

Westside Enhanced Water Recycling Project

Strengthening San Francisco's Water Supply

For nearly 100 years, San Francisco's water has been supplied by the Regional Water System, which includes a blend of water from Hetch Hetchy Reservoir in Yosemite National Park, and five Bay Area reservoirs located in Alameda and San Mateo counties. We have relied on this system for all of our water supply needs, including our drinking water (or potable water) needs and water used for non-drinking (or non-potable) purposes, such as irrigation.

However, we face increasing risks to this supply due to a variety of concerns: climate variability and its impact on snowpack, the potential for earthquakes to disrupt water delivery, droughts, regulatory changes, and population growth. Since the 1980s, we have recognized that our ability to deliver water reliably is at risk if we don't plan for our water future – it's no longer enough to rely only on the approach we've used for the past century. As we plan for the future, we are also challenged to optimize the use of our finite resources by finding ways to conserve drinking water supplies and identify new supplies, such as recycled water, that can be used for non-potable purposes.

To address these challenges, the SFPUC is implementing a **Local Water Program**. The Local Water program: 1) provides conservation programs to help customers save water; 2) uses recycled water and other non-potable supplies to meet many of the City's irrigation and toilet flushing demands; and 3) develops local groundwater to enhance the sustainability of the City's drinking water supply now and into the future.

The **Westside Enhanced Water Recycling Project** is a component of the Local Water Program that allows us to diversify our water sources by creating a new recycled water supply to use for non-drinking purposes. When we use recycled water for irrigation, we will reduce the use of potable water (including surface water from the Regional Water System and local groundwater supplies) currently being used for non-drinking purposes.

Bringing Recycled Water to the Westside of San Francisco

On the westside of San Francisco, there is drinking water that is currently used for non-drinking purposes such as irrigation and lake fill. Consistent with SFPUC's philosophy of matching the right resource to the right use, we are implementing the Westside Enhanced Water Recycling Project to provide recycled water to serve these non-potable uses so that we can conserve potable supplies for drinking. The project includes construction of a new recycled water treatment facility that will be located within the limits of the SFPUC's Oceanside Wastewater Treatment Plant and the construction of almost 8 miles of new recycled water pipelines, built mostly in City streets, to convey the recycled water to irrigated areas. The project also includes the construction of an 840,000 gallon underground reservoir, and an above-ground recycled water pump station in Golden Gate Park which will pump recycled water up to Lincoln Park and the Presidio.

Environmental Review and Design have been completed, and construction began in early 2017. Recycled water deliveries are scheduled to begin in early 2021.

Project Facilities and Distribution System



Meeting a High Water Quality Standard with Advanced Treatment

The Westside Enhanced Water Recycling Project will use the best available technologies to produce advanced treated recycled water at a quality that will exceed California's stringent recycled water standards.

The City's Oceanside Plant currently treats residential wastewater from the western part of San Francisco. That wastewater goes through several treatment processes to produce "secondary effluent," which is then discharged into the Pacific Ocean. The new recycled water treatment facility that will be located at the plant, will take a portion of this secondary effluent flow prior to its discharge, and treat it further with membrane filtration (to remove suspended solids), and reverse osmosis (to remove dissolved constituents). The recycled water will then be disinfected with ultraviolet light prior to being delivered for irrigation in Golden Gate Park, Lincoln Park Golf Course, the Presidio Golf Course and other potential landscaped areas, including the San Francisco Zoo. The water produced by these state-of-the-art treatment technologies is known as "advanced" treated recycled water.

Reverse osmosis is the best available technology to remove both salts and nutrients/ammonia from water. This treatment technology was selected for the Westside Enhanced Water Recycling Project because the primary uses of recycled water will be for irrigation and lake fill in Golden Gate Park. Using this higher level of treatment will minimize potential impacts of salts (sodium, chloride) on park vegetation, and of nutrients (nitrogen, phosphorus) and ammonia on park lakes.

In California, and across the U.S., recycled water is being used for irrigating parks, playgrounds, soccer fields, and other landscaping, as well for toilet flushing, water features, cooling, and industrial processing. All recycled water produced and used in California must meet the stringent standards defined in Title 22 of the California Code of Regulations – some of the highest standards in the country. The advanced treated recycled water produced as part of the Westside Enhanced Water Recycling Project will exceed these State standards. Furthermore, recycled water produced as part of the project will be routinely monitored and tested daily to ensure it consistently meets these high quality standards through continuous monitoring and daily sampling.

Creating a Reliable Water Supply Future

The Westside Enhanced Water Recycling Project provides the right water for the right use by using locally produced recycled water for non-drinking needs. This will allow us to save potable water (surface and groundwater) currently used for irrigation and other non-potable applications. By diversifying in this way, we are safeguarding our drinking water supply, making it less vulnerable to risks such as earthquakes and droughts, while helping to meet the long-term water supply needs of the City.

It takes several years to evaluate, fund, and develop new water supply projects. We have a responsibility to plan and implement projects now to be ready in advance of the need so we can maintain a reliable water supply for our customers. Diversifying our sources of water through the conservation, recycled water, and groundwater projects included in our Local Water Program is one of the most important steps we are taking to prepare for the risks we face, and help to ensure a sustainable water supply for today, tomorrow, and into the future.

Future Recycled Water Facility



We want you to know about the **Westside Enhanced Water Recycling Project** and our Local Water Program!

If you are interested in more detailed project information, please visit sfwater.org/recycledwater.

Funding for this Project has been provided in full or in part through an agreement with the State Water Resources Control Board. California's Clean Water State Revolving Fund is capitalized through a variety of funding sources, including grants from the United States Environmental Protection Agency and state bond proceeds. The contents of this document do not necessarily reflect the views and policies of the foregoing, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.