

# Westside Enhanced Water Recycling Project

## PROJECT OVERVIEW

### What is the Westside Enhanced Water Recycling Project?

The Westside Enhanced Water Recycling Project is a project to develop a recycled water supply for non-potable uses on the west side of San Francisco. The project is an important element of the San Francisco Public Utilities Commission's (SFPUC) local water resource management planning effort, known as the Local Water Program.

The project includes the construction of a new recycled water treatment facility that will be located within the limits of the SFPUC's Oceanside Wastewater Treatment Plant. The treatment facility will produce an average of 1.6 mgd of water. The project includes the construction of almost 8 miles of new recycled water pipelines built mostly in City streets, to convey the recycled water from the new treatment facility to irrigated areas. The project also includes 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.

The Westside Enhanced Water Recycling Project is a component of the Local Water Program that allows us to diversify our water sources. The Local Water Program includes conservation, recycled water, non-potable, and groundwater programs to enhance the sustainability of the City's drinking water supply and meet the long-term needs of the City by providing the right water for the right use. By diversifying our sources of water in this way, San Francisco's water supply is less vulnerable to risks of disruption, such as earthquakes, drought, and maintenance activities.

## RECYCLED WATER QUALITY

### How will recycled water be produced for San Francisco?

The City's Oceanside Plant 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 and reverse osmosis. The recycled water will then be disinfected with ultraviolet (UV) light prior to being delivered to municipal customers for non-drinking water purposes. This treatment technology will produce "enhanced" recycled water.

To learn more about the **Westside Enhanced Water Recycling Project** and our Local Water Program, please visit [sfwater.org/recycledwater](http://sfwater.org/recycledwater).

### What is recycled water?

Recycled water is highly-treated wastewater that has undergone multiple levels of treatment. Recycled water is safe and suitable for many non-drinking uses. In California and across the U.S., recycled water is being used for applications such as irrigating parks, playgrounds, soccer fields, golf courses and other landscaping, as well as wildlife habitat. It is also used for toilet flushing, water features, cooling, dust control, industrial processing, as well as other uses.

### How much recycled water will be available through the Project?

The project will provide 1.6 million gallons per day (mgd), on average per year, to meet current identified demands in Golden Gate Park, Lincoln Park and the Presidio. The project is designed to deliver up to 2 mgd, on an average annual basis, and a peak demand at any given time of 4 mgd.

### Why build it now?

The next major earthquake could be tomorrow. The next drought is imminent. Regulatory changes can affect the availability of water supply. These risks are always with us, and recycled water production and use is a crucial element in addressing these and other vulnerabilities. It takes several years to evaluate, fund, and develop new water supply projects and we need to be ready in advance of the need, not afterward.

### When will recycled water be delivered?

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

### What is the difference between recycled water and "enhanced" recycled water?

This project is different than a typical recycled water project because it will utilize an additional treatment step that will include membrane filtration, reverse osmosis and disinfection that will produce recycled water at a quality that will exceed California's stringent recycled water standards.

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## RECYCLED WATER QUALITY (continued)

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### Why are you using reverse osmosis?

The primary use of the recycled water will be for irrigation and lake-fill in Golden Gate Park. This high level of water quality is necessary to meet water quality needs for sensitive plant species and lake refilling. Reverse osmosis is the best available technology to remove both salts and nutrients/ammonia from water. To minimize impacts of salts (sodium, chloride) on park vegetation, and the impact of nutrients (nitrogen, phosphorus) and ammonia on park lakes, this higher level of treatment will be used.

### How is the quality of recycled water monitored?

Recycled water quality will be monitored very closely and at various steps throughout its production. The treatment process itself includes water quality monitoring before and after membrane filtration for turbidity (a measure of solids in the water). The treatment process also includes on-line, continuous monitoring of the integrity of each system (membrane filters, reverse osmosis, and UV light systems); any indication of a potential malfunction will shut down the treatment system and halt distribution. In compliance with the state's recycled water regulations, daily samples

will also be collected at the end of the treatment process (after disinfection) and tested for total coliform bacteria and turbidity.

### What agency oversees the recycled water system?

The State Water Resources Control Board has adopted strict public health and safety requirements and guidelines for recycled water production and use in California. This agency oversees the design and operation of recycled water systems, sets the standards for the levels of treatment and water quality monitoring requirements, as well as regulating the types of uses and proper applications of recycled water. In addition, the local San Francisco Department of Public Health, in conjunction with the SFPUC, is responsible for cross-connection inspections and making sure that the potable water and recycled water systems are kept completely separate.

### Is there any danger to pets that may come into contact with the recycled water?

There is no danger to pets or wildlife. Recycled water is highly treated to meet stringent quality and safety standards set by the state of California.

## PROJECT INFRASTRUCTURE AND IMPACTS TO RECREATION AND PARKS

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### Where in Golden Gate Park will the new reservoir and pump station be built?

The new facilities will be located at San Francisco Recreation and Park Department's (SFRPD) Central Pump Station site, near Transverse and JFK Drives. This is the site of SFRPD's existing irrigation pump station and reservoir, and is also the site of their composting and chipping operation. The site is already considered a "maintenance yard" area, and is not open to the public, so there will be no loss of recreational space. The new facilities will be built adjacent to the existing reservoir and pump station, which in the future will also be converted to be used for storing and pumping recycled water for park use.

### Is there a backup irrigation supply for Golden Gate Park if delivery of recycled water is disrupted (e.g., planned or unplanned maintenance)?

Yes, the primary backup irrigation supply is groundwater from the Central Pump Station well.

### What impact will the Project have on park operations, traffic, and parking?

We anticipate no impact on traffic or parking. The change to recycled water use will require some changes to the operation of the park irrigation system. Some park walkways may be temporarily closed during active daytime irrigation, particularly in those areas where sprinklers "overspray" these paths. Section gardeners will put up A-frames with signs indicating the temporary closure. Park patrons will need to cross the street and use the walkway on the other side.

### Will the park's irrigation systems be modified to use recycled water?

Yes – most of the changes include simple replacement of irrigation components (sprinkler heads, valve box covers, etc.) with purple-colored versions to indicate the use of recycled water. For areas currently served by potable water, additional plumbing changes will be required to connect those areas to the recycled water pipeline "loop." Signs will be placed throughout the park to indicate recycled water use.

### How are you diversifying San Francisco's water supply portfolio?

The SFPUC is committed to diversifying its water supply portfolio through developing local water supplies by:

- Creating a water-efficient San Francisco by promoting water use efficiency, and reducing wasteful consumption in homes and businesses, through our Water Conservation Program.
- Irrigating San Francisco's large parks and golf courses with advanced treated recycled water through our Recycled Water Program.
- Reusing water in buildings by collecting and treating water onsite for toilet flushing in lieu of using drinking water, through our Non-potable Water Program.
- Maximizing local water sources by blending groundwater with surface water supplies through our Groundwater Program.
- Encouraging homeowners to irrigate their landscape through additional Residential Programs using rainwater and graywater through our Residential Programs.