

5. INFRASTRUCTURE

A well-functioning infrastructure system is an essential part of supporting the needs of Sharp Park area residents, businesses, and visitors. This chapter analyzes the utilities infrastructure network that supports the Planning Area, including the water supply and distribution system, the sanitary sewer system, and the stormwater drainage system.

5.1 Water Supply

The North Coast County Water District (“District”) supplies potable water to the Planning Area and most of Pacifica, with a service area of approximately 13.6 square miles and a service population of 40,000. The potable water system is divided into 34 pressure zones, each separated by pressure reducing valves. At average daily demand, storage capacity in the District’s 12 water tanks (including the now-operational Christen Hill tank) is about 19 million gallons (MG), which can supply the District with water for up to 7.2 days. The District also receives a portion of the total amount of tertiary recycled water produced annually from the Calera Creek Water Recycling Plant (CCWRP), under an Agreement between the City and the District. The District began receiving recycled water from the plant and has been delivering the tertiary recycled water to recreational and institutional customers for irrigation use since August 2013, and residential customers since 2015.

The most recent data on current usage and near-term projections can be found in the 2015 Urban Water Management Plan. The average total potable water demand in the Pacifica service area was 815 MG in 2015 and is projected to increase to 1,136 MG in 2035. Longer term planning for water supply reliability to meet future water demands from 2020 to 2040 is addressed in the 2015 Urban Water Master Plan (UWMP), which confirms the City’s ability to meet projected demand including during drought years.

The District also recently completed a 20-Year Long-Term Water Master Plan (Stetson, 2016) which proposes several capital improvement projects (CIP), including approximately 6.15 million gallons of additional treated water storage in the form of new storage tanks, and replacement of storage tanks that were previously removed from service. The additional storage would increase the District’s total treated water storage from 18.85 million gallons to 25.0 million gallons, which would be sufficient to meet 2015 average daily demand for approximately 12 days. While most of Sharp Park’s pipes are aging, the 2,700 feet of pipeline along Palmetto Avenue was prioritized in the Master Plan and replaced in 2017. Other proposed District CIP projects in the Planning area include replacement of approximately 170 feet of aging pipe crossing Highway 1 on Pacific Avenue.

5.2 Wastewater

The City of Pacifica owns and maintains 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. Wastewater flows through 106 miles of main pipes to five sewer pump stations, and on to CCWRP, where wastewater is treated. The City’s topography prevents gravity flow to the plant and requires pump stations at Linda Mar and Sharp Park. The CCWRP was designed to handle an annual average daily wastewater flow of 4.0 million gallons per day (gpd), enough to treat the annual average daily wastewater flow of 3.1 million gpd.

In 2011, the City was issued a Cease and Desist Order (CDO) by the Regional Water Quality Control Board and was ordered to eliminate insufficient capacity caused by sanitary sewer overflows (SSOs) from the sanitary sewer collection system. In response, the City developed the Wet Weather Equalization (EQ) Basin Project to reduce SSOs, which required construction of a 2.1-million-gallon-capacity EQ basin at the Pacifica Community Center parking lot and underground conveyance piping along Linda Mar Boulevard and Arguello Boulevard. These projects are scheduled to be completed in

2019. The City is in the process of completing Phase II of the Sewer System Master Plan Update and the Sharp Park Station Odor Control Upgrade, which will make the site compatible with any proposed future redevelopment. Other wastewater projects include the relocation of mainline and forcemain at the Sharp Park pump station, as well as an upgrade to the Sharp Park pump station itself, in 2019-2020. The Odor Control and Sharp Park pump station upgrades are shown in Figure 5-1.

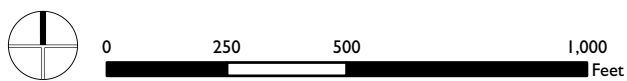


The North Coast County Water District offices are located at 2400 Francisco Boulevard.



The Sharp Park Pump Station is undergoing an odor control upgrade to make it compatible with any future redevelopment of the 2212 Beach Boulevard site.

Figure 5-I: Capital Improvement Projects



5.3 Stormwater

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 290,000 linear feet of storm drain pipes, and 989 inlets.¹

5.4 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. According to the City of Pacifica's 2017 Climate Action Plan, average residential electrical use has been decreasing, while average commercial electrical use has increased since 2016. The availability of electricity and gas services is not expected to become an issue during the planning horizon.

After a series of devastating wildfires in northern California, PG&E has recently initiated a "Public Safety Power Shutoff", or "PSPS." During PSPS events, PG&E proactively turns off electricity when gusty winds and dry conditions, combined with a heightened fire risk, are forecasted. At the time of this Map Atlas' publication, the latest PSPS event shut off power to San Mateo County and Pacifica in late October, 2019.

Peninsula Clean Energy (PCE) is a community choice energy (CCE) program, or a locally controlled community organization that enables alternative energy choices. PCE purchases the electricity for 290,000 homes, businesses, and community facilities in San Mateo County while PG&E continues to maintain the grid. On October 28, 2019, the Peninsula Clean Energy Board of Directors voted to commit up to \$10 million over three years to fund clean backup power for San Mateo County's medically vulnerable residents and essential community services during PG&E power shutoffs.² PCE will develop programs to support the installation of battery backup systems powered by renewable energy on eligible homes and community facilities with greatest need. Programs are expected to roll out next year.

5.5 Utilities Vulnerability to Sea Level Rise

According to the City's Vulnerability Assessment (2018), the Planning Area is located in the Sharp Park, West Fairway Park, and Mori Point subarea that is vulnerable to the effects of climate change and sea level rise, including storm flooding and wave impacts on utilities. Potential impacts include vulnerability of communications conduit (0.7-0.8 mi) to storm flooding, coastal inundation impacts

¹ San Mateo Countywide Water Pollution Prevention Program. Annual Report, 2007-08. August 29, 2008.

² Peninsula Clean Energy. "Press Release: Peninsula Clean Energy Commits \$10 Million for Emergency Backup Power During PG&E Outages.: October 29, 2019. Accessed at <https://www.peninsulacleanenergy.com/wp-content/uploads/2019/10/Peninsula-Clean-Energy-Commits-10-Million-FINAL.pdf>

0.1 mi of stormwater pipes and 4 outfalls, and potential storm flooding impacts of up to 2 miles of pipe and 7 outfalls. Wastewater pipelines are also vulnerable (1.9 to 2.7 miles) while one to two wastewater pump stations are vulnerable to storm flooding and wave impacts, respectively.³ It is important to note that this vulnerability assessment did not reflect the significant protection provided by the existing Beach Boulevard seawall. More information on sea level rise vulnerability is provided in Chapter 6: Environmental Hazards and Resources.

5.6 Other Infrastructure Improvements

Other planned capital improvement projects in the Planning Area include the following, shown in Figure 5-2:

The Palmetto Streetscape Project: Includes installation of archways, planting, signage, water fountains, kiosks, benches, planter boxes, art sculptures and more. For fiscal year 2019-2020, bike racks and benches will be installed.

The Beach Boulevard Seawall and Promenade Project: A multi-year collaborative process to completely replace the northern Beach Boulevard Seawall and Promenade. The first phase will result in a feasibility study, conceptual design alternatives. The second phase will result in engineered plans and specifications. The third and final phase will be construction.

Beach Boulevard Picnic Area Landscaping Project and Fitness Court: Replaces the existing landscaping within the picnic area along the southern end of the Beach Boulevard Promenade with resilient improvements that will withstand ocean environment. A fitness court and playground equipment will be installed following or concurrent with landscaping/hardscaping of Beach Boulevard.

5.7 Planning Issues and Implications

- The District's source of supply from the SFPUC is a reliable source of high-quality, potable water. However, the 2016 NCCWD 20-Year Long-Term Water Master Plan recommends that the District pursue additional sources of supply that would increase operational flexibility and system reliability and provide additional security in the event of prolonged droughts, a catastrophic emergency, or a catastrophic failure of the SFPUC's regional water system.
- Future development will likely occur largely on previously developed sites served by existing infrastructure; a series of improvement projects such as the EQ weather equalization treatment basin, Sharp Park pump station improvements, the addition of the Christen Hill tank, and the Palmetto Avenue pipeline improvement project will support new development.
- The highest priority CIP project in the Planning Area, replacement of a large aging pipe running under Palmetto Avenue, was completed in 2017. The other pipeline proposed for replacement occurs at Pacific Avenue crossing under Highway 1. Aside from these upgrades,

³ Sea Level Rise Vulnerability Assessment. ESA. January 2018.

the main infrastructure deficiencies identified in the NCCWD's 20-Year CIP in the Planning Area have already been addressed.

- According to the City's Vulnerability Assessment (2018), the Planning Area is located in the Sharp Park, West Fairway Park, and Mori Point subarea that is vulnerable to the effects of climate change and sea level rise, including storm flooding and wave impacts on utilities. As part of the Coastal Zone, the Planning Area will include Local Coastal Program policies that address coastal hazards, monitor shoreline change, and protect its assets, including utilities.
- PG&E's PSPS events are intended to reduce wildfire risks, but power outages can pose additional safety hazards. These can include strains on emergency and medical services, especially for vulnerable communities; mobility and circulation concerns as traffic lights go out of service; and other disruptions to daily living. Heightened fire risks and PSPS events may become more commonplace due to climate change, and as such, the City should consider policies to address the impacts of electricity disruptions.