

3.13 Utilities

This chapter presents the environmental setting and impact analysis for utilities in the City of Pacifica related to the proposed Pacifica General Plan. This section describes infrastructure conditions and needs for the following utility systems: potable water, wastewater, and solid waste. Water quality and stormwater management are evaluated in Section 3.5 Hydrology and Flooding.

Environmental Setting

PHYSICAL SETTING

Potable Water

The North Coast County Water District (NCCWD) supplies water to Pacifica and part of San Bruno. NCCWD is an independent water district, not affiliated with the City of Pacifica and not within the City's permitting authority. The district gets virtually all of its water from the San Francisco Public Utilities Commission (SFPUC) and the Hetch Hetchy system. The District has rights to the use of a limited amount of surface water from the South Fork of San Pedro Creek for six months of the year, accounting for one to two percent of the District's water use. Pacifica's water is pumped from San Andreas Lake and the Harry Tracey Water Treatment Plant in Millbrae via a main distribution line under Skyline Boulevard, to the Milagra Ridge storage tank. From there, water for northern Pacifica is pumped to the Christian Hill tank on Skyline Boulevard and then distributed by gravity to smaller tanks and to customers. Water for southern Pacifica is piped from the Milagra Ridge tank to the Royce tank, off Fassler Avenue, and then to smaller tanks and to customers. Overall, the system is divided into 34 pressure zones, each separated by pressure-reducing valves.¹

Water Use

The NCCWD system's 14 storage tanks or reservoirs have a total capacity of 23.8 million gallons, enough to supply the service area with water for seven days at the District's average

¹ Bay Area Water Supply and Conservation Agency (BAWSCA). BAWSCA Annual Survey-FY 2007-08. January 2009. Accessed at <http://www.bawasca.org>, 2009.

daily usage rate of 3.24 million gallons per day (mgd).² The District’s contract with SFPUC allows for a maximum purchase of 3.84 mgd.

Projected Demand

Demand from the residential sectors is expected to increase by about 328 AFY through the next 25 years. Under the terms of the contract with the San Francisco Public Utilities Commission, the District’s maximum supply (maximum wholesale allocation) 4,299.2 AFY. This existing allocation is sufficient to meet the needs of the District from the present through 2035.³

Table 3.13-1: Historical Water Demand and Supply 2000-2010

<i>Year</i>	<i>Supply (mgd)</i>	<i>Demand (mgd)</i>
2008-2009	3.35	3.35
2009-2010	3.02	3.02
2010-2011	3.25	3.25
2011-2012	2.83	2.83

Source: BAWSCA Annual Survey- North Coast County Water District, 2013.

Over the past four years, the water demand has been relatively stable for the NCCWD service area. Single-family residential customers are the largest water use category followed by businesses, public authorities, and multi-family residential customers, and irrigation users.

Water Conservation

Water use in the NCCWD has been steadily declining in recent years due to conservation programs and infrastructure repair throughout the system. Water conservation will be important in coming years. In 2008, SFPUC capped the amount of water it takes from the Tuolumne River and delivers to water districts. The agency limited its aggregate deliveries to Bay Area Water Supply and Conservation Agency (BAWSCA) members to 184 mgd, and established interim supply limitations on each water district. SFPUC may impose environmental surcharge fees on water districts which exceed their limitation during years when the system-wide limitation is exceeded. This is expected to put pressure on agencies to reduce water use, as demand in the SFPUC service area overall continues to rise.

The push for water conservation is also coming from the State, which has recently strengthened its requirements for water districts and local jurisdictions. The Water Conservation Act of 2009, or SB 7, sets an overall target to reduce urban per capita water use by 20 percent by the end of 2020, with an interim target of 10 percent by the end of 2015. The Water Conservation in Landscaping Act, as modified by AB 1881, provides a Model Water

² Ibid.

³ *North Coast County Urban Water Management Plan, 2011.*

Efficient Landscape Ordinance and requires that all jurisdictions adopt it or one at least as effective.

The City of Pacifica has established procedures to meet the requirements of the state's Model Ordinance. The City is studying the feasibility of developing its own water conservation ordinance, which may be based on a BAWSCA model ordinance designed to reduce outdoor water use by 25 percent at applicable projects, and to be at least as effective as the Department of Water Resources (DWR) ordinance. A coordinated response by the City and the NCCWD will help Pacifica meet the requirements of recent state legislation, and stay beneath the water supply limit established by SFPUC.

The NCCWD has approval to proceed on the first phase of a project that would pump treated wastewater from the City's Calera Creek Water Recycling Plant through a new system of pipes for use as irrigation water at Sharp Park Golf Course, the Sharp Park Beach promenade, Palmetto Avenue streetscape, playing fields at Oceana High School and I.B. Lacy Middle School, landscaping along Highway 1, and in the Fairway Park neighborhood and new developments east of Highway 1. The first phase of the project is estimated to have the potential to save up to 40 million gallons of drinking water annually.⁴

Infrastructure Modernization

Pacifica's water pipes and storage reservoirs are aging and in need of modernization. NCCWD's current Capital Improvement Plan is focused on minimizing the risk to the water supply that could result from a major seismic event. NCCWD replaced three major water tanks (Gypsy Hill, Royce, and Nelson) in recent years, and has completed the installation of back-up generators at all 14 of its storage tanks. It will add sensors allowing automatic shutdown of key tanks during a major earthquake, and install "jumper nodules" at joints in the pipe system, which will allow for piping to be replaced with flexible tubing in the case of an emergency. The transmission main that brings water to Pacifica from the regional system is located above the San Andreas Fault as it follows Skyline Boulevard in San Bruno. NCCWD is committing resources both to short-term pipe inspection and repair along the main line, and to a study of the feasibility of developing an alternative and reliable water source.⁵

Beyond these modernization efforts, Pacifica and NCCWD are dependent upon the safety and durability of the larger Hetch Hetchy system. California Assembly Bill 1823 identifies nine projects essential to the maintenance of water supply following a major earthquake, and requires that they be carried out. In 2002, the SFPUC adopted a \$2.9 billion capital improvement program to undertake a system upgrade.⁶

⁴ San Francisco Public Utilities Commission (SFPUC). Website <http://www.sfwater.org>, accessed May2009.

⁵ North Coast County Water District (NCCWD). CIP and Bond Projects Status Report February 20, 2008. Accessed at <http://www.nccwd.com>, February 2008.

⁶ BAWSCA, 2009.

Water Quality

SFPUC monitors water at the source and at local treatment plants for turbidity, organic and inorganic chemicals, microbial quality, mineral content, and radiological quality. NCCWD monitors water as it enters the District's system, and takes weekly water samples from various locations. Pacifica's water is consistently high-quality and safe to drink, meeting all standards set by the California Department of Health Services and the United States Environmental Protection Agency.⁷

Wastewater

The City operates a wastewater treatment plant, sewage lift stations, and stormwater pump stations, as well as the citywide system of sewer mains and lateral pipes that connect to homes and businesses. Waste water flows through some 82 miles of main pipes to six sewer pump stations, and on to the CCWRP. The City's topography prevents gravity flow to the plant, and requires drainage stations at Linda Mar and Sharp Park.

Calera Creek Water Recycling Plant

The Calera Creek Water Recycling Plant (CCWRP), located on the south flank of Mori Point, is a tertiary treatment plant, brought online in 2000 to replace the old Wastewater Treatment Plant in West Sharp Park. The new plant was among the first in California to use ultraviolet disinfection, which allows effluent to be released to wetlands without residual chlorine. The plant has facilitated the creation and restoration of wetlands along Calera Creek, bringing year-round flow to a naturalized stream channel. When the North Coast County Water District's landscape irrigation water recycling project is completed, the CCWRP will also be the source for a portion of Pacifica's irrigation water.

Testing at the Calera Creek Water Recycling Plant generally indicates that discharge meets applicable water quality standards associated with the plant's operating permits with the Regional Water Quality Control Board (RWQCB). While the discharge from the new plant has significantly reduced pollutant loading to the Pacific Ocean, there have been some isolated instances of non-compliance with water quality standards.⁸

Usage and Capacity

Average annual wastewater flows have been declining in recent years, from 3.7 million gallons per day (mgd) on average in 2001 to 2.9 mgd in 2008. Flows are projected to rise to 3.2 mgd by 2012.⁹ The CCWRP has a dry weather capacity of 4.0 million gallons per day (mgd), a peak hourly dry weather capacity of 7.0 mgd, and a peak hourly wet weather

⁷ NCCWD. Website <http://www.nccwd.com>, accessed May 2009.

⁸ Regional Water Quality Control Board (RWQCB). San Francisco Bay (RWQCB), NPDES No. CA0038776, Order Number R2-2006-0067. 2006.

⁹ City of Pacifica, "General Plan Update Wastewater Treatment Service Provider Form." 2009.

capacity of 20 mgd.¹⁰ Considering Pacifica’s slow projected growth, the Plant is believed to have adequate capacity for the next 15 to 20 years.

Planned Improvements

The City intends to undertake the following projects:

- Replacement of the ultraviolet (UV) treatment system at the CCWRP;
- Installation of a new generator at the Linda Mar pump station;
- Repair of the Palmetto trunk sewer line.

An Inflow and Infiltration study performed for the City will determine improvement needs in the collection system. This will serve as a basis for project prioritization and future master planning. Fees are collected when building permits are issued. It is anticipated that improvements will be needed to accommodate future wastewater flows.¹¹

Table 3.13-2: 2009 Wastewater Flows

Flow Component	Flow (mgd)		
	2009	Near-term	Buildout
Residential BWF	2.00	2.02	2.12
Non-Residential BWF	0.21	0.22	0.29
Total Average BWF	2.21	2.24	2.41
Estimated dry season GWI ¹	0.37	0.37	0.37
Total Average DWF	2.58	2.61	2.78

Note: This table represents the most recent wastewater data that was available for the City of Pacifica Wastewater Collection System.

¹ Estimated as the difference between the September 2009 average flow to the WWTP (2.58 mgd) and estimated total BWF.

Source: City of Pacifica Collection System Master Plan, 2011.

Storm Drains

Pacifica’s storm drainage system consists of a collection system and two pump stations. This drainage system acts to convey drainage to area creeks or the ocean. Two areas in the City, Linda Mar and lower Sharp Park, are too low to allow drainage to a creek or the ocean, and are served by pump stations to prevent street flooding. The City’s system services 178 curbmiles of roads, and 986 inlets.¹²

¹⁰ RWQCB, 2006.

¹¹ City of Pacifica, 2009.

¹² San Mateo Countywide Water Pollution Prevention Program. Annual Report, 2007-08. August 29, 2008.

San Mateo Countywide Water Pollution Prevention Program

The San Mateo County Water Pollution Prevention Program (SMCWPPP) was established in 1990 with the assistance of the San Mateo County City/County Association of Governments. The primary goal of the SMCWPPP is to reduce pollution carried by stormwater throughout San Mateo County into local creeks, San Francisco Bay, and the Pacific Ocean, and to maintain compliance with the National Pollutant Discharge Elimination System (NPDES) permit. The program is managed and maintained by San Mateo County and the 21 participating cities, including Pacifica.

San Pedro Creek/Linda Mar Storm Drain Treatment/Diversion Project

In 2004, the City completed the Pacifica State Beach Improvement Project, a complex initiative requiring the cooperation of many agencies and funding sources. Among the project's key elements was the diversion of stormwater from the Anza and Linda Mar pump stations to two constructed wetland treatment swales. The project has successfully redirected polluted water from first-flush release into the ocean, and together with other elements of the project, has resulted in improved water quality.

Stormwater Management and Site Planning

Site planning covers issues concerning the ground on which buildings sit. Key principles of site planning generally include minimizing disturbance to native vegetation and drainage, and minimizing the use of impervious surfaces so that water can drain naturally. Many aspects of sustainable site planning pertain to stormwater management and water use. Stormwater should be allowed to drain on-site to the greatest extent possible, using "Low Impact Development" (LID) measures like permeable paving and rainwater harvesting. LID requirements have been built into the Municipal Regional Permit governing stormwater drainage in Pacifica. Water use, meanwhile, can be reduced by planting native and low-water-use plants, grouped based on their water requirements, using automated watering systems, and limiting the use of turf grass. These and other measures are part of the State's Model Water Efficient Landscaping Ordinance, which is being implemented by the City of Pacifica.

Solid Waste

Solid waste collection and recycling services in Pacifica are provided by Recology of the Coast, a division of Recology. Recology, based in San Francisco, operates a number of landfills, waste transfer and materials recovery facilities, including the recycling yard at 1046 Palmetto Avenue in Pacifica. Recology emphasizes waste reduction and diversion, and is the largest compost facility operator by volume in the United States. In Pacifica, Recology of the Coast currently provides curbside pick-up of garbage, recyclables, and green waste for both residential and commercial customers.

The City has enacted an ordinance requiring all food vendors to use biodegradable or compostable service ware. Both Pacifica and San Mateo County have recycling divisions that provide information to help residents and businesses reduce and divert waste from landfills.

Recycling and Hazardous Wastes

Residential recyclable waste is collected every other week. Organic waste is collected every week on the regular garbage day from Pacifica homes. There is no door-to-door hazardous waste collection service in Pacifica but residents may drop off household hazardous waste at the Recology of the Coast’s Recycling Yard at no cost.¹³

Solid Waste Diversion

To reduce waste disposal and promote recycling, the California Integrated Waste Management Act of 1989 (AB 939) promotes an integrated approach to managing waste. The California Public Resources Code Section 41780 (A)(2) requires that cities and counties divert 50 percent of all solid waste produced within their jurisdiction through source reduction, recycling, and composting. **Table 3.13-3** below shows the diversion rates of waste management in Pacifica. In 2007, the California Department of Resources Recycling and Recovery (CalRecycle) changed the method of calculating diversion rates to one based on the average per capital solid waste disposal rate. The disposal targets for Pacifica were met for both residential and employment disposal for the years 2008-2011.

**Table 3.13-3: Pacifica Integrated Waste Management Authority
 Diversion Rates**

Year	<i>Population Disposal (PPD)^{1,2}</i>		<i>Employment Disposal (PPD)</i>	
	<i>Target</i>	<i>Annual</i>	<i>Target</i>	<i>Annual</i>
2008	3.5	2.8	33.2	26.2
2009	3.5	2.7	33.2	25.9
2010	3.5	2.9	33.2	28.9
2011	3.5	2.6	33.2	23.0

1 In 2007, California Department of Resources Recycling and Recovery (CalRecycle) introduced a new system of measuring diversion rates based on a per capita disposal measurement system equivalent to the 50 percent diversion requirement. The previous system is no longer used. The new per capita disposal measurement system is one of several "factors" in determining a jurisdiction's compliance with the intent of AB 939, and allows CalRecycle and jurisdictions to set their primary focus on successful implementation of diversion programs.

2 PPD = Pound per person per day.

Source: California Department of Resources Recycling and Recovery, 2013.

Gas and Electricity

Electricity

Pacific Gas & Electric (PG&E) provides gas and electric services to Pacifica homes and businesses. With energy obtained from power plants, natural gas fields, and renewable energy sources in northern California. The availability of electricity and gas services is not expected

¹³ Recology website, accessed August 2013, available at: <http://www.recologyofthecoast.com/index.php/for-homes/household-hazardous-waste>.

to become an issue during the planning horizon. However, electricity and natural gas use account for 40 percent of greenhouse gas emissions in Pacifica. Thus, while supply is not anticipated to be an issue in Pacifica, reducing demand for these resources will help reduce carbon emissions.

Natural Gas

PG&E provides local natural gas service to the Pacifica. One natural gas transmission line feeds into the City.

REGULATORY SETTING

Federal, State, and Local Regulations

Water

Federal Clean Water Act

The Clean Water Act is the principal federal law addressing water quality. The primary objectives include the regulation of pollutant discharges to surface water, financial assistance for public wastewater treatment systems, technology development, and non-point source pollution prevention programs. The Clean Water Act also requires that states adopt water quality standards to protect public health and welfare and enhance the quality of water.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by the U.S. EPA in coordination with the states, is the main federal law that ensures the quality of drinking water. Under the SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The Department of Public Health administers the regulations contained in the Act in the State of California.

California Water Code

California Water Code (Porter-Cologne Act) establishes a program to protect water quality and beneficial uses of state water resources and includes groundwater and surface water. The State Water Resources Control Board and the San Francisco Bay Regional Water Quality Control Board are the principal state agencies responsible for control of water quality in California and the San Francisco Bay Area region, respectively.

California Department of Public Health

A major component of the State Department of Public Health, Division of Drinking Water and Environmental Management, is the Drinking Water Program which regulates public water systems. Regulatory responsibilities include the enforcement of the federal and state Safe Drinking Water Acts, the regulatory oversight of public water systems, issuance of water treatment permits, and certification of drinking water treatment and distribution operators. State regulations for potable water are contained primarily within the Food and Agricultural

Code, the Government Code, the Health and Safety Code, the Public Resources Code, and the Water Code. Regulations are from Title 17 and Title 22 of the California Code of Regulations.

The regulations governing recycled water are found in a combination of sources including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations. Issues related to treatment and distribution of recycled water are generally under the influence of the RWQCB, while issues related to use and quality of recycled water are the responsibility of the California Department of Public Health.

California Environmental Quality Act, SB 610, and SB 221

Section 15083.5 of the CEQA Guidelines requires the City to request certain information from the public water supply system(s) serving the planning area. This requested information includes: an indication of whether the projected water demand associated with the proposed general plan was included in its last urban water management plan; and, an assessment for any major development projects “whether its total projected water supplies available during normal, single-dry, and multiple-dry water years as included in the 20-year projection contained in its urban water management plan will meet the projected water demand associated with the proposed project, in addition to the system’s existing and planned future uses.”

Senate Bill 610 became effective January 1, 2002, and requires cities in connection with CEQA review to consider water supply assessments to determine whether projected water supplies can meet the project’s anticipated water demand. SB 610 also requires additional factors to be considered in the preparation of urban water management plans and water supply assessments.

SB 610 and CEQA Guidelines Section 15083.5 identifies those projects generally as a residential development of more than 500 dwelling units; a commercial or industrial business employing more than 1,000 persons; or any other project that would have a water demand at least equal to a 500 dwelling unit project. SB 221 contains similar provisions as SB 610 but is intended for use with large residential subdivisions and is usually required at the time of tentative tract map approval.

San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay Regional Water Quality Control Board (RWQCB) governs many of the regulations associated with utilities, specifically potable water, sanitary sewers, storm drains, and recycled water.

RWQCB has the authority to enforce water quality regulations found in the Clean Water Act based on the Porter-Cologne Water Quality Control Act.

North Coast County Water District

North Coast County Water District (NCCWD) supplies water to Pacifica and part of San Bruno, and gets virtually all of its water from the San Francisco Public Utilities Commission and the Hetch Hetchy system. NCCWD has rights to the use of a limited amount of surface water from the South Fork of San Pedro Creek for six months of the year, accounting for one to two percent of the District's water use.

NCCWD Urban Water Management Plan

NCCWD's 2005 Urban Water Management Plan (UWMP) documents the district's planning efforts to ensure adequate water supplies to meet existing and future demands for water. The UWMP presents forecasted supplies and demands up to the year 2030 and describes the District's recycled water and conservation programs. The UWMP also describes what happens in a water shortage and discusses drought management programs.

Wastewater

The RWQCB administers regulations related to wastewater discharges under the Federal Water Pollution Control Act of 1972, as amended, more commonly known as the Clean Water Act. Wastewater discharges are guided by NPDES (National Pollutant Discharge Elimination System) permits granted by the RWQCB.

The City Municipal Code Title 6, Chapter 13, Article 2 established regulations for the treatment disposal, and control of wastewater and industrial wastes for the City. The intent of the regulations is to maintain proper disposal of wastewater and provide standards for discharges that enter community sewers.

Storm Drains

The City has adopted a Storm Water Management and Discharge Control Ordinance, set in place to regulate the discharge of stormwater, regulate stormwater discharge, and ensure that the City remains in compliance with state and regional stormwater regulations.

Flood Damage Prevention Ordinance

The City has adopted a Flood Damage Prevention ordinance (Title 7, Chapter 5, Article 1 of the Pacifica Municipal Code), which regulates the safety in Pacifica in relation to flood hazards. This ordinance outlines control measure to ensure the safety of the public and minimize losses in the case of flood conditions in the City. It also outlines measures to be taken for new development in order to minimize the potential impacts of flooding on new construction, specifically in coastal areas that are especially prone to flood hazards.

Solid Waste

Resource Conservation and Recovery Act (Amended 1986)

The Resource Conservation and Recovery Act is a federal act regulating the potential health and environmental problems associated with solid waste hazards and non-hazardous wastes. Specific regulations addressing solid waste issues are contained in Title 40, Code of Federal Regulations.

California Integrated Waste Management Board

The California Integrated Waste Management Board (CalRecycle) establishes the statewide regulations for solid waste collection and disposal, including state-mandated diversion goals. Regulations authored by CalRecycle (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board pertaining to landfills (Title 23, Chapter 15) to form Title 27 of the California Code of Regulations.

The California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989, or AB 939, mandated that all jurisdictions in the State divert at least 50 percent by 2000 through source reduction, composting, and recycling activities. The Act gives the highest priority to source reduction and defines it as the act of reducing the amount of solid waste generated in the first place. Recycling and composting are given the next highest priority. The Act specifies that all other waste that is not diverted be properly and safely disposed of in a landfill or through incineration. The California Integrated Waste Management Act also mandates that each jurisdiction adopt a Source Reduction and Recycling Element (SRRE) which specifies how the community will meet the 50 percent goals set forth in the Act. Each community is also required to take measures to reduce solid waste generation and to provide for the safe disposal of special and hazardous wastes.

The California Solid Waste Reuse and Recycling Access Act

Subsequent to the California Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB939. The California Solid Waste Reuse and Recycling Access Act of 1991 directs the California Integrated Waste Management Board (CIWMB) to draft a model ordinance (which San Mateo County has adopted) relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance is used by the County as the basis for imposing recycling conditions on new development projects and on existing projects that add 30 percent or more to their existing floor area. Beginning in 1994, the model ordinance requires that any new development project for which an application is submitted include adequate, accessible and convenient areas for collecting and loading recyclable materials.

The Solid Waste Disposal Measurement System Act

The Solid Waste Disposal Measurement System Act of 2008, SB 1016, amended the California Integrated Waste Management Act procedures for measuring and reporting diversion

requirements. Starting in 2009, jurisdictions are required to calculate the 50 percent diversion requirement in a per capita disposal rate equivalent. CalRecycle will determine the per capita disposal rate equivalent for each jurisdiction.

CalRecycle delegates local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies (LEA). The Pacifica Municipal Code contains regulations related to solid waste and recycling in Title 6, Chapter 5

Gas and Electricity

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates Investor-Owned Utilities (IOUs) including those that offer electric, natural gas, steam, and petroleum service to consumers. The CPUC regulates both electric and natural gas rates and services provided by these utilities including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing. Natural gas regulations are found in General Orders 58, 94, 96, and 112, while electrical distribution regulations are found in General Orders 95, 128, 131, 165, and 166.

Impact Analysis

SIGNIFICANCE CRITERIA

Implementation of the proposed General Plan would have a potentially significant adverse impact if it would:

- Criterion 1:** Not have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements.
- Criterion 2:** 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.
- Criterion 3:** Require or result in the construction of new water or wastewater treatment facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects.
- Criterion 4:** Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects.
- Criterion 5:** Exceed wastewater treatment requirements of the Regional Water Quality Control Board.

Criterion 5: Result in solid waste disposal needs that exceed the permitted landfill capacity serving the project.

Criterion 6: Cause solid waste levels to be in non-compliance with federal, state, or local regulations related to solid waste.

METHODOLOGY AND ASSUMPTIONS

The analysis for this section addresses impacts to City infrastructure due to projected growth arising from General Plan Land Use changes. Subsequent CEQA review at the project level may be required to determine whether significant environmental effects would result from the construction of water distribution lines, wastewater collection system components, storm drainage conveyance pipes, and any onsite storage or pumping facilities on development sites. Project-level review will occur when proposed development plans are prepared.

Population and Housing

Existing population estimates are based on those reported by ABAG Projections. Existing housing unit estimates are based on yearly estimates by Department of Finance housing tables. Buildout household estimates are based on an average household size of 2.6 persons per unit based on US Census years 2007-2011.

Water

Pacifica's projected water demand was calculated using information obtained from NCCWD's 2011 Urban Water Management Plan. Pacifica's share of the total was calculated based on per capita planning demand within NCCWD's service area for 2035.

Wastewater

Pacifica's projected wastewater flow was calculated using information obtained from the city of Pacifica's 2011 Collection System Master Plan.

IMPACT SUMMARY

With buildout of the proposed General Plan, population is expected to increase, bringing with it an increased demand for utilities across the City. This increase in population could have a substantial effect on water demand and supply, sewer and wastewater facilities, landfill capacity, and/or solid waste. However, because projected supply and demand of the City's utilities has remained relatively constant over recent years, and population increase is relatively small in comparison to the existing population, the increase in demand will not cause any significant impacts to be created for and of the City's utilities. Proposed General Plan policies can reduce possible impacts related to utilities. These policies, as listed below, include water conservation measures and incentives as policies that guide water quality protection, all of which are designed to minimize possible environmental effects.

IMPACTS AND MITIGATION MEASURES

3.13-1 Implementation of the proposed Plan will not result in insufficient water supplies to be available to serve the project from existing entitlements and resources, or require new or expanded entitlements. (Less than Significant)

According to data from the NCCWD, the total average water production for the district was 2.83 mgd in 2011. At buildout, the proposed General Plan is estimated to increase demand in the Pacifica Planning Area by 19 percent to 3.36 mgd.

Table 3.13-4: Estimated Water Demand and Supply

	Population	Estimated Water Demand (mgd) ¹	Estimated Water Supply (mgd)	Percent Increase from Existing Demand
Existing Conditions (2011)	37,230	2.83	2.83	-
Proposed General Plan Total at Buildout (2035)	39,800	3.36	3.84	19%

¹ mgd = million gallons per day

Source: Dyett & Bhatia, 2013, North Coast County Water District Urban Water Management Plan, 2011, BAWSCA, 2013.

Table 3.13-4 shows the estimated water demand based on the Pacifica population and the estimated demand for the NCCWD. The projected demand for 2035 is 3.36 mgd, with a projected supply of 3.84 mgd. Based on these calculations, there will be adequate water supply to provide for the population under General Plan buildout.

However, because NCCWD’s water supply is dependent on precipitation and snowpack in the Sierra Nevada, which eventually flows into the Hetch Hetchy system, NCCWD’s ability to meet customer demand will be chiefly dependent upon future weather conditions. According to the NCCWD Urban Water Management Plan, the district expects there to be no shortage with normal current demand rates. However, it does expect a demand-to-supply shortfall of 10 percent in a drought year and larger shortfalls for multi drought years.

In view of this uncertainty, it is in the City’s best interest to plan for contingencies and reduce water use at all times. Proposed General Plan policies will ensure that new developments are designed with low-flush toilets and other water saving features. The City plans to continue cooperative efforts with NCCWD to promote water conservation to the public. Additionally, the City plans to start a water recycling program to irrigate public parks and landscaping. The relevant policies designed to reduce water use are listed below.

Proposed General Plan Policies that Reduce Impact

Conservation Element

CO-I-20 **Water Supply.** Support the Bay Area Water Supply & Conservation Agency in advocating for reliable and fairly priced water from the San Francisco regional water system.

CO-I-21 **Water Efficient Landscaping.** Collaborate with the North Coast County Water District (NCCWD) to design and implement a water-conserving landscaping ordinance that meets State requirements.

The State of California has a Model Water Efficient Landscaping Ordinance, which can be adapted to the City's needs. A coordinated response by the City and the NCCWD will help Pacifica reduce water use and stay beneath the water supply limit established by San Francisco Public Utilities District.

CO-I-22 **Incentives for Water Conservation.** Encourage the NCCWD to continue and expand its water conservation incentive programs, including free water-efficient fixtures and rebates for water-efficient appliances.

CO-I-23 **Water Recycling.** Collaborate with the NCCWD to implement a water recycling project, involving new pipes and pumping stations, to allow treated wastewater from the Calera Creek Water Recycling Plant to be used for irrigation of landscaped areas.

The feasibility of expanding this project to include other potential uses of recycled water such as linkages with fire hydrants will be evaluated.

CO-I-24 **Water Storage.** Support the NCCWD in its efforts to provide adequate emergency water storage in Pacifica.

Mitigation Measures

None required.

Impact

3.13-2 Implementation of the proposed Plan will not 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. (*Less than Significant*)

The City's wastewater collection system serves the entire population of Pacifica. In 2011, the City prepared a Collection System Master plan that evaluates the capacity of the existing sewer system and identifies sewer improvements that are necessary to achieve the required capacity. The report is also intended to create a long-range Capital Improvement Program (CIP) for the wastewater collection system.

The collection and conveyance of wastewater generated by the buildout of the proposed General Plan will use the existing sanitary and sewer system. The wastewater treatment plant operated by the City CCWRP has a dry weather capacity of 4.0 million gallons per day (mgd), a peak hourly dry weather capacity of 7.0 mgd, and a peak hourly wet weather capacity of 20 mgd.¹⁴

Table 3.13-5: Estimated Wastewater Flow and Capacity

	Population	Estimated Average Influent Flow (mgd)	Percent Increase from Existing Flow
Existing Conditions (2010)	37,230	2.9	-
Proposed General Plan Total at Buildout (2035)	39,800	3.1	7.0%

1 mgd = million gallons per day

Source: Dyett & Bhatia, 2013.

Table 3.13-5 shows the estimated wastewater flow under General Plan buildout. Because the wet weather capacity of the Plant is 7.0 mgd, and the estimated flow under General Plan buildout is only 3.1 mgd, there is adequate capacity to serve the buildout population. General Plan buildout will not impact any existing sewers due to the projected slow growth of Pacifica. Therefore wastewater resources for the City will not be affected under buildout of the proposed General Plan.

Proposed General Plan Policies that Reduce Impact:

Conservation Element

- CO-G-6 **Wastewater Treatment.** Ensure that the City maintains adequate capacity to handle wastewater, and continue to expand wastewater recycling.
- CO-I-25 **Wastewater Treatment Capacity.** Continue to monitor wastewater generation rates so decision-makers are aware of the impacts on the treatment plant on new development, and plan for additional capacity in advance of projected need.
- CO-I-26 **Sewer System Connections.** Require all new development to be connected to the City's sewer system.
- CO-I-27 **Sanitary Sewer Discharge.** Ensure that discharges of treated wastewater from the Calera Creek Wastewater Recycling Plant continue to comply with the Sanitary Sewer System Permit.

The City will manage the release of treated wastewater as part of habitat restoration along Calera Creek, and pursue the use of recycled water for irrigation and other uses.

¹⁴ RWQCB, 2006.

Mitigation Measures:

None required.

Impact

3.13-3 Implementation of the proposed Plan will not require or result in the construction of new water or wastewater treatment facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects. (*Less than Significant*)

The only water-related construction planned for the water district is the modernization of Pacifica's water pipes and storage reservoirs. NCCWD's current Capital Improvement Plan focuses on minimizing the risk to the water supply that could result from a major seismic event. NCCWD replaced three major water tanks in recent years, and has completed the installation of back-up generators at all 14 of its storage tanks. It will add sensors allowing automatic shutdown of key tanks during a major earthquake, and install "jumper nodules" at joints in the pipe system. The transmission main that brings water to Pacifica from the regional system is located above the San Andreas Fault as it follows Skyline Boulevard in San Bruno. NCCWD is committing resources both to short-term pipe inspection and repair along the main line, and to a study of the feasibility of developing an alternative and reliable water source.¹⁵

Beyond these modernization efforts, Pacifica and NCCWD are dependent upon the safety and durability of the Hetch Hetchy system. Aside from these improvements, no new construction is planned for the water district. Therefore, the construction of new water facilities will not occur under the General Plan, which would avoid adverse environmental effects.

As stated under Impact 3.13-2, the wastewater infrastructure in Pacifica is adequate and will not require additional facilities to be built under the proposed General Plan buildout population. Therefore the potential impact would be less than significant.

Proposed General Plan Policies that Reduce Impact

CO-I-13 **Infrastructure and Water Quality.** Ensure that the design and construction of new infrastructure elements does not contribute to stream bank or hillside erosion or creek or wetland siltation, and incorporates site design and source control BMPs, construction phase BMPs, and treatment control BMPs to minimize impacts to water quality, in compliance with the NPDES Permit.

Mitigation Measures:

None required.

¹⁵ North Coast County Water District (NCCWD). CIP and Bond Projects Status Report February 20, 2008. Accessed at <http://www.nccwd.com>, February 2008.

Impact

3.13-4 Implementation of the proposed Plan will not require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects. (*Less than Significant*)

Pacifica's storm drainage system consists of a collection system and two pump stations. This drainage system acts to convey drainage to area creeks or the ocean. Two areas in the City, Linda Mar and lower Sharp Park, are too low to allow drainage to a creek or the ocean, and are served by pump stations to prevent street flooding. Overall, the City's system serves 178 miles of roads and 986 inlets.¹⁶ The stormwater infrastructure in Pacifica is adequate to provide for the proposed General Plan buildout population.

In 2004, the City completed the Pacifica State Beach Improvement Project. This project has successfully redirected polluted water from first-flush release into the ocean to two constructed wetland treatment swales, and, together with other elements of the project, improved water quality. New development under the proposed Plan will incorporate best management practices from construction and development, meeting the requirements of the City's stormwater permit and following proposed Plan policies. The increasing incorporation of stormwater management in site planning will further reduce the need for development of new storm drainage infrastructure. The Plan does not propose construction of new storm water drainage facilities or expansion of existing facilities. Since there would be no facility construction, no adverse environmental effects would occur.

Proposed General Plan Policies that Reduce Impact

Conservation Element

CO-I-12 **Protect Water Quality through Best Management Practices.** Continue to require the use of best management practices to reduce water quality impacts from construction and development. Measures include:

- ***Site Design and Source Control.*** Ensure that all new development incorporates site design and source control BMPs into the project design in order to preserve the infiltration, purification, and retention functions of each site's natural drainage systems, and to prevent or minimize the runoff of pollutants, sediments, waste, and pathogens from the site.
- ***Construction Pollution Control.*** Require all construction projects to adopt measures to minimize erosion and runoff of pollutants and sediments from construction-related activities, and to limit activities that result in the disturbance of land or natural vegetation.

¹⁶ San Mateo Countywide Water Pollution Prevention Program. Annual Report, 2007-08. August 29, 2008.

Construction projects will be required to use appropriate erosion prevention techniques, sediment control measures, and best management practices in accordance with City specifications and the San Mateo Countywide Water Pollution Prevention Program.

- **Treatment Control.** Require that new development implement treatment control BMPs (or structural treatment BMPs) where the combination of site design and source control BMPs is not sufficient to protect water quality and comply with applicable water quality permits.

CO-I-10 **Countywide Water Pollution Prevention Program.** Continue to participate in the San Mateo Countywide Water Pollution Prevention Program.

The Program represents a collaborative effort amongst the County and its municipalities, consisting of five major areas of water pollution prevention and control:

- *Municipal maintenance activities*
- *Industrial and illicit discharge*
- *Public information and participation*
- *New development and construction controls*
- *Watershed monitoring*

Mitigation Measures:

None required.

Impact

3.13-5 Implementation of the proposed Plan will not result in exceeding wastewater treatment requirements of the Regional Water Quality Control Board. (*Less than Significant*)

The Calera Creek Water Recycling Plant (CCWRP) is a tertiary treatment plant brought online in 2000 to replace the old Wastewater Treatment Plant in West Sharp Park. The new plant uses ultraviolet disinfection, which allows effluent to be released to wetlands without residual chlorine. The plant has facilitated the creation and restoration of wetlands along Calera Creek, bringing year-round flow to a naturalized stream channel. When NCCWD's water recycling project is completed, the CCWRP will also be the source for a portion of Pacifica's landscape irrigation water.

Testing at the Calera Creek Water Recycling Plant indicates that discharges generally meet applicable water quality standards, although there have been some isolated instances of non-compliance. The Water Quality Control Plan for the San Francisco Bay Basin is the Regional Water Board's (RWQCB) master water quality control planning document, which states the water quality objectives for waters in the region. In addition, the RWQCB has implemented regulatory Orders for the CCWRP that guide the Plant to meet the standards of the RWQCB.

Based on the estimated wastewater flow under General Plan buildout (as analyzed under Impact 3.13-2), there are adequate wastewater treatment facilities in the City. Therefore, the proposed Plan will not result in the exceeding of wastewater treatment requirements of the RWQCB.

Proposed General Plan Policies that Reduce Impact

Conservation Element

CO-I-11 **Stormwater Discharge.** Ensure compliance with the Municipal Regional Permit, the Construction General Permit, and the Construction Dewatering Permit, which regulate stormwater discharge from new and existing development.

These permits are established by the National Pollutant Discharge Elimination System (NPDES) and administered by the Regional Water Quality Control Board. They require that new development incorporate Best Management Practices (BMPs) in site design, construction, and management to minimize storm water runoff rates and volumes, control water pollution, and maximize infiltration.

In addition, see CO-G-6 listed above.

Mitigation Measures:

None required.

Impact

3.13-6 Implementation of the proposed Plan will not result in solid waste disposal needs that exceed the permitted landfill capacity serving the project. (*Less than Significant*)

According to disposal data provided by Recology, Pacifica sent approximately 10,714, 431, and 191 tons of waste to the Ox Mountain, San Bruno, and Mussel Rock landfills, respectively. This totaled in 11,335 tons of waste for Pacifica in 2012.¹⁷ Pacifica's growth under the proposed General Plan is not substantial enough to alter or increase Recology's annual waste in relation to their total waste from all solid waste customers. Therefore, there will be no significant impact of the proposed General Plan on solid waste disposal and/or landfill capacity.

The Integrated Waste Management Act of 1989 requires that all jurisdictions meet a 50 percent waste reduction requirement. Since 2007, CalRecycle has been using a new system to measure diversion rates. This new system uses a per capita disposal threshold as one of several "factors" in determining a jurisdiction's compliance with diversion requirements. In 2011, Pacifica had a disposal rate of 2.6 pounds per person per day (ppd), which met the

¹⁷ Email correspondence with Chris Porter, General Manager, Recology of the Coast, September 12, 2013.

target of 3.5 ppd set for that year.¹⁸ Under buildout of the proposed General Plan, the amount of solid waste generated will likely increase due to population growth. However, due to the small amount of growth that will occur as part of the proposed Plan, and as long as the waste generated by each person does not increase, the city should have no trouble meeting the pound per person target set by CalRecycle each year. In addition, to reduce residential and commercial waste streams within the city, the proposed General Plan includes policies to reduce waste through reduction, reuse, recycling, and public education.

In consideration of these policies, although the proposed Plan may generate additional amounts of solid waste due to population growth, the overall impact is less than significant.

Proposed General Plan Policies that Reduce Impact

Conservation Element

- CO-G-17 **Waste Reduction.** Seek to reduce overall solid waste by limiting packaging, controlling construction and demolition waste, and promoting composting and recycling.
- CO-I-66 **Waste Collection.** Periodically evaluate the City's waste collection contract to ensure that Pacifica residents and businesses receive high-quality and cost effective service.
- CO-I-67 **Waste Reduction and Diversion.** Seek to continually reduce Pacifica's output of solid waste and increase the proportion of waste diverted from landfills, setting targets and monitoring progress.

Mitigation Measures

None required.

Impact

3.13-7 Implementation of the proposed Plan will not cause solid waste levels to be in non-compliance with federal, state, or local regulations related to solid waste. (Less than Significant)

Based on the historic integrated waste management authority diversion rates for solid waste in Pacifica, the City has seen diversion rates below both its population disposal targets as well as its employment disposal targets. The disposal targets are expressed as Pacifica's 50 percent diversion equivalent, which are based on previous disposal and employee data reported. The target is represented in per pounds per person per day, if Pacifica were at exactly 50 percent

¹⁸ Department of Resources Recycling and Recovery website on Diversion/Disposal Rate Report. Available: <http://www.calrecycle.ca.gov/lgcentral/Tools/MARS/JurDrDtl.asp?Flag=1&Yr=2008&Ju=568>.

diversion or 50 percent disposal.¹⁹ The City's population disposal target is 3.5 pounds per person per day, and the employment disposal target is 33.2 pounds per person per day. Based on integrated waste management diversion trends for Pacifica, if the City's population reaches its proposed General Plan buildout population, diversion rates would still be able to remain below this target. Therefore, this impact is less than significant.

Proposed General Plan Policies that Reduce the Impact

Conservation Element

See CO-I-66 and CO-I-67 listed above.

Mitigation Measures

None required.

¹⁹ California Department of Resources Recycling and Recovery, "Waste Management Annual Report FAQs," accessed August 22, 2013, available at: <http://www.calrecycle.ca.gov/stateagency/WMReport/FAQ.pdf>.