastewater, solid waste, and energy conservation are each addressed in separate sections of this chapter. Stormwater as it relates to both water quality and capacity is addressed in Chapter 4.8, Hydrology and Water Quality, of this Draft EIR under impact discussion HYDRO-5. In each section, a summary of the relevant regulatory setting and existing conditions is followed by a discussion of the proposed project and cumulative impacts.

4.14.1 WATER

4.14.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

California Porter-Cologne Water Quality Act

Under the Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, the State Water Resources Control Board (SWRCB) has authority over State water rights and water quality policy. This Act divided the State into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. The RWQCB engage in a number of water quality functions in their respective regions. The RWQCB regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Hayward is overseen by the San Francisco Bay RWQCB.

California Urban Water Management Planning Act

Through the Urban Water Management Planning Act of 1983, the California Water Code (Division 6, Part 2.6, sections 10610 through 10656) requires all urban water suppliers within California to prepare and adopt an urban water management plan and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet¹ of water annually. This Act is intended to support conservation and efficient use of urban water supplies. This Act requires that total project water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single- and multiple-dry water years, and that plans include a water recycling analysis that incorporates a description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses. In

¹ Once acre-foot is the amount of water required to cover 1 acre of ground (43,560 square feet) to a depth of 1 foot.

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September 2014 the act was amended by Senate Bill (SB) 1420 to require urban water suppliers to provide descriptions of their water demand management measures and similar information.²

Senate Bills 610 and 221

Senate Bill (SB) 610 and SB 221 amended State law to ensure better coordination between local water supply and land use decisions and confirm that there is an adequate water supply for new development. Both statutes require that detailed information regarding water availability be provided to City and County decision-makers prior to approval of large development projects. SB 610 requires the preparation of a WSA for certain types of projects, as defined by Water Code Section 10912, which are subject to the California Environmental Quality Act (CEQA). Projects required to prepare a WSA are defined as follows:

- Residential development of more than 500 dwelling units
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor area
- Hotel or motel, or both, having more than 500 rooms
- Industrial, manufacturing or processing plant, or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- Mixed-use project that includes one or more of the projects specified above
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units

SB 221 establishes consultation and analysis requirements related to water supply planning for residential subdivisions including more than 500 dwelling units. Written verification by the water supplier that sufficient water is available for the project is required before construction begins. The document used to determine compliance with both SB 610 and SB 221 is the UWMP.

Groundwater Management Act (1992)

The Groundwater Management Act of the California Water Code (Assembly Bill [AB] 3030), signed into law on September 26, 1992, and effective on January 1, 1993, provides guidance for applicable local agencies to develop voluntary Groundwater Management Plans in State-designated groundwater basins. The Groundwater Management Plans can allow agencies to raise revenue to pay for measures influencing the management of the basin, including extraction, recharge, conveyance, facilities' maintenance, and water quality.³

² Department of Water Resources. Urban Water Management Plans, <https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans>, accessed on October 12, 2018.

³ Department of Water Resources Planning and Local Assistance Central District, Groundwater, *Groundwater Management*, <http://www.cd.water.ca.gov/groundwater/gwab3030.cfm>, accessed on October 12, 2018.

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Sustainable Groundwater Management Act (2014)

The Sustainable Groundwater Management Act of 2014 consists of three legislative bills, SB 1168, AB 1739, and SB 1319. The legislation provides a framework for long-term sustainable groundwater management across California. Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins will form Groundwater Sustainability Agencies (GSAs) that oversee the preparation and implementation of a local Groundwater Sustainability Plan. The City of Hayward is a municipal corporation, with land use authority and water service responsibilities within a portion of the East Bay Plain Groundwater Subbasin. On February 28, 2017, the City of Hayward submitted an application to be the GSA for the portion of the East Bay Plain Subbasin located within the city boundary.^{4,5} Groundwater Sustainability Plans would have to be developed and in place by 2022. GSAs have until 2040 to achieve groundwater sustainability.⁶

Water Conservation Act of 2009

The Water Conservation Act of 2009,⁷ SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing statewide per capita water by 20 percent by 2020, with an interim goal of a 10 percent reduction in statewide per capita water use by 2015. Effective in 2016, urban retail water suppliers that do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards.

State Updated Model Water Efficient Landscape Ordinance

The updated Model Water Efficient Landscape Ordinance requires cities and counties to adopt updated water efficient landscape ordinances by February 1, 2016 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance. Chapter 10 of the Hayward Municipal Code includes Article 12, Bay-Friendly Water Efficient Landscape Ordinance, and Article 20, Bay-Friendly Landscaping Ordinance, which serves as the City's water-efficient landscape ordinance.

California Plumbing Code

The California Plumbing Code⁸ was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions.

⁴ Department of Water Resources, Sustainable Groundwater Management Act, Formation Notification System, <https://sgma.water.ca.gov/portal/gsa/print/200>, accessed on October 12, 2018.

⁵ City of Hayward, Application to Serve as Groundwater Sustainability Agency, file:///C:/Users/cgarcia/Downloads/GSAFormation_Cover_Letter.pdf, accessed on October 12, 2018.

⁶ UC Davis, Division of Agriculture and Natural Resources, 2014. Groundwater web page, <http://groundwater.ucdavis.edu/SGMA/>, accessed on October 12, 2018.

⁷ Department of Water Resources, Senate Bill SBX7-7 2009 Information, <http://www.water.ca.gov/wateruseefficiency/sb7/>, accessed on October 12, 2018.

⁸ California Code of Regulations, Title 24, Part 5.

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Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. Water supply and distribution shall comply with all applicable provisions of the current edition of the California Plumbing Code.

Local Regulations

Looking Forward Hayward 2040 General Plan

The Natural Resource (NR), Public Facilities and Services (PFS), and Community Safety (CS) elements of the General Plan 2040, adopted in July 2014, include policies specific to water resources in the Specific Plan Area. As described in the General Plan EIR, in most cases, no one goal, policy, or implementation program itself is expected to completely avoid or reduce an identified potential environmental impact.⁹ However, the collective, cumulative mitigating benefits of the policies listed below are intended to reduce water-related impacts. Specific goals and policies are described in Section 4.14.1.3, Impact Discussion, to demonstrate how the policy would avoid or reduce the impact.

The following goals and policies are relevant to the analysis of potential impacts to water supply within the Specific Plan Area:

- **Goal NR-6:** Improve overall water quality by protecting surface and groundwater sources, restoring creeks and rivers to their natural state, and conserving water resources.
 - **Policy NR-6.9 Water Conservation:** The City shall require water customers to actively conserve water year-round, and especially during drought years.
 - **Policy NR-6.12 Dual Plumbing Systems:** The City shall encourage the installation and use of dual plumbing systems in new buildings to recycle greywater.
 - **Policy NR-6.14 Native and Drought-Tolerant Landscaping:** The City shall encourage private property owners to plant native or drought-tolerant vegetation in order to preserve the visual character of the area and reduce the need for toxic sprays and groundwater supplements.
 - **Policy NR-6.15 Native Vegetation Planting:** The City shall encourage private property owners to plant native or drought-tolerant vegetation in order to preserve the visual character of the area and reduce the need for toxic sprays and groundwater supplements.
 - **Policy NR-6.16 Landscape Ordinance Compliance:** The City shall continue to implement the Bay-Friendly Water Efficient Landscape Ordinance.
- **Goal PFS-1:** Ensure the provision of adequate and efficient facilities and services that maintain service levels, are adequately funded, accessible, reliable, and strategically allocated.
 - **Policy PFS-1.4 Development Fair Share:** The City shall, through a combination of improvement fees and other funding mechanisms, ensure that new development pays its fair share of providing new public facilities and services and-or the costs of expanding/upgrading existing facilities and services impacted by new development (e.g., water, wastewater, stormwater drainage).

⁹ City of Hayward, 2014, City of Hayward 2040 General Plan certified EIR, State Clearinghouse Number 2013082015.

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- **Goal PFS-3:** Maintain a level of service in the City’s water system that meets the needs of existing and future development while improving water system efficiency.
 - **Policy PFS-3.2 Urban Water Management Plan:** The City shall maintain and implement the Urban Water Management Plan, including water conservation strategies and programs, as required by the Urban Water Management Planning Act.
 - **Policy PFS-3.3 Water Shortage Allocation Plan:** The City shall support implementation of the Water Shortage Allocation Plan, which distributes available water from the regional water system among San Francisco Public Utility Commission and wholesale customers in the event of a system-wide shortage of 20 percent or less.
 - **Policy PFS-3.4 Water Shortage Contingency Plan:** The City shall maintain and implement the Water Shortage Contingency Plan as necessary to address climate conditions or other water shortage emergencies.
 - **Policy PFS-3.13 New Development:** The City shall ensure that water supply capacity is in place prior to granting building permits for new development.
 - **Policy PFS-3.14 Water Conservation Standards:** The City shall comply with provisions of the State’s 20x2020 Water Conservation Plan (California Water Resources Control Board, 2010).
 - **Policy PFS-3.17 Bay-Friendly Landscaping:** The City shall promote landscaping techniques that use native and climate appropriate plants, sustainable design and maintenance, water-efficient irrigation systems, and yard clipping reduction practices.
 - **Policy CS-3.4 Adequate Water Supply for Fire Suppression:** The City shall require new development projects to have adequate water supplies to meet the fire suppression needs of the project without compromising existing fire suppression services to existing uses.

Hayward Municipal Code

Chapter 10, Article 12, the Bay Friendly Water Efficient Landscape Ordinance, establishes a structure for planning, designing, installing, maintaining, and managing water-efficient landscapes in new construction and rehabilitated projects. Chapter 10, Article 20, the Bay-Friendly Landscaping Ordinance, requires all new development with landscapes to meet the most recent minimum Bay-Friendly Landscape Scorecard points as recommended by StopWaste.org. Chapter 10, Article 23, the Indoor Water Efficiency Ordinance, includes standards for new construction and remodels mandating the installation of water-conserving fixtures. The City incorporated CALGreen standards in Chapter 10, Article 21, Green Building Requirements for Municipal Buildings, and Chapter 10, Article 22, Green Building Requirements for Private Development. CALGreen established water conservation measures and requirements that new buildings reduce water consumption by 20 percent.¹⁰ Chapter 11, Article 2, Hayward Municipal Water System, establishes a system for service connections, meter maintenance and testing, and fire service connections, and sets standards and installation costs for service connections.¹¹

¹⁰ City of Hayward Municipal Code, Chapter 10, Planning, Zoning, and Subdivisions.

¹¹ City of Hayward Municipal Code, Chapter 11, Public Utilities.

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City of Hayward Department of Utilities & Environmental Services

The City of Hayward Department of Utilities & Environmental Services manages the procurement, transmission, and distribution of your water supply and oversees the City's water conservation programs. The City of Hayward provides water for residential, commercial, industrial, governmental, and fire suppression uses. The City owns and operates its own water distribution system and purchases all of its water from the San Francisco Public Utility Commission (SFPUC). Emergency water supplies are available through connections with the Alameda County Water District and the East Bay Municipal Utility District (EBMUD) in case of disruption of delivery from SFPUC.

2014 Water System Master Plan

The City of Hayward *Water System Master Plan (WSMP)*, adopted in 2014, is a comprehensive evaluation of the City's water distribution system. The WSMP identifies strategies for cost-effectively improving the City's distribution system infrastructure; furnishes important guidance to enhance operational, emergency preparedness and water quality practices; provides a framework for diversifying the City's water supply; and makes recommendations to enhance the City's existing sustainability programs.

Existing Conditions

This section is based in part on the *Hydraulic Impact Evaluation for the Proposed Downtown Specific Plan Area* that was prepared for the proposed project by West Yost Associates. The evaluation is provided in Appendix F, Utilities Data, of this Draft EIR.

Potable Water Supply Sources

Water service is provided by the City of Hayward for residential, commercial, industrial, governmental, and fire suppression uses. In 1962, Hayward entered into an agreement with the SFPUC to purchase all of Hayward's water from the SFPUC. Prior to that, Hayward constructed over 20 miles of aqueduct in order to deliver Hetch Hetchy water and ceased providing well water in 1963. Approximately 85 percent of the SFPUC water supply originates from the Hetch Hetchy watershed, located in Yosemite National Park; the remaining 15 percent of the SFPUC water supply is produced in the Alameda and Peninsula watersheds. Water is delivered to the city through East Bay transmission mains operated by the SFPUC.

Water service to the Specific Plan Area is mostly provided by the City of Hayward water system, with exception to a small portion of the Specific Plan Area which receives water from a 12-inch water distribution line located along Foothill Boulevard, within the East Bay Municipal Utility District (EBMUD) service area. The EBMUD service area is bounded by San Lorenzo Creek to the south and west, State Route 238 and Foothill Blvd to the east, and the Specific Plan Area boundary and Hazel Avenue to the north.¹²

¹² City of Hayward, 2019, *Downtown Specific Plan*, Public Review Draft, Chapter 4, Infrastructure.

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Recycle Water Systems

The City is implementing a Recycled Water Project, which is scheduled to begin non-potable water deliveries to the western portion of the city in early 2019. Providing recycled water for irrigation will benefit the region considerably by creating a locally sustainable water supply which conserves drinking water, increases drought resiliency, and decreases wastewater discharges. However, the City of Hayward Proposed Recycled Water Project Location Map and Distribution System shows that almost all proposed improvements are located west of Hesperian Boulevard and there will be no municipally available non-potable water within the Specific Plan Area.

Water Supply Availability

The City's 2015 *Urban Water Management Plan* (UWMP) was prepared in accordance with the Urban Water Management Planning Act previously described. The 2015 UWMP addresses the City's water system and includes a description of the water supply sources, historical and projected water use, and a comparison of water supply to water demands during normal, single-dry, and multiple-dry years. The 2015 UWMP also addresses water use efficiency legislation, including the City's 2015 and 2020 water use targets, as required by the Water Conservation Act, and the implementation plan for meeting the City's 2020 water use targets.¹³

The 2015 UWMP relies on the Association of Bay Area Governments (ABAG) *Projections 2013* for estimating the City's water demand. Over the next 25 years, the UWMP assumes that increased residential water demand would result from development of new housing, primarily infill, intensification of existing residential areas, and construction of larger homes. The majority of residential growth is expected to occur in Priority Development Areas (PDAs), which includes the Specific Plan Area. Jobs are estimated to increase by 20 percent and be primarily in the manufacturing/wholesale and health/education fields, and smaller amounts in retail and professional services.¹⁴

The *Water Shortage Allocation Plan* (WSAP) between the SFPUC and its wholesale customers, including the City of Hayward, was adopted as part of the Water Supply Agreement, addresses shortages of up to 20 percent of system-wide use. The Water Supply Agreement has a 25-year term and expires in 2034. It may be extended for up to two 5-year periods upon agreement by SFPUC and a specified number of wholesale customers. The WSAP is comprised of two components. The *Tier 1 Water Shortage Plan* allocates water between the SFPUC and the wholesale customers during system-wide shortages of 20 percent or less. The Water Supply Agreement also includes a *Tier 2 Water Shortage Plan*, which would allocate the available water from the SFPUC system among the wholesale customers based on individual supply guarantee, seasonal use of all available water supplies, and residential per capita use. As a result of the individual supply guarantees, the SFPUC has a responsibility to provide 184 mgd to its wholesale customers in perpetuity, regardless of demand.

¹³ City of Hayward, June 2016, 2015 *Urban Water Management Plan*, Introduction and Overview, page 1-2.

¹⁴ City of Hayward, June 2016, 2015 *Urban Water Management Plan*, Water System Description, page 3-1 and 3-5.

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The SFPUC has not yet been compelled to declare a water shortage emergency and implement the *Tier 1 Water Shortage Plan* because its customers have exceeded the 10 percent voluntary system-wide reduction in conjunction with the Statewide mandatory reductions assigned by the SWRCB. The reductions assigned to each water agency by the SWRCB to address the current drought conditions effectively reduced the demand for SFPUC water supplies.

Tables 4.14-1 to 4.14-3 presents the water supply and demand assessment in million gallons per year (mgy) for normal years, single dry years, and multiple dry years according.

TABLE 4.14-1 NORMAL YEAR WATER SUPPLY AND DEMAND COMPARISON (MGY)

	2020	2025	2030	2035	2040
Supply Totals	8,850	9,320	9,600	9,820	10,260
Demand Totals	8,850	9,320	9,600	9,820	10,260
Difference	0	0	0	0	0

Source: City of Hayward, 2015 Urban Water Management Plan, Chapter 7, Water Supply Reliability Assessment, Table 7-2, page 7-9.

TABLE 4.14-2 SINGLE DRY YEAR SUPPLY AND DEMAND COMPARISON (MGY)

	2020	2025	2030	2035	2040
Supply Totals	7,180	7,180	7,180	7,180	7,180
Demand Totals	8,850	9,320	9,600	9,820	10,260
Difference	-1,670	-2,140	-2,420	-2,640	-3,080

Source: City of Hayward, 2015 Urban Water Management Plan, Chapter 7, Water Supply Reliability Assessment, Table 7-3, page 7-9.

TABLE 4.14-3 MULTIPLE DRY YEARS SUPPLY AND DEMAND COMPARISON (MGD)

		2020	2025	2030	2035	2040
First Year	Supply Totals	7,180	7,180	7,180	7,180	7,180
	Demand Totals	8,850	9,320	9,600	9,820	10,260
	Difference	-1,670	-2,140	-2,420	-2,640	-3,080
Second Year	Supply Totals	6,370	6,370	6,370	6,370	6,370
	Demand Totals	9,030	9,390	9,710	9,910	10,260
	Difference	-2,660	-3,020	-3,340	-3,540	-3,890
Third Year	Supply Totals	6,370	6,370	6,370	6,370	6,370
	Demand Totals	9,210	9,460	9,820	10,000	10,260
	Difference	-2,840	-3,090	-3,450	-3,630	-3,890

Source: City of Hayward, 2015 Urban Water Management Plan, Chapter 7, Water Supply Reliability Assessment, Table 7-4, page 7-9.

As shown in the tables above, the SFPUC would be able to meet all of the City's projected demand through 2040 if average water use; however, during years of water shortages, the 2015 UWMP anticipates

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that supplies would be reduced and demand would be controlled through demand management measures.¹⁵

Section 8 of the 2015 UWMP includes a *Water Shortage Contingency Plan* (WSCP). Water shortage contingency planning prepares a community to respond to water shortages that may occur due to drought conditions, which may occur over a period of time or catastrophic events, which occur suddenly and tend to be shorter in duration. Maintaining optimum supply reliability during such occurrences reduces the impact.

Hayward's past experience with water shortages, most notably during the recent Statewide drought, has shaped its plans for managing droughts and other events. To address decreasing water supplies with increased levels of prohibitions and consumption reduction, Hayward's WSCP consists of four stages, depending on the severity of the shortage, and includes a stage that addresses a reduction of 50 percent in the water supply. Each stage is triggered by water supply availability.¹⁶ Using the measures in the WSCP to reduce the demands to the required supply availability, the 2015 UWMP estimates that Hayward will have adequate supplies to meet demands during normal, single-dry, and multiple-dry years throughout the planning period of the 2015 UWMP (i.e., through 2040).

The City of Hayward has a long-standing commitment to water conservation. Hayward was among the original signatories to the California Urban Water Conservation Council Memorandum of Understanding Regarding Urban Water Conservation in California, and as such, has implemented a diverse range of demand management measures across customer sectors. Aggressive demand management can be credited, in part, for the fact that historical per capita water use is one of the lowest in the San Francisco Bay Area, with a baseline daily water use of 130 gallons per capita per day (gpcd) for the 10-year, 1995/1996 to 2004/2005 fiscal year, period. The City's 2020 target per capita use is 122 gpcd, which is a 5 percent reduction from the City's baseline daily per capita use. The City currently meets its target and would evaluate methods of maintaining this per capita use, as total water demand increases due to residential, economic, and business growth. Section 9 of the 2015 UWMP provides a comprehensive description of Hayward's current and planned water conservation efforts.¹⁷

Hayward recognizes the value in regional water supply planning and, to the extent practicable, has participated in regional efforts to improve and diversify water supplies. Hayward is an active member of the Bay Area Water Supply & Conservation Agency, which was created in May 2003 to represent the interests of the 26 member agencies in Alameda, Santa Clara and San Mateo counties that purchase water on a wholesale basis from the SFPUC. These agencies cooperatively implement water conservation programs, communicate with SFPUC regarding maintenance, operation and improvement of the regional water system, and as appropriate, jointly pursue development of water supplies. Hayward has also participated in Integrated Regional Water Management Plan, the Western Recycled Water Coalition, and other multi-agency efforts to increase and diversify water supplies.

¹⁵ City of Hayward, June 2016, *2015 Urban Water Management Plan*, Supply and Demand Assessment, page 7-9.

¹⁶ City of Hayward, June 2016, *2015 Urban Water Management Plan*, Water Shortage and Contingency Planning, page 8-1.

¹⁷ City of Hayward, June 2016, *2015 Urban Water Management Plan*, Demand Management Measures.

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The SFPUC's Water Supply Improvement Program (WSIP), adopted in 2008, provides goals and objectives to improve the delivery reliability of the regional water system, including water supply reliability. The WSIP includes projects to address water supply reliability.¹⁸

Water Distribution Network

Potable water is distributed throughout the city using a pressurized distribution system that is owned and operated by the City. As shown in Figure 4.14-1, distribution mains within the Specific Plan Area range in size from 8 to 12 inches, with a majority of the streets having 12-inch mains. There are eight main pressure zones within the City's water service area.

The City's distribution system consists of 14 water storage tanks and 7 pump stations delivering water to upper pressure zones. The Specific Plan Area is located within the Pressure Zone 250, which is the pressure maintained in the Pressure Regulating Station as measured in feet above mean sea level. Water enters the City's water distribution system from the SFPUC mains through Pressure Zone 250 and is then pumped to reach higher elevation zones. Pressure Zone 250 provides sufficient pressure throughout the Specific Plan Area under most conditions. Figure 4.14-2 shows the boundaries of the pressure zones. Available pressure within the Specific Plan Area during the existing peak hour demand ranges between 40 pounds per square inch (psi) and 60 psi for portions of the Specific Plan Area east of Mission Boulevard, and between 60 psi and 80 psi for the areas along Mission Boulevard and to the west.

Available fire flow under maximum day demand within the Specific Plan Area ranges from 2,500 to 4,500 gallons per minute (gpm), depending on location and the size of pipes within the local pipe network.

Water service is organized as a service fee-based enterprise fund separate and distinct from the City General Fund, and includes the Water Capital Improvement Fund and Water System Replacement Fund. The City maintains an on-going 10-year Capital Improvement Program (CIP) to ensure system capacity, good performance, and proper maintenance.¹⁹

4.14.1.2 STANDARDS OF SIGNIFICANCE

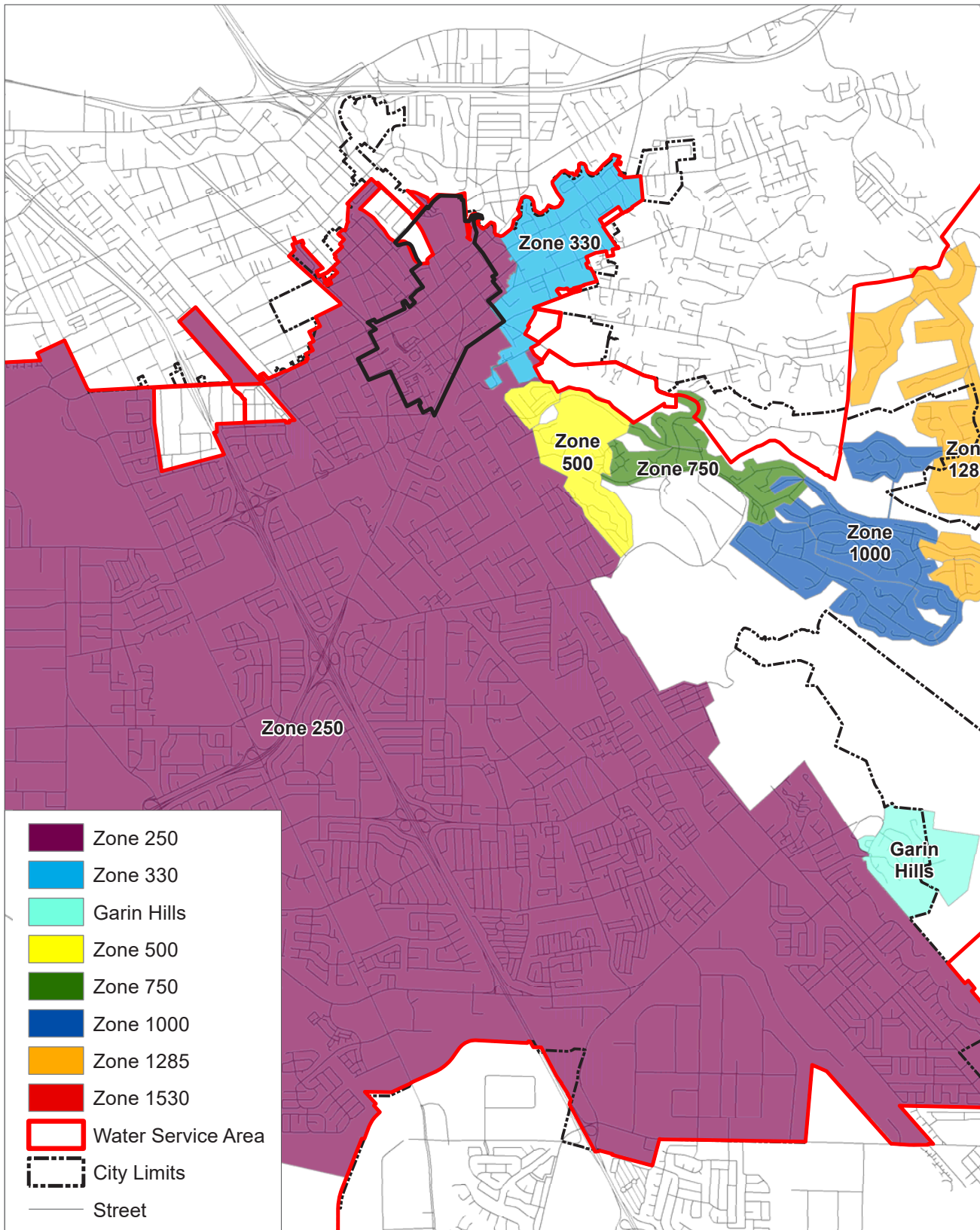
Implementation of the proposed project would have a significant impact on water service if:

1. There were insufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded entitlements were needed.
2. It would require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

¹⁸ City of Hayward, June 2016, *2015 Urban Water Management Plan, System Supplies*, pages 6-11 to 6-14.

¹⁹ City of Hayward, 2014, *Hayward 2040 General Plan Background Report*, page 8-11.

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Source: City of Hayward, Water System Master Plan, June 2014.



Figure 4.14-2
Pressure Zones

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4.14.1.3 IMPACT DISCUSSION

UTIL-1 Sufficient water supplies would be available to serve the proposed project from existing entitlements and resources and new or expanded entitlements would not be required.

As shown in Table 4.14-4, the projected water demand for the Specific Plan would be 506 million gallons per year or approximately 1,554acre-feet per year. This portion of future development potential was not accounted for in the City’s 2015 UWMP and is assumed to create additional water demand.

TABLE 4.14-4 PROPOSED PROJECT WATER DEMAND

Land Use	Number of Dwelling Units/Jobs	Generation Rates	Water Demand	
			MGD	MGY
Multifamily Residential	3,427 dwelling units	202 gallons per day per unit	0.69	253
Non-Residential	6,333 jobs	90 gallons per day per employee	0.57	208
Unaccounted-for-water ^a			0.13	45
Total Water Demand			1.4	506

Notes: MGD= million gallons per day. MGY = million gallons per year.

a. Unaccounted-for-water is equal to 9 percent, per 2014 Hayward Water System Master Plan.

Source: West Yost Associates, Hydraulic Impact Evaluation for the Proposed Downtown Specific Plan Area, May 31, 2018.

As previously shown in Tables 4.14-1 to 4.14-3, the City of Hayward has adequate water supplies to meet the demand in normal years, but not enough supply to meet projected demand during dry years.

The City could meet the water demand with the implementation of water conservation and water efficiency ordinances adopted by the City, including the Indoor Water Efficiency Ordinance (Municipal Code Chapter 10, Article 23), the CALGreen building code requirements (Municipal Code Chapter 10, Article 22 and Article 23), and the Bay-Friendly Water Efficient Landscape and Landscaping Ordinances (Municipal Code Chapter 10, Article 12 and 20). The California plumbing code has instituted requirements for new construction that mandate the installation of ultra, low-flow toilets and low-flow showerheads. Residential, commercial, and industrial usage can be expected to decrease as a result of the implementation of more aggressive water conservation practices, including the active distribution of water saving devices, providing high efficiency toilets and high efficiency clothes washer rebates. In addition, in the case of a water shortage, the City would implement the WSCP, as outlined in the 2015 UWMP.

Furthermore, as an infill development effort, the proposed Specific Plan inherently furthers objectives of water conservation by redeveloping older less efficient buildings with new high efficiency buildings that meet CALGreen standards that reduce water consumption by 20 percent.

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Future development would also be required to comply with the General Plan policies described above in Section 4.14.1.1, as applicable, that require local planning and development decisions to consider impacts to water supply. Specific policies that conserve water include the following: Policy NR-6.9 requires the City to require water customers to actively conserve water year-round, and especially during drought years; Policy NR-6.12 requires the City to encourage the installation and use of dual plumbing systems in new buildings to recycle greywater; Policy PFS 3.14 mandate the City's compliance with provisions of the State's 20x2020 Water Conservation Plan; and Policy PFS-3.2 requires the City to implement water conservation strategies and programs, as required by the Urban Water Management Planning Act. Additionally, Policies NR-6.14, NR-6.15, NR-6.16, and PFS-3.17 conserve water through water efficient landscaping techniques such as the use of appropriate plants and water-efficient irrigation systems. The City also ensures, under Policies PFS-3.13 and CS-3.4, that water supply capacity is in place prior to granting building permits for any new development within the Specific Plan, including adequate water supply for fire suppression. The City also ensures that new development pays its fair share of providing new public facilities and services and/or the costs of expanding/upgrading existing facilities and services impacted by new development (e.g., water, wastewater, stormwater drainage) through a combination of improvement fees and other funding mechanisms as stated in Policy PFS-1.4.

In addition, the proposed Specific Plan contain goals, policies, and programs that also require local planning and development decisions to consider impacts to water services from development in the Specific Plan Area. The following Specific Plan goals and policies would serve to minimize potential adverse impacts from development in the Specific Plan Area:

- **Goal 6 Economic Development (ED):** Downtown capitalizes on its location in the region, leverages its amenities, and captures more sales tax revenue to become a national model for the revitalization of mid-size cities.
 - **Policy ED 3 Innovative Financing Strategies:** Seek innovative and creative ways to fund public amenities, development incentives, and new infrastructure without unduly transferring the cost burden to the private sector.
 - **Policy ED 4 Infrastructure and Utility Delivery:** Ensure efficient delivery of infrastructure and utilities in the Specific Plan Area to achieve buildout in a cost-effective manner and to support economic development.
 - **Program ED 11:** Develop an incentives program that encourages private development to contribute to public amenities that serve a broader area than the development site, such as parkland, stormwater infrastructure, and streetscape improvements beyond the minimum requirement.
 - **Program ED 12:** Facilitate the development of an Enhanced Infrastructure Financing District(s), Community Revitalization Investment Authorities, and other financing opportunities as they arise to support the funding of long-term, more costly infrastructure improvements.
- **Goal 7 Infrastructure and Public Facilities (IPF):** Public services, community facilities, and utility systems are well maintained, implement citywide climate change policies, and meet the needs of current and future Downtown residents, businesses, and visitors.

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- **Policy IPF 1: Water and Sewer:** Maintain adequate water and sewer infrastructure necessary to support development Downtown.
- **Policy IPF 3 Fair Share:** Require developers to pay their fair share cost of infrastructure upgrades.
 - **Program IPF 5:** Pursue funding for necessary systemwide infrastructure improvements to address existing deficiencies and build capacity to support additional development and reduce impact fees. This would be implemented by the Planning Development Services-Planning Division, the Utilities and Environmental Service Department, and the Library and Community Services Department.
 - **Program IPF 6:** Complete an assessment of infrastructure deficiencies in the Plan Area with the potential to impede business growth, including businesses that require specialized infrastructure such as high-speed telecommunications for technology-oriented businesses.

The proposed Specific Plan also recommends that as the new municipal recycled water infrastructure is implemented, the City should look for opportunities to expand the recycled water delivery to the Specific Plan Area and in anticipation, would implement General Plan Policy NR-6.12 and encourage the installation of dual plumbing systems in new buildings and fully isolated irrigation systems that will support the use of non-potable supply on new projects.

Also, the SFPUC's WISP once complete would likely increase the reliability of supplies within the city. The Bay Area Water Supply & Conservation Agency is implementing projects as part of their long-term water supply strategy that could increase the water supply.

While the compliance with existing Municipal Code and General Plan, and the planned conservation improvements described in the 2015 UWMP as well as the proposed Specific Plan could reduce the water deficit, the insufficient water supply during dry years would result in a *significant* impact.

Impact UTIL--1: With implementation of the proposed Specific Plan there would not be sufficient water supplies available to serve the proposed future development from existing entitlements and resources during multiple dry years.

Mitigation Measure UTIL-1: Prior to approving future applications for development in the Specific Plan Area, the City shall require future project applicants to prepare and submit a written statement to the satisfaction of the City of Hayward Community Development Department that clearly demonstrates how the project complies with the water conservation and water efficiency ordinances adopted by the City, including the Indoor Water Efficiency Ordinance (Municipal Code Chapter 10, Article 23), the CALGreen building code requirements (Municipal Code Chapter 10, Article 22 and Article 23), and the Bay-Friendly Water Efficient Landscape and Landscaping Ordinances (Municipal Code Chapter 10, Article 12 and 20) and any other water conservation strategies that would be implemented by the project applicant.

Significance with Mitigation: Significant and Unavoidable. Supplemental water supply sources for the 2040 buildout year of the proposed Specific Plan would be identified and developed by SFPUC. As the 2015 UWMP is updated, supplemental water supply sources beyond 2040 (the planning horizon of the current 2015 UWMP) would be quantified through refined project developments in subsequent UWMPs (updated

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every 5 years). Therefore, additional water supplies that would mitigate this impact will be developed by SFPUC. Because SFPUC is the water service provider to the City and the entity that has the ability to mitigate this impact, and because the City does not have jurisdiction over the development of new water supplies, the City cannot guarantee that additional water supplies will be developed, so the impact is considered significant and unavoidable.

UTIL-2 Implementation of the proposed project would require or result in the construction of new water facilities or expansion of existing facilities, the construction of which might cause significant environmental effects.

The City provides water, purchased from the SFPUC, to all land uses in the City, as well as for fire suppression. The General Plan EIR states that the City has ongoing efforts to replace and renovate existing water storage reservoirs to increase capacity and improve seismic suitability. Seismic suitability is also addressed by retrofitting and improving water distribution pipes at fault line crossings.²⁰ Emergency water supplies are available from the Alameda County Water District and the East Bay Municipal Utility District (EBMUD),²¹ as well as through five emergency wells with a combined capacity of 13.6 mgd.²² All of Hayward's current water supply is purchased from SFPUC and is delivered via Hayward's water delivery infrastructure. The Hayward water distribution system consists of a pipe network which lies predominantly beneath the public street right-of-way. Water comes into Hayward via two aqueducts along Mission Boulevard and Hesperian Boulevard, both having a combined capacity of 32 mgd. Capacity can be increased to 50 mgd through a system of booster pump stations.

Ongoing funding sources are used to update and increase capacity of the water distribution system to meet demand for projected population growth. Additionally, the City plans to replace the existing 1 million-gallon High School Reservoir, with a 3 million-gallon reservoir. Hayward is also developing a recycled water program that could deliver up to 500,000 gpd of tertiary treated wastewater to customers for irrigation and industrial uses, decreasing overall demand for freshwater purchasing from SFPUC.²³

Results from the Hydraulic Impact Evaluation for the Specific Plan indicate that the existing pressure regulating station supply capacity is sufficient to support the Specific Plan. However, storage capacity at buildout was found to be deficient for the Pressure Zone 250. A total of 0.68 million gallons of additional storage capacity is recommended to support the Specific Plan.

²⁰ City of Hayward, 2014, City of Hayward 2040 General Plan certified EIR, State Clearinghouse Number 2013082015, page 19-2.

²¹ City of Hayward, 2014, Hayward 2040 General Plan Background Report, page 8-2.

²² City of Hayward, 2014, Hayward 2040 General Plan Background Report, page 8-11.

²³ City of Hayward, 2014, Hayward 2040 General Plan Background Report, page 8-12.

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Furthermore, the existing water distribution infrastructure is adequate to provide pressure and flow under buildout peak hour conditions, but is insufficient to meet maximum buildout day demand plus fire flow conditions.²⁴ The existing deficiencies are shown on Figure 4.14-3 below. Improvements and would require replacement with larger diameter pipes. Specifically, in some areas pipes that are smaller than 12 inches in diameter should be replaced with new 12-inch diameter pipelines to meet the fire flow pressure criterion and the velocity criterion. As a general efficiency practice, at the time of any planned improvements of public right-of-way it is recommended that the City evaluate if existing utilities should be replaced as part of the roadway construction.

Potential environmental impacts could result from construction and operation of upgraded pipeline improvements; however, such impacts would be project-specific. Any new or expanded water facilities would require permitting and review in accordance with CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent possible. Furthermore, General Plan Policy PFS-1.4 requires that new projects which require construction or expansion of public improvements shall pay their fair share of the costs necessary to improve or expand infrastructure to serve them, including water service. Compliance with this policy would ensure impacts related to adequate water service would be *less than significant*.

Significance without Mitigation: Less than significant.

4.14.2 SANITARY WASTEWATER (SEWER)

4.14.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

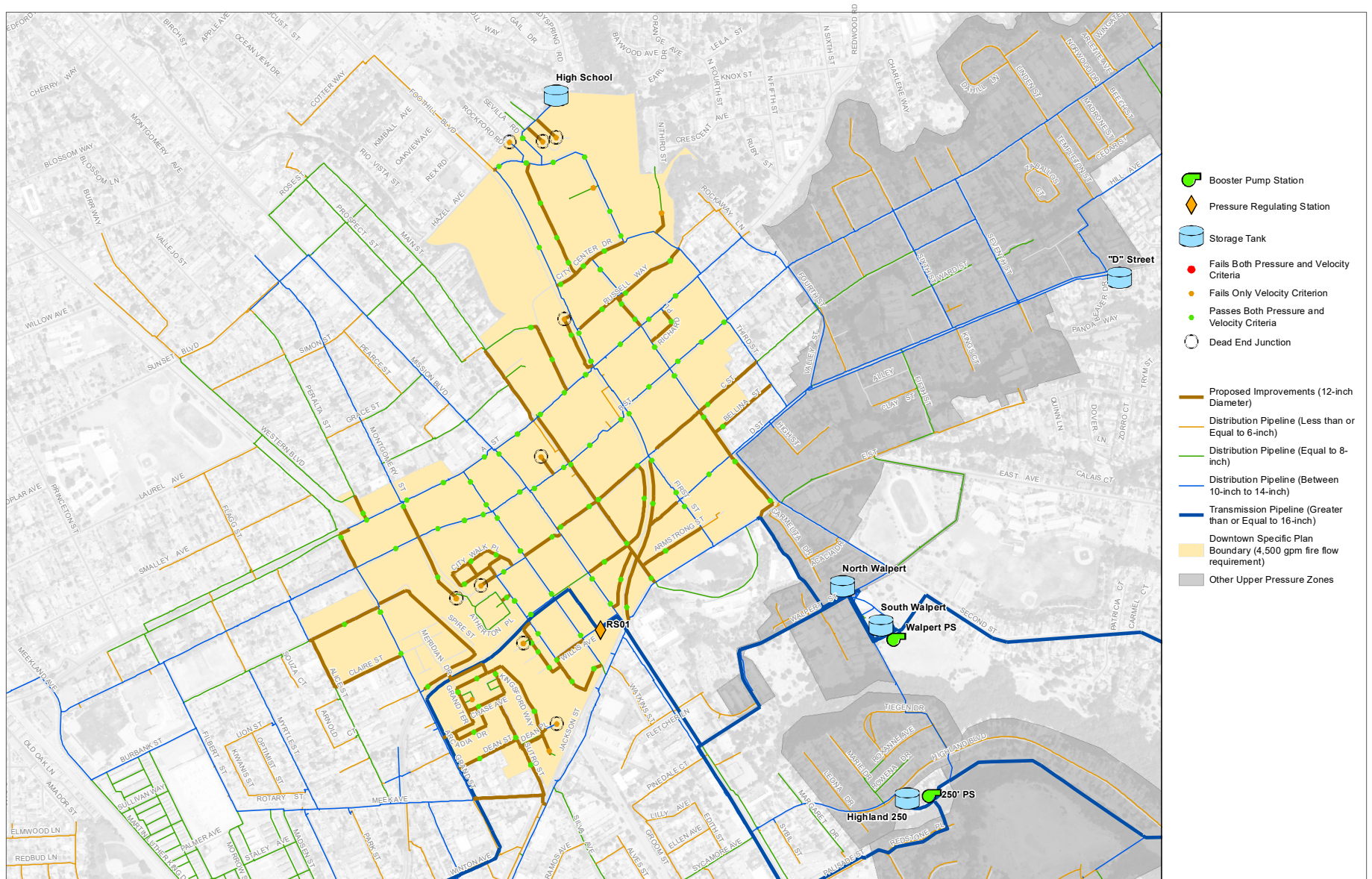
The federal government regulates wastewater treatment and planning through the Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), as well as through the National Pollutant Discharge Elimination System (NPDES) permit program, both of which are discussed in further detail below.

Clean Water Act

The CWA regulates the discharge of pollutants into watersheds throughout the nation. The CWA consists of two parts, one being the provisions which authorize federal financial assistance for municipal wastewater treatment plant construction. The other is the regulatory requirements that apply to industrial and municipal dischargers. Under the CWA, the United States Environmental Protection Agency (USEPA) implements pollution control programs and sets wastewater standards

²⁴ West Yost Associates, May 31, 2018, *Hydraulic Impact Evaluation for the Proposed Downtown Specific Plan Area*, Conclusions and Recommendation, page 13.

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Source: West Yost Associates, Hydraulic Impact Evaluation for the Proposed Downtown Specific Plan Area, May 31, 2018.



Figure 4.14-3
Proposed Water Distribution System Improvements

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National Pollutant Discharge Elimination System

The NPDES permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a wastewater treatment plant.

State Regulations

Wastewater treatment and planning is regulated by the State. The specific State regulations relevant to the proposed project are described below.

Title 22 of California Code of Regulations

Title 22 regulates the use of reclaimed wastewater. Typically, disinfected tertiary water may only be used on food crops where the recycled water would come into contact with the edible portion of the crop, and disinfected secondary treatment may be used for food crops where the edible portion is grown above ground. Other crops such as orchards, vineyards, and fiber crops require less levels of treatment. Title 22 also regulates treated wastewater used in non-agricultural irrigation such as playgrounds, parks, and landscaping. Regulation of reclaimed water is governed by the nine RWQCBs and the California Department of Public Health.

State Water Resources Control Board

On May 2, 2006 the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine RWQCBs to enforce these requirements within their region. The City of Hayward is within the jurisdiction of the San Francisco Bay RWQCB.

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Sanitary District Act of 1923

The Sanitary District Act of 1923 (Health and Safety Code Section 6400 et seq.) authorizes the formation of sanitation districts and enforces the districts to construct, operate, and maintain facilities for the collection, treatment, and disposal of wastewater.²⁵ This Act was amended in 1949 to allow the districts to also provide solid waste management and disposal services, including refuse transfer and resource recovery.

Local Regulations

Looking Forward Hayward 2040 General Plan

The Public Facilities and Services (PFS) and Natural Resource (NR) elements of the General Plan 2040, adopted in July 2014, include policies specific to the management of wastewater in the Specific Plan Area. Policies concerning wastewater in the General Plan are aimed to enhance efficiency, maintain quality, and dictate when and where expansions should occur. As described in the General Plan EIR, in most cases, no one goal, policy, or implementation program itself is expected to completely avoid or reduce an identified potential environmental impact.²⁶ However, the collective, cumulative mitigating benefits of the policies listed below are intended to reduce sanitary wastewater-related impacts. Specific goals and policies are described in Section 4.14.2.3, Impact Discussion, to demonstrate how the policy would avoid or reduce the impact.

The following goals and policies are relevant to the analysis of potential sanitary wastewater impacts within the Specific Plan Area:

- **Goal PFS-1:** Ensure the provision of adequate and efficient facilities and services that maintain service levels, are adequately funded, accessible, reliable, and strategically allocated.
 - **Policy PSF-1.1 Capital Improvement Program:** The City shall maintain the Capital Improvement Program (CIP) to ensure the implementation of the General Plan and the adequate and timely provision of public facility and municipal utility improvements.
 - **Policy PSF-1.2 Priority for Infrastructure:** The City shall give high priority in capital improvement programming to funding rehabilitation or replacement of critical infrastructure that has reached the end of its useful life or has capacity constraints.
 - **Policy PSF-1.3 Public Facility Master Plans:** The City shall maintain and implement public facility master plans to ensure compliance with appropriate regional, State, and Federal laws; the use of modern and cost-effective technologies and best management practices; and compatibility with current land use policy.
 - **Policy PFS-1.4 Development Fair Share:** The City shall, through a combination of improvement fees and other funding mechanisms, ensure that new development pays its fair share of providing new

²⁵ California Health and Safety Code, <http://leginfo.ca.gov/cgi-bin/calawquery?codesection=hsc>, accessed on October 12, 2018.

²⁶ City of Hayward, 2014, City of Hayward 2040 General Plan certified EIR, State Clearinghouse Number 2013082015.

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public facilities and services and/or the costs of expanding/upgrading existing facilities and services impacted by new development (e.g., water, wastewater, stormwater drainage).

- **Policy PFS-1.5 Neighborhood Compatibility:** The City shall ensure that public facilities, such as utility substations, water storage and treatment plants, and pumping stations are located, designed, and maintained so that noise, light, glare, or odors associated with these facilities will not adversely affect nearby land uses. The City shall require these facilities to use building and landscaping materials that are compatible with or screen them from neighboring properties.
- **Policy PSF-1.7 Adaptive Infrastructure:** The City shall monitor expected impacts of climate change on the City's infrastructure and services and make appropriate adaptive facility and service modifications and upgrades.
- **Goal PSF-3:** Maintain a level of service in the City's water system that meets the needs of existing and future development while improving water system efficiency.
 - **Policy PSF-3.8 Water Treatment Capacity and Infrastructure:** In the event that San Francisco Public Utilities Commission is unable to provide water that meets drinking water standards, the City shall plan, secure funding for, and procure sufficient water treatment capacity and infrastructure to meet projected water demands.
- **Goal PFS-4:** Maintain a level of service in the City's wastewater collection and disposal system to meet the needs of existing and future development.
 - **Policy PFS-4.1 Sewer Collection System Master Plan:** The City shall maintain and implement the Sewer Collection System Master Plan.
 - **Policy PFS-4.2 Water Pollution Control Facility Master Plan:** the City shall maintain and implement the Water Pollution Control Facility Master Plan.
 - **Policy PFS-4.3 Sewer Collection System- Minimization of Sanitary Sewer Overflows:** The City shall operate and maintain the sewer collection system to minimize the potential for sewer system overflows.
 - **Policy PFS-4.4 Water Pollution Control Facility Operation and Maintenance:** The City shall operate and maintain the WPCF to ensure that wastewater discharge meets all applicable NPDES permit provisions.
 - **Policy PFS-4.6 Innovative and Efficient Operations:** The City shall strive to adopt innovative and efficient wastewater treatment technologies that are environmentally- sound.
 - **Policy PFS-4.9 Service New and Existing Development:** The City shall ensure the provision of adequate wastewater service to all new development, before new developments are approved, and support the extension of wastewater service to existing developed areas where this service is lacking.
 - **Policy PFS-4.11 Industrial Pretreatment:** The city shall enforce appropriate industrial pretreatment standards and source control to prevent materials prohibited by Federal and State regulations from entering the wastewater system and to ensure compliance with the City's local discharge limits. The City shall work with the business community to maintain and implement programs to ensure compliance with all Federal, State and local discharge requirements.

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- **Goal NR-6:** Improve overall water quality by protecting surface and groundwater sources, restoring creeks and rivers to their natural state, and conserving water resources.
 - **Policy NR-6.9 Water Conservation:** The City shall require water customers to actively conserve water year-round, and especially during drought years.
 - **Policy NR-6.10 Water Recycling:** The City shall support efforts by the regional water provider to increase water recycling by residents, businesses, non-profits, industries, and developers, including identifying methods for water recycling and rainwater catchment for indoor and landscape uses in new development.
 - **Policy NR-6.11 Reclaimed Water Usage:** The City shall take an active role in increasing the use of reclaimed water and educating the community about the methods of safe collection and benefits of using reclaimed water.
 - **Policy NR-6.12 Dual Plumbing Systems:** The City shall encourage the installation and use of dual plumbing systems in new buildings to recycle greywater.
 - **Policy NR-6.13 Water Recycling Program Advocacy:** The City shall coordinate with the East Bay Municipal Utility District and the Hayward Area Recreation and Park District to advance water recycling programs, including using treated wastewater to irrigate parks, golf courses, and roadway landscaping and encouraging rainwater catchment system-wide and greywater usage techniques in new buildings.

Hayward Municipal Code

Chapter 10, Article 3, Subdivision Ordinance, Sanitary Sewerage, requires all new subdivisions to make adequate provision for the disposal of all sanitary wastes. Chapter 11, Article 3, Sanitary Sewer System, details contractor responsibilities, general regulations for sewer connections to the public sewer and sewer main extensions, construction permit procedures, sewer service charges, wastewater discharge regulations, and the management of fats, grease, and oil waste.

Hayward Sewer Collection System Master Plan

The *Sewer Collection System Master Plan* is used to guide improvements to Hayward's sanitary sewer system to accommodate current and future development. The Master Plan develops wastewater flow projections for the City's collection area using up-to-date water use and land use information and flow monitoring data, dictates how to update the sewer system, and how to address deficiencies for the existing and projected population. The Plan also created a Capital Improvement Plan which determines priority improvements needed in the wastewater system, and how to fund them.

Existing Conditions

Wastewater Treatment

Wastewater in the Specific Plan Area is conveyed through a series of gravity mains to the Water Pollution Control Facility (WPCF) at the end of Enterprise Avenue in Hayward. The WPCF is permitted to provide secondary treatment for up to 18.5 mgd average dry weather flow (ADWF) with current ADWF much

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lower, at 11.3 mgd. Treatment consists of influent waste grinding to protect pumps from large debris, grit removal and primary sedimentation followed by biological treatment and finally discharged to San Francisco Bay via the East Bay Dischargers Authority.²⁷

Wastewater Collection

The City of Hayward owns and operates the wastewater collection and treatment system that serves the majority of the city's population and businesses, plus a small amount of unincorporated areas of Alameda County adjacent to the city boundary. Hayward's collection system includes approximately 320 miles of sewer mains, nine sewage lift stations, and 4.2 miles of force mains as shown in Figure 4-14-4.

Hayward's wastewater service is operated as a service fee enterprise fund which is distinct from the City General Fund. An ongoing 10-year CIP is in place to ensure adequate system capacity, good performance, and proper maintenance is completed. The CIP has a dedicated Sewer Capital Improvement Fund in place to fund any expansions or improvements needed.²⁸

The 2015 Sewer Master Plan included development of a hydraulic model of the trunk sewer system, generally sewers 10-inches and larger, and evaluated the existing and future capacity of the trunk sewers. Capacity deficiencies were identified and CIP projects were developed to address identified deficiencies. No deficiencies were identified on the trunk sewers within or downstream of the Specific Plan area during the Master Plan. However, the Specific Plan changes the future projections within the Downtown area, requiring a reevaluation of sewer capacity.²⁹

4.14.2.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would have a significant impact on wastewater service if it would:

1. Exceed wastewater treatment requirements of the applicable RWQCB.
2. Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
3. 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.

²⁷ City of Hayward, 2019, *Downtown Specific Plan*, Public Review Draft, Chapter 4, Infrastructure.

²⁸ City of Hayward, 2014, *Hayward 2040 General Plan Background Report*, page 8-25.

²⁹ Woodard and Curran, May 31, 2018, *Sanitary Sewer Capacity Evaluation for the Downtown Specific Plan Area*, page 1.

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Source: City of Hayward, Downtown Specific Plan, Public Review Draft, 2019.

Figure 4.14-4
Wastewater Collection System

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4.14.2.3 IMPACT DISCUSSION

UTIL-3 Implementation of the proposed project would not exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board.

As discussed in Chapter 3, Project Description, of this Draft EIR, the Specific Plan Area would include light industrial, commercial, and residential land uses. The land uses that would result from buildout of the Specific Plan would not generate wastewater of different quality and treatability than that generated by those land uses in the city currently. The WPCF is currently in compliance with its NPDES permit requirements. As such, buildout of the Specific Plan Area would not be expected to generate wastewater that would exceed the treatment requirements of the San Francisco Bay RWQCB (e.g., NPDES effluent limits applicable to the WPCF).

Additionally, potential future development in the Specific Plan Area would be required to comply with existing General Plan policies described above in Section 4.12.2.1, as applicable, that require local planning and development decisions to consider impacts to wastewater. Specific policies that include the following: Policy PSF-4.11, which requires the City to enforce appropriate industrial pretreatment standards and source control to prevent materials prohibited by Federal and State regulations from entering the wastewater system and to ensure compliance with the City’s local discharge limits; Policy NR-6.11 requires the City to take an active role in increasing the use of reclaimed water and educating the community about the methods of safe collection and benefits of using reclaimed water; and Policy NR-6.12 requires the City to encourage the installation and use of dual plumbing systems in new buildings to recycle greywater

In addition, the proposed Specific Plan contain goals, policies, and programs that also require local planning and development decisions to consider impacts to wastewater services from development in the Specific Plan Area. The following Specific Plan goals and policies would serve to minimize potential adverse impacts from development in the Specific Plan Area:

- **Goal 6 Economic Development (ED):** Downtown capitalizes on its location in the region, leverages its amenities, and captures more sales tax revenue to become a national model for the revitalization of mid-size cities.
 - **Policy ED 3 Innovative Financing Strategies:** Seek innovative and creative ways to fund public amenities, development incentives, and new infrastructure without unduly transferring the cost burden to the private sector.
 - **Policy ED 4 Infrastructure and Utility Delivery:** Ensure efficient delivery of infrastructure and utilities in the Specific Plan Area to achieve buildout in a cost-effective manner and to support economic development.
- **Goal 7 Infrastructure and Public Facilities (IPF):** Public services, community facilities, and utility systems are well maintained, implement citywide climate change policies, and meet the needs of current and future Downtown residents, businesses, and visitors.

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- **Policy IPF 1: Water and Sewer:** Maintain adequate water and sewer infrastructure necessary to support development Downtown.
- **Policy IPF 3 Fair Share:** Require developers to pay their fair share cost of infrastructure upgrades.
- **Policy IPF 8 Public Restrooms: Provide an adequate supply of safe and clean public restrooms**
 - **Program IPF 5:** Pursue funding for necessary systemwide infrastructure improvements to address existing deficiencies and build capacity to support additional development and reduce impact fees. This would be implemented by the Planning Development Services-Planning Division, the Utilities and Environmental Service Department, and the Library and Community Services Department.
 - **Program IPF 6:** Complete an assessment of infrastructure deficiencies in the Plan Area with the potential to impede business growth, including businesses that require specialized infrastructure such as high-speed telecommunications for technology-oriented businesses.
 - **Program IPF 7:** Plan and construct new public restrooms in public parks and open-space, streets with a high-level of pedestrian activity, and community centers throughout the Plan Area.
 - **Program IPF 11:** Develop a maintenance program to ensure that new public restrooms are well maintained and consistently cleaned.

With continued compliance with applicable regulations as described in Section 4.12.2.1, Environmental Setting, and the General Plan policies wastewater generated from buildout of the Specific Plan Area would not exceed the San Francisco Bay RWQCB's applicable treatment requirements in Order No. R2-2014-0014 (NPDES No. CA0038873). Therefore, the wastewater treatment requirements of the San Francisco Bay RWQCB would not be exceeded due to buildout of the Specific Plan Area, resulting in a *less-than-significant* impact.

Significance without Mitigation: Less than significant.

UTIL-4	Implementation of the proposed project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.
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As discussed above, the Hayward WPCF is permitted to provide secondary treatment for up to 18.5 mgd ADWF with current ADWF much lower, at 11.3 mgd. Thus, the WPCF has a 7.2 mgd of unused permitted ADWF capacity.

Unit flow factors of 205 gpd per multifamily unit and 25 gpd per employee were used to estimate the additional sewer discharge from the Specific Plan. These factors are consistent with the assumptions used in the 2015 Master Plan. The estimated residential future sewer discharge load would increase to 1.28

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mgd from the 1.19 mgd estimated for the future scenario of the 2015 Master Plan and the non-residential future sewer discharge would increase to 0.32 mgd from the 0.29 mgd estimated in 2015.³⁰ The total increase in wastewater discharge in the City of Hayward, with the proposed Specific Plan buildout, is estimated at 2.24 mgd, which can be accommodated by the wastewater treatment plant. Future wastewater flows from buildout of the Specific Plan Area would not exceed the design or permitted dry weather treatment capacity of the wastewater treatment plant serving the Specific Plan Area.

Furthermore, the sanitary sewer capacity evaluation report shows that all the pipes within the Specific Plan Area have sufficient capacity in existing and future load scenarios under both peak dry weather flow (PDWF) and for peak wet weather flow (PWWF). For PDWF, there are no pipes within the Specific Plan Area that are predicted to be surcharged or even more than 75 percent full. There is one small section of pipe outside of the Specific Plan Area in Meek Avenue that receives flow from the Specific Plan Area and is very slightly surcharged (but would have over 10 feet of freeboard). Under PWWF, there would be increased surcharge in the sewer in Meek Avenue and in another 10-inch sewer in Mission Blvd but the water level would remain far below the ground.

Downstream of the Specific Plan Area the evaluation shows that all the pipes downstream of the area have sufficient capacity as defined by the hydraulic analysis criteria used in *2015 Sewer Collection System Master Plan* study. Therefore, no capacity deficiency would be triggered by the Specific Plan development and no additional capacity improvements are needed. The evaluation also indicates that the Specific Plan Area development would not contribute flow to existing capacity-deficient sewers or any of the capacity improvement projects identified in the 2015 Master Plan.³¹

Future development would also be required to comply with the General Plan policies described above in Section 4.14.2.1, as applicable, that require local planning and development decisions to consider impacts to wastewater. Specific policies that include the following: Policy PFS-1.4 requires the City to require new development pays its fair share of providing new public facilities and services and/or the costs of expanding/upgrading existing facilities and services impacted by new development; Policy PFS-4.9 requires the City to ensure the provision of adequate wastewater service to all new development, before new developments are approved, and supports the extension of wastewater service to existing developed areas where this service is lacking; and Policy NR-6.10 requires the City to support efforts by the regional water provider to increase water recycling by residents, businesses, non-profits, industries, and developers, including identifying methods for water recycling and rainwater catchment for indoor and landscape uses in new development.

Furthermore, policies related to water conservation listed in Section 4.14.1.1 would also reduce the generation of wastewater that needs to be collected and treated. In addition, the proposed Specific Plan contain goals, policies, and programs that also require local planning and development decisions to consider impacts to wastewater from development in the Specific Plan Area. The following Specific Plan goals and policies would serve to minimize potential adverse impacts from development in the Specific Plan Area:

³⁰ Woodard and Currant, May 31, 2018, *Sanitary Sewer Capacity Evaluation for the Downtown Specific Plan Area*.

³¹ Woodard and Currant, May 31, 2018, *Sanitary Sewer Capacity Evaluation for the Downtown Specific Plan Area*.

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- **Goal 6 Economic Development (ED):** Downtown capitalizes on its location in the region, leverages its amenities, and captures more sales tax revenue to become a national model for the revitalization of mid-size cities.
 - **Policy ED 3 Innovative Financing Strategies:** Seek innovative and creative ways to fund public amenities, development incentives, and new infrastructure without unduly transferring the cost burden to the private sector.
 - **Policy ED 4 Infrastructure and Utility Delivery:** Ensure efficient delivery of infrastructure and utilities in the Specific Plan Area to achieve buildout in a cost-effective manner and to support economic development.
 - **Program ED 12:** Facilitate the development of an Enhanced Infrastructure Financing District(s), Community Revitalization Investment Authorities, and other financing opportunities as they arise to support the funding of long-term, more costly infrastructure improvements. For example, the City should consider establishing an EIFD that includes City-owned land and parking lots in the Downtown (parcels in an EIFD do not need to be contiguous).
- **Goal 7 Infrastructure and Public Facilities (IPF):** Public services, community facilities, and utility systems are well maintained, implement citywide climate change policies, and meet the needs of current and future Downtown residents, businesses, and visitors.
 - **Policy IPF 1: Water/Sewer:** Maintain adequate water and sewer infrastructure necessary to support development Downtown.
 - **Policy IPF 3 Fair Share:** Require developers to pay their fair share cost of infrastructure upgrades.
 - **Program IPF 1:** Require new projects to provide water quality treatment for stormwater runoff by incorporating site design measures, source control measures, and low impact development (LID) measures that are hydraulically sized as specified in the C.3 Technical Guidance Manual from the Alameda County Clean Water Program. This would be implemented by the Planning Development Services-Planning Division and the Utilities and Environmental Service Department.
 - **Program IPF 3:** Develop an in-lieu or incentive-based program to encourage developers to treat stormwater from the public right of way. This would be implemented by the Planning Development Services-Planning Division and the Utilities and Environmental Service Department.
 - **Program IPF 6:** Complete an assessment of infrastructure deficiencies in the Plan Area with the potential to impede business growth, including businesses that require specialized infrastructure such as high-speed telecommunications for technology-oriented businesses.

In summary, compliance with existing General Plan, as well as the local and State regulations identified in Section 4.14.2.1, Environmental Setting, would ensure there is sufficient wastewater services to serve the Specific Plan Area. Additionally, implementation of the proposed Specific Plan goals and policies would further ensure sufficient wastewater services. Impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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UTIL-5 **Implementation of the proposed project would not result in the 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.**

As described under impact discussion UTIL-4 above, the WPCF has the available capacity to treat the projected 2.24 mgd increase in effluent produced in the City of Hayward. The Specific Plan would also be required to comply with existing wastewater treatment requirements of the San Francisco RWQCB and water conservation policies enacted by the City which will minimize the amount of wastewater generated.

Compliance with these regulations and policies discussed in impact discussion UTIL-4 would ensure that the proposed project would not exceed the design or permitted capacity of the WPCF and would not require new or expanded wastewater treatment facilities. Accordingly, implementation of the proposed project would result in a *less-than-significant* impact.

Significance without Mitigation: Less than significant.

4.14.3 SOLID WASTE

4.14.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations (CFR), Part 258 (Resource Conservation and Recovery Act RCRA, Subtitle D) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the Federal landfill criteria. The Federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

State Regulations

California Department of Resources Recycling and Recovery

CalRecycle oversees, manages, and monitors waste generated in California. It provides limited grants and loans to help California cities, counties, businesses, and organizations meet the State waste reduction, reuse, and recycling goals. It also provides funds to clean up solid waste disposal sites and co-disposal sites, including facilities that accept hazardous waste substances and non-hazardous waste. CalRecycle develops, manages, and enforces waste disposal and recycling regulations, including AB 939 and SB 1016.

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Assembly Bill 939

AB 939 (Public Resources Code 41780) requires cities and counties to prepare integrated waste management plans (IWMPs) and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements as part of the IWMP. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Senate Bill 1016

SB 1016 requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's IWMP. The CalRecycle Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. Beginning January 1, 2018, the Board will be required to review a jurisdiction's source reduction and recycling element and hazardous waste element every two years.

Local Regulations

Looking Forward Hayward 2040 General Plan

The Public Facilities and Services (PFS) and Natural Resource (NR) elements of the General Plan 2040, adopted in July 2014, include policies specific to the management of solid waste in the Specific Plan Area. Policies concerning solid waste in the General Plan are aimed to enhance efficiency, maintain quality, and dictate when and where expansions should occur. As described in the General Plan EIR, in most cases, no one goal, policy, or implementation program itself is expected to completely avoid or reduce an identified potential environmental impact.³² However, the collective, cumulative mitigating benefits of the policies listed below are intended to reduce solid waste-related impacts. Specific goals and policies are described in Section 4.14.3.3, Impact Discussion, to demonstrate how the policy would avoid or reduce the impact.

The following goals and policies are relevant to the analysis of potential solid waste impacts within the Specific Plan Area:

- **Goal PFS-2:** Operate and function in a sustainable manner, use public revenues and resources efficiently, and provide professional, high-quality service to residents and businesses.
 - **Policy PSF-2.3 Sustainable Practices:** The City shall serve as a role model to businesses and institutions regarding purchasing decisions that minimize the generation of waste, recycling programs that reduce waste, energy efficiency and conservation practices that reduce water, electricity and natural gas use, and fleet operations that reduce gasoline consumption.
- **Goal PFS-7:** Minimize the generation of solid waste, increase recycling, and provide for the collection and disposal of solid waste.

³² City of Hayward, 2014, City of Hayward 2040 General Plan certified EIR, State Clearinghouse Number 2013082015.

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- **Policy PFS-7.2 Adequate Service:** The City shall monitor its solid waste and recycling services franchisee to ensure that services provide are adequate to meet the needs of the community and to meet the provisions of the City's Franchise Agreement.
- **Policy 7.3 Landfill Capacity:** The City shall continue to coordinate with the Management Authority to ensure adequate landfill capacity in the region for the duration of the contract with its landfill franchisee.
- **Policy PFS-7.4 Solid Waste Diversion:** The City shall comply with State goals regarding diversion from landfill, and strive to comply with the provisions approved by the Alameda County Waste Management Authority.
- **Policy PFS-7.5 Municipal Waste Reduction:** The City shall reduce municipal waste generation by continuing to employ a wide range of innovative techniques, including electronic communications to reduce paper usage and buying products with less packaging and in bulk, where feasible.
- **Policy PFS-7.6 Municipal Reuse:** The City shall reduce municipal waste disposed by continuing to reuse equipment to prolong its useful life.
- **Policy PFS-7.7 Municipal Collection of Recyclables and Organics:** The City shall continue to require its franchisee to arrange for regular collection of recyclables and organics from all municipal facilities.
- **Policy PSF-7.9 City Contracts:** The City shall continue to implement the Environmentally Friendly Preferred Purchasing Program by requiring City contractors to use best management practices (e.g., waste prevention, salvage and reuse, recycling and reusing) to maximize diversion of waste from landfills.
- **Policy PFS-7.10 Recycled Products or Processes for Capital Projects:** The City shall implement the use of recycled products or recycling processes whenever possible as part of any capital project.
- **Policy PFS-7.12 Construction and Demolition Waste Recycling:** The City shall require demolition, remodeling, and major new development projects to salvage or recycle asphalt and concrete and all other non-hazardous construction and demolition materials to the maximum extent practicable.
- **Policy PFS-7.13 Residential Recycling:** The City shall encourage increased participation in residential recycling programs, and strive to comply with the recycling provisions approved by the Alameda County Waste Management Authority Board. The City shall work with StopWaste.org to monitor participation in residential recycling programs and educate the community regarding actual composition of waste sent to landfills.
- **Policy PFS-7.14 Commercial Recycling:** The City shall encourage increased participation in commercial and industrial recycling programs, and strive to comply with the recycling provisions approved by the Alameda County Waste Management Authority Board. The City shall work with StopWaste.org to provide technical assistance to businesses to implement mandatory recycling.
- **Policy PFS-7.15 Yard Clippings Reduction:** The City shall encourage residents to reduce yard clippings through at-home composting or use the green waste collection service provided by the City's franchisee.

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- **Policy PFS-7.16 Organics Collection:** The City shall encourage residents and businesses to separate for collection food and food-soiled paper using organics collection services provided by the City's franchisee.
- **Policy PFS-7.17 Waste-to-Energy Generation Systems:** The City shall advocate for waste management strategies that aim to maximize the value of solid waste by using waste-to-energy generation system.
- **Policy PFS-7.20 Food Scraps Collection:** The City shall promote and expand the food scraps collection program for single-family homes to minimize organic waste in landfills.
- **Policy PFS-7.21 Mandatory Recycling:** The City shall implement mandatory recycling for commercial and multifamily uses and work with StopWaste.org to increase participation in this program.
- **Policy PFS-7.22 Maximize Solid Waste Value:** The City shall advocate for waste management strategies that maximize the useful value of solid waste, such as using landfill gas to generate electricity.

Hayward Municipal Code

Chapter 5, Sanitation and Health, Article 10, Construction and Demolition Debris Waste Reduction and Recycling Requirements requires applicants for all construction, demolition, and/or renovation projects valued at \$75,000 or more to recycle 100 percent of all asphalt and concrete and 50 percent of remaining materials, including materials such as wood and metal. Chapter 5, Article 11, - Polystyrene Foam Disposable Food Service Ware Prohibited; Recyclable or Compostable Food Service Ware Required bans polystyrene food containers from retail food vendors. The City requires that retail food vendors use recyclable or compostable food service ware instead.

The City incorporated CALGreen standards in Hayward Municipal Code Article 21, Green Building Requirements for Municipal Buildings, and Article 22, Green Building Requirements for Private Development.³³ CalGreen Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of non-hazardous construction and demolition debris must be recycled or salvaged and requires that project applicants prepare a Waste Management Plan (WMP), for on-site sorting or construction debris, which is submitted to the City of Hayward for approval.

The WMP is required to include the following:

- Identify the materials to be diverted from disposal by recycling, reuse on the Project or salvage for future use or sale.
- Specify if materials will be sorted on-site or mixed for transportation to a diversion facility.

³³ City of Hayward Municipal Code, Chapter 10, Planning, Zoning, and Subdivisions, Article 21, Green Building Requirements for Municipal Buildings, and Article 22, Green Building Requirements for Private Development.

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- Identify the diversion facility where the material collected can be taken.
- Identify construction methods employed to reduce the amount of waste generated.

Specify that the amount of materials diverted shall be calculated by weight or volume, but not by both.

The Alameda County Waste Reduction and Recycling Initiative Charter Amendment

The Alameda County Waste Reduction and Recycling Initiative Charter Amendment (Measure D) requires that a per ton disposal surcharge be imposed at the Altamont and Vasco Road landfills in order to provide the necessary funds to design and implement municipal recycling services for residents and businesses. The purpose of Measure D is to provide the necessary funding to enable Alameda County agencies to meet the State diversion rate standard.

Alameda County Integrated Waste Management Plan: Countywide Element

The Alameda County Waste Management Agency prepared the Alameda County Integrated Waste Management Plan: Countywide Element to comply with AB 939 and SB 1016.

Alameda County Mandatory Recycling Ordinance

In February 2012 the Hayward City Council determined that the City would participate in an ordinance proposed by Alameda County Waste Management Authority (ACMWA) in which all multifamily developments and businesses with 4 cubic yards or more of weekly garbage service are required to have recycling services by July 1, 2012. The ACMWA ordinance is more stringent than the State legislation because it specifies which materials are targeted for collection, establishes compliance provisions for regulated haulers, transfer stations, and landfills, and includes enforcement protocols. Recyclables required for collection include a variety of types of paper, recyclable food and beverage containers made of glass and metal, and plastic bottles. The City provides multifamily developments and businesses with plastic indoor storage containers and labels at no charge.

Alameda County Reusable Bag Ordinance

The objective of this countywide ordinance is to reduce the use of single-use carryout bags and to promote the use of reusable bags. As of January 1, 2013, grocery stores and other stores in Alameda County that sell packaged food can no longer provide single-use plastic carryout bags, nor can they distribute paper bags or reusable bags for free at checkout.

Hayward Climate Action Plan

The Hayward Climate Action Plan provides a program to achieve a measurable reduction in GHG, consistent with State law (i.e., AB 32 and Executive Order S-03-05). The plan includes the countywide goal to reduce waste sent to landfills by 75 percent.

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Existing Conditions

Solid Waste Collection

The City of Hayward Department of Public Works, Utilities and Environmental Services Division, has an agreement with Waste Management of Alameda County to provide garbage and recycling service to all residents and businesses. Waste management trucks deliver waste to the Davis Street Transfer Station which is located in San Leandro. Organics are then composted at the Redwood Recycling Center in Marin County. Residential recyclables are sorted at the Tri-CED Community Recycling, a local non-profit, in Union City.³⁴

Other services available to all residents at no additional charge include safe disposal of all unwanted hazardous waste, including paints, adhesives, and pesticides, for example. Residents may deliver their hazardous waste to any of the four facilities located in Alameda County and operated by the Alameda County Household Hazardous Waste Program.³⁵

Landfills Serving the City

There are 15 landfills that serve the City of Hayward. Approximately 76 percent of the solid waste from the city generated in 2017 was sent to the Altamont Landfill, located in Livermore. The Potrero Hills Landfill received approximately 19 percent of the city's solid waste in 2017 with the remaining landfills receiving lesser quantities.³⁶

The Altamont Landfill is a Class II facility that accepts municipal solid waste from the following Alameda County municipalities: Alameda, Albany, Berkeley, Castro Valley, Dublin, Emeryville, Fremont, Hayward, Newark, Oakland, the Oro Loma Sanitary District, and unincorporated Alameda County, as well as wastes imported from the city and county of San Francisco and San Ramon. The landfill occupies a 2,170-acre site of which 472 acres are permitted for landfill. In 2001 the landfill received County approval to increase capacity, adding 25 years to the life of the landfill and extending the anticipated closure date to the year 2040.³⁷ The Altamont landfill is estimated to have a remaining capacity of 65,400,000 cubic yards, or 53 percent of its total capacity, as of January 2014. The Altamont Landfill has a permitted throughput of 11,150 tons per day.³⁸ In 2017, the daily throughput for Altamont Landfill was 2,641 tons per day.³⁹ Therefore, the landfill has a residual capacity for 8,508 tons per day. Solid waste collected in 2017 from the City of Hayward accounted for approximately 332 tons per day.

³⁴ City of Hayward, Garbage and Recycling, <https://www.hayward-ca.gov/your-environment/green-your-community/garbage-and-recycling>, accessed on October 12, 2018.

³⁵ City of Hayward, November 2013, *Hayward General Plan Update Public Review Background Report*, page 8-42.

³⁶ CalRecycle, Jurisdiction Disposal by Facility, Disposal during 2017 for Hayward, <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, accessed on October 12, 2018.

³⁷ City of Hayward, 2014, *Hayward 2040 General Plan Background Report*, page 8-41.

³⁸ CalRecycle, SWIS Facility Detail, Altamont Landfill & Resource Recovery (01-AA-0009), <https://www2.calrecycle.ca.gov/swfacilities/Directory/01-AA-0009/>, accessed on October 12, 2018.

³⁹ CalRecycle, Landfill Tonnage Reports, <https://www2.calrecycle.ca.gov/LandfillTipFees/>, accessed October 12, 2018.

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The Potrero Hills landfill is estimated to have a remaining capacity of 13,872,000 cubic yards, or 17 percent of its total capacity, as of January 2006. The closure date for this landfill is February 2048. The Potrero Hill landfill has a permitted throughput of 4,330 tons per day.⁴⁰ In 2017, the daily throughput was 272 tons per day.⁴¹ Therefore, the landfill has a residual capacity of 4,058 tons per day. Solid waste collected in 2017 from the City of Hayward accounted for approximately 82 tons per day.

Vasco Road Landfill is a disposal site located in Alameda County with remaining capacity. The City has no contractual relationship with Vasco Road Landfill. However, tonnage is self-hauled to that disposal site by individuals and businesses residing in the city of Hayward. Vasco Road Landfill is owned by Republic Industries, Inc. and is located in the eastern part of the county about 3 miles north of Interstate 580. In 2005 the landfill was at 70 percent capacity. The estimated closure date for Vasco Road Landfill is 2022.⁴²

Solid Waste Diversion

The City of Hayward has been in compliance with AB 939 since 2007 (see Table 4.14-5), which is the year when the per capita disposal measurement system was adopted to identify whether goals established by the Integrated Waste Management Act of 1989 have been met.

TABLE 4.14-5 PER CAPITA DISPOSAL RATE TRENDS

Report Year	Target Disposal Rate Population	Per Capita Population (PPD)	Target Disposal Rate Employment	Per Capita Employment (PPD)	Number of Diversion Programs
2007	7.0	6.4	14.7	12.9	38
2008	7.0	5.2	14.7	10.5	38
2009	7.0	4.5	14.7	9.8	38
2010	7.0	4.6	14.7	10.9	38
2011	7.0	4.1	14.7	9.5	38
2012	7.0	4.0	14.7	9.2	38
2013	7.0	3.8	14.7	8.6	38
2014	7.0	3.7	14.7	8.2	38
2015	7.0	3.9	14.7	8.6	39
2016	7.0	3.8	14.7	8.6	N/A

Notes: PPD = Pounds Per Person Per Day; N/A = Not Available

Source: CalRecycle, 2018, Per Capital Disposal Rate Trends, <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>.

⁴⁰ CalRecycle, SWIS Facility Detail, Potrero Hills Landfill (48-AA-0075), <https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0075/>, accessed on October 12, 2018.

⁴¹ CalRecycle, Landfill Tonnage Reports, <https://www2.calrecycle.ca.gov/LandfillTipFees/>, accessed on October 12, 2018.

⁴² City of Hayward, 2014, Hayward 2040 General Plan Background Report, page 8-42.

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4.14.3.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would have a significant impact on wastewater service if it would:

1. Not be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
2. Not comply with federal, State, and local statutes and regulations related to solid waste.

4.14.3.3 IMPACT DISCUSSION

UTIL-6	Implementation of the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
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There are 15 landfills that serve the City of Hayward. Approximately 76 percent of the solid waste from the city generated in 2017 was sent to the Altamont Landfill, located in Livermore. The Potrero Hills Landfill received approximately 19 percent of the city's solid waste in 2017 with the remaining landfills receiving lesser quantities.⁴³

The Altamont landfill is estimated to have a remaining capacity of 65,400,000 cubic yards, or 53 percent of its total capacity, as of January 2014. The Altamont Landfill has a permitted throughput of 11,150 tons per day.⁴⁴ In 2017, the daily throughput for Altamont Landfill was 2,641 tons per day.⁴⁵ Therefore, the landfill has a residual capacity for 8,508 tons per day. The closure date for this landfill is January 2040.

The Potrero Hill landfill is estimated to have a remaining capacity of 13,872,000 cubic yards, or 17 percent of its total capacity, as of January 2006. The closure date for this landfill is February 2048. The Potrero Hill landfill has a permitted throughput of 4,330 tons per day.⁴⁶ In 2017, the daily throughput Potrero Hill was 272 tons per day.⁴⁷ Therefore, the landfill has a residual capacity for 4,058 tons per day.

The proposed Specific Plan would generate 7,539 residents and 6,333 employees at buildout. For analysis purposes, solid waste generation is assumed to be the actual 2016 per capita generation rates of 3.8 ppd for residents and 8.6 ppd for employees. Accordingly, the total solid waste generated by the proposed project's residents and employees is estimated to be 83,112 ppd, or 41.6 tons per day as shown in Table 4.14-6.

⁴³ CalRecycle, Jurisdiction Disposal by Facility, Disposal during 2017 for Hayward, <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>, accessed on October 12, 2018.

⁴⁴ CalRecycle, SWIS Facility Detail, Altamont Landfill & Resource Recovery (01-AA-0009), <https://www2.calrecycle.ca.gov/swfacilities/Directory/01-AA-0009/>, accessed on October 12, 2018.

⁴⁵ CalRecycle, Landfill Tonnage Reports, <https://www2.calrecycle.ca.gov/LandfillTipFees/>, accessed on October 12, 2018.

⁴⁶ CalRecycle, SWIS Facility Detail, Potrero Hills Landfill (48-AA-0075), <https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0075/>, accessed on October 12, 2018.

⁴⁷ CalRecycle, Landfill Tonnage Reports, <https://www2.calrecycle.ca.gov/LandfillTipFees/>, accessed on October 12, 2018.

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TABLE 4.14-6 PROPOSED PROJECT SOLID WASTE GENERATION

Land Use	Number of Dwelling Units/Jobs	Waste Generation (PPD)
Residents ^a	7,539 residents	28,648
Employees ^b	6,333 jobs	54,464
Total Water Demand		83,112

Note:

PPD = pounds per day.

a. The multifamily residential waste generation was considered to be 3.8 ppd.

b. The non-residential waste generation is considered to be 8.6 ppd

Source: PlaceWorks

The total estimated solid waste generation rate for the Specific Plan of 41.6 tons per day is less than one percent of the daily residual capacity (i.e., 12,566 tons/day) of the two landfills providing the bulk of disposal services to the city. Furthermore, the landfills that receive the majority of the City’s solid waste are not estimated to close until 2048 (Potrero Hills Landfill) and 2040 (Altamont Landfill). There were 15 landfills that received waste from Hayward in 2017. If the two primary landfills were unavailable in the future, it is likely Hayward’s solid waste volume could be increased at one or more of the other landfills that already serve the city.

Additionally, future development would be required to comply with the CALGreen, which requires a minimum of 50 percent of non-hazardous construction and demolition debris to be recycled or salvaged. The project applicant’s under the Specific Plan would be required to prepare a Waste Management Plan, for on-site sorting of construction debris, which is submitted to the City for approval, in order to ensure that the covered project meets the diversion requirement for reused or recycled construction and demolition debris.

In addition, the proposed Specific Plan contain goals, policies, and programs that also require local planning and development decisions to consider impacts to wastewater from development in the Specific Plan Area. The following Specific Plan goals and policies would serve to minimize potential adverse impacts from development in the Specific Plan Area:

- **Goal 6 Economic Development (ED):** Downtown capitalizes on its location in the region, leverages its amenities, and captures more sales tax revenue to become a national model for the revitalization of mid-size cities.
 - **Policy ED 3 Innovative Financing Strategies:** Seek innovative and creative ways to fund public amenities, development incentives, and new infrastructure without unduly transferring the cost burden to the private sector.
 - **Program ED 12:** Facilitate the development of an Enhanced Infrastructure Financing District(s), Community Revitalization Investment Authorities, and other financing opportunities as they arise to support the funding of long-term, more costly infrastructure improvements.

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- **Goal 7 Infrastructure and Public Facilities (IPF):** Public services, community facilities, and utility systems are well maintained, implement citywide climate change policies, and meet the needs of current and future Downtown residents, businesses, and visitors.
 - **Policy IPF 6 Landfill Diversion:** Encourage innovative expansion of recycling and waste diversion.
 - **Program IPF 6:** Complete an assessment of infrastructure deficiencies in the Plan Area with the potential to impede business growth, including businesses that require specialized infrastructure such as high-speed telecommunications for technology-oriented businesses.
 - **Program IPF 8:** Develop systems and infrastructure to better allow Downtown residents and businesses to recycle specialty waste streams, particularly electronic waste and mattress. This would be implemented by the Planning Development Services-Planning Division and the Utilities and Environmental Service Department.

With continued compliance with applicable regulations and General and Specific Plan policies listed above, solid waste generated from the buildout of the Specific Plan would not exceed the landfill capacity available to the city. Therefore, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs, resulting in a *less-than-significant* impact.

Significance without Mitigation: Less than significant.

UTIL-7	Implementation of the proposed project would comply with federal, State, and local statutes and regulations related to solid waste.
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As discussed above, the City has complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. The City's per capita disposal rate is below the target rate established by CalRecycle. The City also has established solid waste recycling requirements in its Municipal Code.

The General Plan includes policies and actions that promote recycling, conservation, and help ensure adequate waste collection and disposal facilities are available for the residents and workers of Hayward. In addition, the Specific Plan includes Goal 7, Policy 7 Landfill Diversion described in impact discussion UTIL-6. This policy encourages innovative expansion of recycling and waste diversion.

Together these policies and actions help to ensure that the proposed Specific Plan is consistent with statutes and regulations related to solid waste.

Therefore, in accordance with the applicable regulations and General and Specific Plan policies listed below, adoption and implementation of the Specific Plan would comply with applicable statutes and regulations related to solid waste, resulting in *no impact*.

Significance without Mitigation: No impact

4.14.4 ENERGY CONSERVATION

4.14.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

Natural Gas Pipeline Safety Act of 1968

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

State Regulations

California Public Utilities Commission Long Term Energy Efficiency Strategic Plan

Adopted in September 2008 and updated in January 2011, the California Public Utilities Commission (CPUC) Long Term Energy Efficiency Strategic Plan provides a framework for energy efficiency in California

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through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-, mid-, and long-term strategies to assist in achieving these goals. The Plan sets forth the following four goals, known as “Big Bold Energy Efficiency Strategies,” to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, ventilation and air conditioning will be transformed to ensure that its energy performance is optimal for California’s climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

The CPUC and the California Energy Commission have adopted the following goals to achieve zero net energy levels by 2030 in the commercial sector:

- **Goal 1:** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.
- **Goal 2:** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.
- **Goal 3:** Transform the commercial lighting market through technological advancement and innovative utility initiatives.

California Energy Code

The State of California provides a minimum standard for energy conservation through Title 24, Part 6 California Code of Regulations, commonly referred to as the California Energy Code. The California Energy Code was first adopted by the California Energy Resources Conservation and Development Commission in June 1977. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. In June 2015, the California Energy Code adopted the 2016 Building and Energy Efficiency Standards, which went into effect on January 1, 2017.

2016 Appliance Efficiency Regulations

The 2016 Appliance Efficiency Regulations (Title 20, California Code of Regulations Sections 1601 through 1608) include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state, and those designed and sold exclusively for use in recreational vehicles or other mobile equipment. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

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State Greenhouse Gas Regulations

The Governor's GHG Reduction Executive Order S-3-05 was signed on June 1, 2005, and set GHG reduction targets for the State. Soon after, AB 32, the Global Warming Solutions Act (2006) was passed by the California State legislature on August 31, 2006, to place the State on a course toward reducing its contribution of GHG emissions. In response to AB 32, the California Air Resources Board developed a Scoping Plan outlining California's approach to achieving the goal of reducing GHG emissions to 1990 levels by 2020. The final Scoping Plan was adopted by the California Air Resources Board on December 11, 2008. The California Air Resources Board approved the first 5-year Update to the Climate Change Scoping Plan on May 22, 2014, as required by AB 32. For a detailed discussion on these regulations, see Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR.

California Energy Benchmarking and Disclosure

AB 1103 (2007) required that electric and gas utilities maintain records of the energy consumption data of all non-residential buildings to which they provide service and, upon authorization of a non-residential building owner or operator, upload all of the energy consumption data to the EPA Energy Star Portfolio Manager. This statute further required that a non-residential building owner or operator disclose Energy Star Portfolio Manager benchmarking data and ratings, for the most recent 12-month period, to a prospective buyer, lessee, or lender.

On October 8, 2015, the Governor signed AB 802 which revised and recast the above provisions. The new law directed the California Energy Commission to establish a statewide energy benchmarking and disclosure program, and enhanced the Commission's existing authority to collect data from utilities and other entities for the purposes of energy forecasting, planning, and program design. Among the specific provisions, AB 802 required utilities to maintain records of the energy usage data of all buildings to which they provide service for at least the most recent 12 complete months. The bill required each utility, upon the request and authorization of the owner, owner's agent, or operator of a covered building, to deliver or provide aggregated energy usage data for a covered building to the owner, owner's agent, operator, or to the owner's account in the Energy Star Portfolio Manager. The bill also authorized the Commission to specify additional information to be delivered by utilities for certain purposes.

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Looking Forward Hayward 2040 General Plan

Policies concerning energy in the General Plan are aimed to enhance efficiency, maintain quality, and dictate when and where expansions should occur. As described in the General Plan EIR, in most cases, no one goal, policy, or implementation program itself is expected to completely avoid or reduce an identified potential environmental impact.⁴⁸ However, the collective, cumulative mitigating benefits of the policies listed below are intended to reduce energy conservation-related impacts. Specific goals and policies are

⁴⁸ City of Hayward, 2014, City of Hayward 2040 General Plan certified EIR, State Clearinghouse Number 2013082015.

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described in Section 4.14.4.3, Impact Discussion, to demonstrate how the policy would avoid or reduce the impact.

The following goals and policies are relevant to the analysis of potential energy conservation impacts within the Specific Plan Area:

- **Goal LU-1:** Promote local growth patterns and sustainable development practices that improve quality of life, protect open space and natural resources, and reduce resource consumption, traffic congestion, and related greenhouse gas emissions.
 - **Policy LU-1.1 Jobs-Housing Balance:** The City shall support efforts to improve the jobs-housing balance of Hayward and other communities throughout the region to reduce automobile use, regional and local traffic congestion, and pollution.
 - **Policy LU-1.3 Growth and Infill Development:** The City shall direct local population and employment growth toward infill development sites within the City, especially the catalyst and opportunity sites identified in the Economic Development Strategic Plan.
 - **Policy LU-1.5 Transit-Oriented Development:** The City shall support high-density transit-oriented development within the City's Priority Development Areas to improve transit ridership and to reduce automobile use, traffic congestion, and greenhouse gas emissions.
 - **Policy LU-1.6 Mixed-Use Neighborhoods:** The City shall encourage the integration of a variety of compatible land uses into new and established neighborhoods to provide residents with convenient access to goods, services, parks and recreation, and other community amenities.
 - **Policy LU-1.8 Green Building and Landscaping Requirements:** The City shall maintain and implement green building and landscaping requirements for private- and public-sector development to:
 - Reduce the use of energy, water, and natural resources.
 - Minimize the long-term maintenance and utility expenses of infrastructure, buildings, and properties.
 - Create healthy indoor environments to promote the health and productivity of residents, workers, and visitors. Encourage the use of durable, sustainably-sourced, and/or recycled building materials.
 - Reduce landfill waste by promoting practices that reduce, reuse, and recycle solid waste.
- **Goal LU-2:** Revitalize and enhance Hayward's Priority Development Areas to accommodate and encourage growth within compact, mixed-use, and walkable neighborhoods and districts that are located near the City's job centers and regional transit facilities.
 - **Policy LU-2.5 Downtown Housing:** The City shall encourage the development of a variety of urban housing opportunities, including housing units above ground floor retail and office uses, in the Downtown to:
 - Increase market support for businesses,
 - Extend the hours of activity,
 - Encourage workforce housing for a diverse range of families and households,
 - Create housing opportunities for college students and faculty, and

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- Promote lifestyles that are less dependent on automobiles.
- **Policy LU-2.15 Office and Employment Uses and Amenities:** The City shall encourage the establishment of professional office and employment uses within the Priority Development Areas. Major office and employment uses should include amenities for employees, such as courtyards and plazas, outdoor seating areas, fitness facilities, bicycle storage areas, and showers.
- **Policy LU-3.1 Complete Neighborhoods:** The City shall promote efforts to make neighborhoods more complete by encouraging the development of a mix of complementary uses and amenities that meet the daily needs of residents. Such uses and amenities may include parks, community centers, religious institutions, daycare centers, libraries, schools, community gardens, and neighborhood commercial and mixed-use developments.
- **Policy LU-3.2 Centralized Amenities:** The City shall encourage the development of neighborhood amenities and complementary uses in central locations of the neighborhood whenever feasible.
- **Goal NR-2:** Improve the health and sustainability of the community through continued local efforts to improve regional air quality, reduce greenhouse gas emissions, and reduce community exposure to health risks associated with toxic air contaminants and fine particulate matter.
 - **Policy NR-2.6 Greenhouse Gas Reduction in New Development:** The City shall reduce potential greenhouse gas emissions by discouraging new development that is primarily dependent on the private automobile; promoting infill development and/or new development that is compact, mixed use, pedestrian friendly, and transit oriented; promoting energy-efficient building design and site planning; and improving the regional jobs/housing balance ratio.
 - **Policy PFS-2.7 Energy Efficient Buildings and Infrastructure:** The City shall continue to improve energy efficiency of City buildings and infrastructure through implementation of the Municipal Green Building Ordinance, efficiency improvements, equipment upgrades, and installation of clean, renewable energy systems.
 - **Policy NR-2.8 Reduced Emissions for City Operations and Commutes:** The City shall promote reduced idling, trip reduction, routing for efficiency, and the use of public transportation, carpooling, and alternate modes of transportation for operating City departments and City employees.
- **Goal NR-4:** Reduce energy consumption through increased production and use of renewable energy, sustainable energy purchasing, and improved energy efficiency.
 - **Policy NR-4.1 Energy Efficiency Measures:** The City shall promote the efficient use of energy in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment.
 - **Policy NR-4.2 Energy Resources and Efficiency:** The City shall collaborate with partner agencies, utility providers, and the business community to support a rate of energy efficiency, conservation, and waste reduction measures, including the development of green buildings and infrastructure, weatherization programs, installation of energy-efficient appliances and equipment in homes and offices, promotion of energy efficiency retrofit programs, use of green power options, and heightened awareness of the benefits of energy efficiency and conservation issues.

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- **Policy NR-4.3 Efficient Construction and Development Practices:** The City shall encourage construction and building development practices that maximize the use of renewable resources and minimize the use of non-renewable resources throughout the life-cycle of a structure.
- **Policy NR-4.4 Energy Resource Conservation in Public Buildings:** The City shall continue to require all public facilities and services to incorporate energy and resource conservation standards and practices.
- **Policy NR-4.6:** The City shall encourage and support the generation, transmission, use, and storage of locally-distributed renewable energy in order to promote energy independence, efficiency, and sustainability. The City shall consider various incentives to encourage the installation of renewable energy projects (i.e. reduced permit fees and permit streamlining).
- **Policy NR-4.11 Green Building Standards:** The City shall require newly constructed or renovated public and private buildings and structures to meet energy efficiency design and operations standards with the intent of meeting or exceeding the State's zero net energy goals by 2020.
- **Policy NR-4.12 Urban Forestry:** The City shall encourage the planting of native and diverse tree species to reduce heat island effect, reduce energy consumption, and contribute to carbon mitigation.
- **Policy NR-4.14 Energy Efficiency Retrofits:** The City shall collaborate with regional entities and others to promote incentive programs for energy efficiency retrofits such as the Energy Upgrade California program for residential properties.
- **Goal M-1:** Provide a comprehensive, integrated, and connected network of transportation facilities and services for all modes of travel.
 - **Policy M-1.6 Bicycling, Walking, and Transit Amenities:** The City shall encourage the development of facilities and services, (e.g., secure term bicycle parking, street lights, street furniture and trees, transit stop benches and shelters, and street sweeping of bike lanes) that enable bicycling, walking, and transit use to become more widely used modes of transportation and recreation.
 - **Policy M-3.8 Connections with New Development:** The City shall ensure that new commercial and residential development projects provide frequent and direct connections to the nearest bikeways, pedestrian ways, and transit facilities.

Hayward Municipal Code

The City of Hayward Municipal Code includes several regulations related to energy service. Through Ordinance 10-15 the City of Hayward adopted the 2010 California Building Code, including the 2010 California Green Building Standards Code Part 11, effective January 1, 2011.

City of Hayward Municipal Code Chapter 8, Article 18, through voter approval of Measure A, establishes a tax on every person in the city using telecommunication, video, electricity, and gas services at the rate of 5.5 percent of the charges made for such services. City of Hayward Municipal Code Chapter 10, Article 21, requires that all City-owned buildings meet a minimum LEED Silver rating. Projects using the LEED checklist must earn a minimum of 20 points. Additionally, The City incorporated CALGreen standards in Hayward Municipal Code Article 21, Green Building Requirements for Municipal Buildings, and Article 22,

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Green Building Requirements for Private Development.⁴⁹ City of Hayward Municipal Code Chapter 10, Article 22, requires that all new multifamily and single family residential projects are Green Point rated and demonstrate full compliance with the California Building Energy Efficiency Standard (Title 24, part 6) at the time of permitting.

Hayward Climate Action Plan

The Hayward Climate Action Plan provides a roadmap for achieving a measurable reduction in GHG emissions, as consistent with State law (i.e., AB 32 and Executive Order S-03-05). Hayward has set the target of reducing GHG emissions to 12.5 percent below 2005 emission levels by 2020. Hayward also set an interim goal of 6 percent below 2005 emission levels by 2013, and a long-term goal of 82.5 percent below 2005 emission levels by 2050. The plan includes three strategies for reducing energy use: improve the energy performance of existing buildings, improve the energy performance of new buildings, and use renewable energy. The plan also includes two strategies to reduce fuel use: reduce vehicle miles traveled and decrease the carbon intensity of vehicles.

Existing Conditions

Electricity

Grid electricity and natural gas service in the City of Hayward is provided by Pacific Gas and Electric Company (PG&E). PG&E is a publicly traded utility company which generates, purchases, and transmits energy under contract with the CPUC. PG&E's service territory is 70,000 square miles in area, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada mountain range to the Pacific Ocean.

PG&E's electricity distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines. The electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy such as wind turbines and photovoltaic plants or "solar farms." "The Grid," or bulk electric grid, is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service "drops" that connect to the individual customer.⁵⁰

PG&E maintains three major transmission lines running west to east across Alameda County to substations in Hayward, San Mateo, and Fremont. PG&E has recently (2012) completed the Russell City Energy Center (RCEC) interconnection project in Hayward. The project upgraded power lines and existing substations to connect the RCEC to the grid in three phases. Phase 1, which was completed in October 2011, consisted of the installation of 1.3 miles of new lines between the new RCEC and the Eastshore

⁴⁹ City of Hayward Municipal Code, Chapter 10, Planning, Zoning, and Subdivisions, Article 21, Green Building Requirements for Municipal Buildings, and Article 22, Green Building Requirements for Private Development.

⁵⁰ PG&E, 2018, Company Info, <http://www.pge.com/about/company/profile/>, accessed October 15, 2018.

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Substation in Hayward. Phase 2, completed in December 2011, consisted of modifying several towers and replacing about 14 miles of wire on the power line spanning from the Eastshore Substation in Hayward to the San Mateo Substation in San Mateo. Phase 3, completed in March 2012, consisted of modifying several towers and replacing 6.8 miles of wire on the power line spanning from the Eastshore Substation in Hayward to the Dumbarton Substation in Fremont. These improvements will improve service reliability for PG&E customers in the greater Bay Area.⁵¹

PG&E produces or buys its energy from a number of conventional and renewable generating sources, which travel through PG&E's electric transmission and distribution systems. The power mix PG&E provided to customers in 2017 consisted of non-emitting nuclear generation (27 percent), large hydroelectric facilities (18 percent), and eligible renewable resources (33 percent), such as wind, geothermal, biomass, solar and small hydro. The remaining portion came from natural gas (20 percent) and unspecified power (2 percent). Unspecified power refers to electricity that is not traceable to specific generation sources by any auditable contract trail. In 2016, PG&E served 32.8 percent of their retail electricity sales with renewable power. PG&E's percentage of renewable power currently under contract for 2020 is 33 percent.⁵²

Alameda County is home to 21 wind, nine oil/gas, five waste-to-energy, one hydroelectric, and one solar power generation facilities. Most of these facilities are located in the northeastern portion of the county.⁵³

In 2017 PG&E's preliminary projected average annual electricity demand growth (mid-demand forecast) between 2018 and 2028 was estimated at 0.99 percent. Total mid-electricity consumption in PG&E's service area was 281,666 gigawatt-hour per year in 2015 and is forecast to increase to 319,484 gigawatt-hours per year in 2027.⁵⁴

Natural Gas

PG&E's natural gas (methane) pipe delivery system includes 42,000 miles of distribution pipelines, and 6,700 miles of transportation pipelines. Gas delivered by PG&E originates in gas fields in California, the US Southwest, US Rocky Mountains, and from Canada. Transportation pipelines send natural gas from fields and storage facilities in large pipes under high pressure. The smaller distribution pipelines deliver gas to individual businesses or residences.

PG&E gas transmission pipeline systems serve approximately 15 million gas customers in northern and central California.⁵⁵ PG&E has numerous pipeline safety programs, policies, and procedures in place to ensure the safety of customers, employees and the public. These programs include:

⁵¹ City of Hayward, 2014, Hayward 2040 General Plan Background Report, page 8-52.

⁵² PG&E, 2018, Exploring Clean Energy Solutions, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page, accessed on October 15, 2018.

⁵³ City of Hayward, 2014, Hayward 2040 General Plan Background Report, page 8-52.

⁵⁴ California Energy Commission, 2017, California Energy Demand 2018-2028 Preliminary Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=220615>, accessed on October 15, 2018.

⁵⁵ PG&E, 2018, Learn about the PG&E natural gas system, https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/natural-gas-system-overview.page, accessed on October 15, 2018

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- Valve automation to improve the ability to quickly shut off the flow of gas in the event of a significant change in pressure.
- Regular leak detection surveys across a 70,000-square mile service area for gas leaks resulting in a 99 percent reduction of minor leaks.
- Regular monitoring and inspection of nearly 7,000 miles of gas transmission pipelines and 42,000 miles of distribution pipelines to identify and address concerns before they become a hazard.
- Replacement of steel distribution main, which can be prone to leaks, with modern, new materials.
- Community Pipeline Safety Initiative which ensures first responders and emergency response crews have critical access to pipelines in the event of an emergency or natural disaster.⁵⁶

In 2017 PG&E's preliminary projected average annual demand growth (mid-demand forecast) between 2018 and 2028 was estimated at 0.75 percent. Total mid-natural gas consumption in PG&E's service area was 4,587 million therms per year in 2017 and is forecast to increase to 5,019 million therms per year in 2028.⁵⁷

4.14.4.2 THRESHOLDS OF SIGNIFICANCE

Appendix F, Energy Conservation, of the CEQA Guidelines, requires a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy; however, no specific thresholds of significance for potential energy impacts are published in the State CEQA Guidelines or are established by the City of Hayward. Therefore, this EIR analysis determined that impacts would be significant if the proposed project, upon potential future development buildout, would result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and transmission infrastructure or capacity enhancing alterations to existing facilities, paralleling the threshold determinations for other utility and service systems under Appendix G. To further the intent of Appendix F, relevant, potential impacts listed in that appendix are also incorporated in the evaluation.

Appendix F lists the following possible impacts to energy conservation that should be considered to the extent they are applicable and relevant to a particular project:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.

⁵⁶ PG&E, 2018, PG&E's Gas safety Programs, https://www.pge.com/en_US/safety/gas-safety/safety-initiatives.page, accesses October 25, 2018.

⁵⁷ California Energy Commission, 2017, California Energy Demand 2018-2028 Preliminary Forecast, <https://efiling.energy.ca.gov/getdocument.aspx?tn=220615>, accessed on October 25, 2018

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4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

4.14.4.3 IMPACT DISCUSSION

UTIL-8	Implementation of the proposed project would not result in a substantial increase in natural gas and electrical service demands, and would not require new energy supply facilities and transmission infrastructure or capacity enhancing alterations to existing facilities.
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New development under the Specific Plan would continue to be served by PG&E. New underground electrical and gas lines would be required to replace existing lines when realignment is required under future development. The proposed increase in development would result in a long-term increase in energy demand associated with the operation of lighting and space heating/cooling in the added building space, and vehicle travel. In addition, construction activities associated with development require the use of energy (e.g., electricity and fuel) for various purposes such as the operation of construction equipment and tools, as well as excavation, grading, demolition, and construction vehicle travel.

Construction

Even with energy saving practices in place (as discussed below), new electrical connections, switches and/or transformers might be required to serve new structures and/or carry additional loads within the Specific Plan Area. Similarly, new gas distribution lines and connections may be necessary. These are anticipated infrastructure improvements and part of the Specific Plan development. Most of the work would be in existing public rights-of-way or facilities. Although creation of new or relocated gas and electric lines could create short-term construction-related environmental effects (e.g., noise, dust, traffic, temporary service interruption), the work would be subject to compliance with the City's and PG&E's regulations and standard conditions for new construction related to infrastructure improvements. For example, these regulations and conditions would require gas and electric line construction to include best management practices that require construction areas to minimize dust generation, limit construction noise to daytime hours to limit impacts to sensitive receptors, and use modern equipment to limit emissions. In addition, these types of infrastructure improvements are anticipated as part of the Specific Plan development. Also, any such work would be subject to compliance with applicable regulations and standard conditions of approval for construction projects, including City permits/review for construction (e.g., grading permits, private development review, encroachment permits, etc.)

Construction vehicles would consume fuel. The USEPA adopted the Heavy-Duty National Program to establish fuel efficiency and GHG emission standards in the heavy-duty highway vehicle sector, which includes combination tractors (i.e., semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles including buses and refuse or utility trucks. These standards include targets for gallons of fuel consumed per mile beginning in model year 2014. These standards are being extended through model

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year 2018 through current rulemaking by the USEPA. While construction activities require a commitment of energy sources, these efficiency standards improve energy security and innovation in clean energy technology and further the goal of conserving energy in the context of project development. As a result, construction impacts for future development under the proposed Specific Plan Update would result in a *less-than-significant* impact.

Operational

The proposed Specific Plan calls for significant infill development in the Downtown over the next 20 or more years. As a largely built-out area, future development opportunities are limited to infill sites and the redevelopment of underutilized parcels. The Specific Plan Area may facilitate, at maximum, up to 3,427 new housing units and 1.9 million square feet of non-residential space such as retail, hospitality, office, and education. The proposed increase in development would result in a long-term increase in energy demand, associated with the operation of lighting and space heating/cooling in the added building space, and vehicle travel.

Development Energy Impacts

Proposed new development would be constructed using energy efficient modern building materials and construction practices, in accordance with CALGreen Building Code, CPUC's *Long Term Energy Efficiency Strategic Plan* (2008), and Hayward's Municipal Code Chapter 10, Article 21 and Article 22, and Chapter 9, Article 11 which contain the Green Building Ordinance and Energy Code, respectively. The new buildings also would use new modern appliances and equipment, in accordance with the 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608). Under these requirements, future development under the Specific Plan would use recycled construction materials, environmentally sustainable building materials, building designs that reduce the amount of energy used in building heating and cooling systems as compared to conventionally built structures, and landscaping that incorporates water efficient irrigation systems, all of which would conserve energy.

General Plan policies described above in Section 4.14.2.1, as applicable, that require local planning and development decisions to consider impacts related to energy conservation. Specific policies that include the following: Policy LU-1.8 requires the City to maintain and implement green building and landscaping requirements for private- and public-sector development to reduce the use of energy, water, and natural resources; Policy NR-2.6 requires the City to reduce potential greenhouse gas emissions by promoting energy-efficient building design and site planning; Policy NR-4.1 requires the City to promote the efficient use of energy in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment; Policy NR-4.3 requires the City to shall encourage construction and building development practices that maximize the use of renewable resources and minimize the use of non-renewable resources throughout the life-cycle of a structure; Policy NR-4.11 requires the City to require newly constructed or renovated public and private buildings and structures to meet energy efficiency design and operations standards with the intent of meeting or exceeding the State's zero net energy goals by 2020; Policy NR-4.14 requires the City to collaborate with regional entities and others to promote incentive programs for energy efficiency retrofits such as the Energy Upgrade California program for residential properties; and Policy PFS-2.7 requires the City to continue to improve energy efficiency of

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City buildings and infrastructure through implementation of the Municipal Green Building Ordinance, efficiency improvements, equipment upgrades, and installation of clean, renewable energy systems.

In addition, the proposed Specific Plan contain goals, policies, and programs that also require local planning and development decisions to consider energy conservation from development in the Specific Plan Area. The following Specific Plan goals and policies would serve to minimize potential adverse impacts from development in the Specific Plan Area:

- **Goal 6 Economic Development (ED):** Downtown capitalizes on its location in the region, leverages its amenities, and captures more sales tax revenue to become a national model for the revitalization of mid-size cities.
 - **Policy ED 3 Innovative Financing Strategies:** Seek innovative and creative ways to fund public amenities, development incentives, and new infrastructure without unduly transferring the cost burden to the private sector.
- **Goal 7 Infrastructure and Public Facilities (IPF):** Public services, community facilities, and utility systems are well maintained, implement citywide climate change policies, and meet the needs of current and future Downtown residents, businesses, and visitors.
 - **Policy IPF 4 Sustainable Design:** Encourage property owners pursuing new developments or home renovations to design and construct buildings for healthful living and working conditions, including enhanced internal circulation, healthy building materials, design for universal accessibility, and mechanical and HVAC systems that enhance indoor air quality and comfort.
 - **Policy IPF 5 Renewable Energy:** Establish a pathway to derive 50 percent of the electricity in Downtown from renewable sources.
 - **Program IPF 4:** Accelerate the decarbonization of the electricity grid by incorporating greenhouse gas reduction targets in the Department of Public Works' resource plan.
 - **Program IPF 6:** Complete an assessment of infrastructure deficiencies in the Plan Area with the potential to impede business growth, including businesses that require specialized infrastructure such as high-speed telecommunications for technology-oriented businesses.
 - **Program IPF 9:** Partner with PG&E and other utility providers to evaluate future demand and to fund utility improvements in advance of construction. This would be implemented by the Planning Development Services-Planning Division and the Utilities and Environmental Service Department.
 - **Program IPF 15:** Partner with PG&E and other utility providers to offer incentives, such as expedited permitting or reduced development fees when new building construction complies with LEED programming or the California Green Building Code. This would be implemented by the Planning Development Services-Planning Division and the Utilities and Environmental Service Department.
 - **Program IPF 16:** Continue working to implement the city-wide Energy Assurance Plan in Downtown. This would be implemented by the Planning Development Services-Planning Division and the Utilities and Environmental Service Department.

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- **Program IPF 17:** Incentivize sustainable development to encourage the installation of renewable energy projects. This would be implemented by the Planning Development Services-Planning Division and the Utilities and Environmental Service Department.
- **Program IPF 18:** Continue to improve the energy efficiency of the building stock and infrastructure Downtown through the implementation of the Municipal Green Building Ordinance, efficiency retrofit improvements, equipment upgrades, and installation of clean, renewable energy systems. This would be implemented by the Planning Development Services-Planning Division, the Utilities and Environmental Service Department, and the Maintenance Service Department. Therefore, with the implementation of these General and Specific Plan policies and compliance with the CALGreen Building Code and the other applicable state and local energy efficiency measures, cited above, significant energy conservation and savings would be realized from future development under the Specific Plan. Therefore, impacts would be *less than significant* and no mitigation measures are required.

Transportation Energy Impacts

The Specific Plan inherently furthers objectives of energy conservation related to transportation by focusing activities in areas of existing infrastructure and services. Transportation design features that are priorities of the Specific Plan include the creation of a Specific Plan-wide pedestrian circulation system; the creation of a Specific Plan-wide bicycle circulation system; prioritizing intermodal transit connectivity; and facilitating improved connections to transit facilities for bicycles and pedestrians. These elements all promote non-motorized transportation within and to the development, thereby potentially reducing energy consumption that would otherwise be related to motorized vehicle use (i.e., automobiles). Policies in the Specific Plan that address these transportation design features include:

- **Goal 2 Community Design (CD):** Downtown is a beautiful, safe, and high-quality pedestrian-oriented environment for all ages to enjoy day or night, with sufficient and attractive lighting, sidewalk amenities, landscaping, and inviting ground floor frontages.
 - **Policy CD 1 Pedestrian-Oriented Design:** Require best practices in pedestrian-oriented building and streetscape design to create an attractive and comfortable walking experience.
- **Goal 4 Circulation (C):** The public right-of-way is recognized as the backbone of the public realm and Downtown streets are comfortable for people walking and bicycling, efficient and convenient for people taking transit, and accommodating to people driving automobiles at a posted speed limits.
 - **Policy C 3 Pedestrian Priorities:** Reclaim Downtown as a place for pedestrians by supporting pedestrian focused design strategies, such as wide sidewalks, painted or lighted crosswalks, ergonomic crosswalks, flashing lights, pedestrian controlled mid-block, and reduced curb-to curb dimensions across intersections to make walking more protected, convenient, and comfortable.
 - **Policy C 4 Bike Network:** Create a safe, efficient, and attractive bicycle network for internal connectivity and connections with bikeways outside of the Plan Area.
 - **Policy C 6 Agency Coordination:** Work with AC Transit, BART, and other transit providers to meet the travel needs of Downtown residents, businesses, and visitors and to prioritize improvements identified in this Plan, such as reconsidering BART Station access.

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- **Goal 5 Travel Demand Management and Parking (TP):** Public transportation, walking, biking and shared rides are the preferred means of travel for most trips in Downtown thereby reducing cut-through traffic and the need for parking while also supporting economic development and sustainability initiatives.
 - **Policy TP 1 Make it Easy to Take Transit, Walk, or Bike:** Make it easy for residents, employees, and visitors to travel by transit, foot, bike, or shared rides when traveling to, from, and within the Downtown.
 - **Policy TP 4 Shift to Non-Personal Vehicle Modes:** Accommodate future new person trips through modes other than personal vehicles (such as public transit, rideshare, and cycling) to help achieve a more balanced circulation network and reduce vehicle miles traveled.
 - **Policy TP 5 Carsharing and Bikesharing:** Facilitate the establishment of carsharing and bikesharing services within the Plan Area.

Also, there are several General Plan policies intended to ensure energy conservation is practiced in Hayward, as shown in Section 4.14.4.1. Specifically, Policies LU1.1, LU-1.3, LU-1.6, LU-2.5, LU-2.15, LU-3.1, LU-3.2, and NR-2.6 which are land use planning policies aimed to reduce travel time and automobile use, and Policies LU-1.5, M-1.6, and M-3.8 which promote the use of public transit, bikes, and walking.

Chapter 4.13, Transportation and Traffic, provides an evaluation of the expected traffic and transit trips generated by the Specific Plan. As discussed, the Specific Plan Update would potentially generate an increase in typical weekday trips consisting of vehicular, transit and walk/bike trips that would vary between 2014 and 2040 due to region-wide transportation system improvements that are projected to alter travel patterns and modes of project trips. For example, by 2040 Caltrain is expected to be running trains more frequently, faster, and more efficiently as part of the Caltrain Electrification and Modernization Project, which will increase the transit mode share and decrease the vehicle mode share for project trips.

As discussed above, the USEPA adopted standards that include targets for gallons of fuel consumed per mile beginning in model year 2014. These standards are being extended through model year 2018 through current rulemaking by the USEPA. While future transportation would require a commitment of energy sources, these efficiency standards improve energy security and innovation in clean energy technology further the goal of conserving energy in the context of project development. As with impacts of future development discussed above, compliance with General Plan policies listed above and implementation of Specific Plan policies would ensure energy impacts from transportation would be *less than significant*.

Significance without Mitigation: Less than significant.