



Palos Verdes Reservoir



The Metropolitan Water District of Southern California is a regional water wholesaler that imports water from the Colorado River and the northern Sierra and delivers it to communities across Southern California, including Palos Verdes. Water from Metropolitan's treatment plants is brought into the Palos Verdes area, then delivered to West Basin Municipal Water District and California Water Service for distribution to homes and businesses.

As part of Metropolitan's water delivery infrastructure, the district owns and operates the Palos Verdes Reservoir, as well as various large pipelines that bring water into the community from three different treatment plants. This system ensures reliable water delivery to the Palos Verdes Peninsula and nearby communities. While Palos Verdes Reservoir has been out of service since 2022, Metropolitan has maintained the same level of reliability for these communities, bypassing the reservoir and delivering water directly to the local water system.



For added safety and reliability, Metropolitan is collaborating with the Los Angeles County Fire Department to install a helicopter dip tank on the reservoir property to help protect the water system and support local firefighting efforts during wildfire emergencies.

Purpose and current status of the Palos Verdes Reservoir

Palos Verdes Reservoir is a treated water reservoir built in 1939. It is not used to store water. Rather, it is a regulating reservoir, buffering fluctuations in flow caused by daily changes in water demands. Regulating reservoirs help maintain relatively constant water flows and pressures in the large pipelines that supply the region. Since Palos Verdes Reservoir is a treated water reservoir, it is required to be covered to protect water quality and comply with regulations.

Palos Verdes Reservoir was taken out of service to repair its cover and to facilitate upgrades to a key pipeline that supplies the reservoir and community, the Second Lower Feeder.

A bypass pipeline was installed to maintain reliable water deliveries while the reservoir was out of service and upgrades were made to the Second Lower Feeder. The bypass provides the same flow and pressure as the reservoir, ensuring all demands are met. With the Second Lower Feeder now back in service, the bypass line remains in place to provide redundancy and long-term reliability.

The future long-term use of Palos Verdes Reservoir is under evaluation. With lower water demands and resulting water quality challenges, the reservoir cannot be used in its current configuration.

Wasn't the reservoir out of service before?

In 2009, after 60 years of use, Palos Verdes Reservoir was taken out of service for needed improvements and

maintenance, including a new liner, cover, and seismic upgrades. Construction was completed in January 2019 and the reservoir was returned to service. It was periodically used until 2022.

Reliable water for Peninsula communities in emergencies

Metropolitan has taken multiple measures to ensure the Palos Verdes Peninsula and nearby communities have reliable water in the event of a wildfire, earthquake or other emergency:

Record water in storage: Metropolitan has a record amount of water in storage with 3.8 million acre-feet of water (an acre-foot of water is nearly 326,000 gallons, about the amount used annually by three typical Southland households).

Infrastructure investments: Metropolitan recently made major upgrades to the Second Lower Feeder, a key pipeline supplying the Palos Verdes Peninsula. A new bypass line, constructed at the reservoir, provides redundancy and enhances reliability.

Helicopter dip tank: Metropolitan collaborated with the Los Angeles County Fire Department to install a helicopter dip tank on the reservoir property to help protect the water system and support local firefighting efforts during wildfire emergencies.

Multiple ways to deliver water: Metropolitan operates multiple regional pipelines, service connections and other infrastructure, in addition to the bypass line, that draw water from various sources and reservoirs to serve the Palos Verdes Peninsula. If one pipeline is disrupted in an emergency, Metropolitan has alternative ways to deliver water to the area, and from multiple sources.

Future of Palos Verdes Reservoir challenged by nitrification

Southern California has made great strides in water conservation – reducing per person potable water use by 45% since 1990. This increased efficiency is critical to the region’s sustainability and long-term water security.

However, lower water demands mean that water can remain in the reservoir longer than desired, leading to a growing water quality challenge known as nitrification.

What is Nitrification? Nitrification can occur in drinking water systems that use chloramines as a disinfectant, particularly during periods of low water flow and warmer temperatures.

Metropolitan, like many water agencies, uses chloramines to help maintain the quality and safety of treated drinking water as it travels through our distribution system. Chloramines are formed when ammonia is added to chlorine. Nitrification involves the conversion of ammonia to nitrite which, if not properly managed, can reduce the disinfectant residual in a distribution system.

A reduction in disinfectant residual could potentially affect water quality by decreasing the system’s ability to address potential contamination within a distribution system.

Because of the risk of nitrification, Metropolitan is evaluating the future operation of the reservoir, considering evolving water demands, and operational needs. The reservoir property remains a critical piece of water infrastructure, along with its associated pipelines, helping to provide reliable water deliveries to the Palos Verdes Peninsula.



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The Metropolitan Water District of Southern California is a state-established regional cooperative of 26 cities and public water agencies, which collectively serve nearly 19 million people in six counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies and supports its members through the development of increased conservation, recycling, storage and other resource management programs.