# POTABLE REUSE IN SAN DIEGO COUNTY

San Diego County Water Authority

Safe and reliable water supplies have been a hallmark of San Diego County for decades, supporting the region's economy and our quality of life. The region's water agencies are committed to environmental stewardship and world-class technology as they develop new sources of drought-resilient local supply for future generations.

One example of a local water supply that several local agencies are advancing or considering is potable water reuse. Potable water reuse utilizes multi-barrier processes similar to seawater desalination to treat wastewater to drinking water standards. By using water more than once, local water agencies will be able to generate billions of gallons of water each year, helping the semi-arid region continue to thrive.

For more than two decades, water agencies in San Diego County have promoted water reuse as part of the region's multifaceted water supply diversification strategy. In 1991, the region was 95 percent dependent on one source of imported supply. Now, our water supply picture is much more diverse due in part to local water supply projects, including recycled water, seawater desalination and brackish groundwater recovery replacing our need for imported water deliveries.

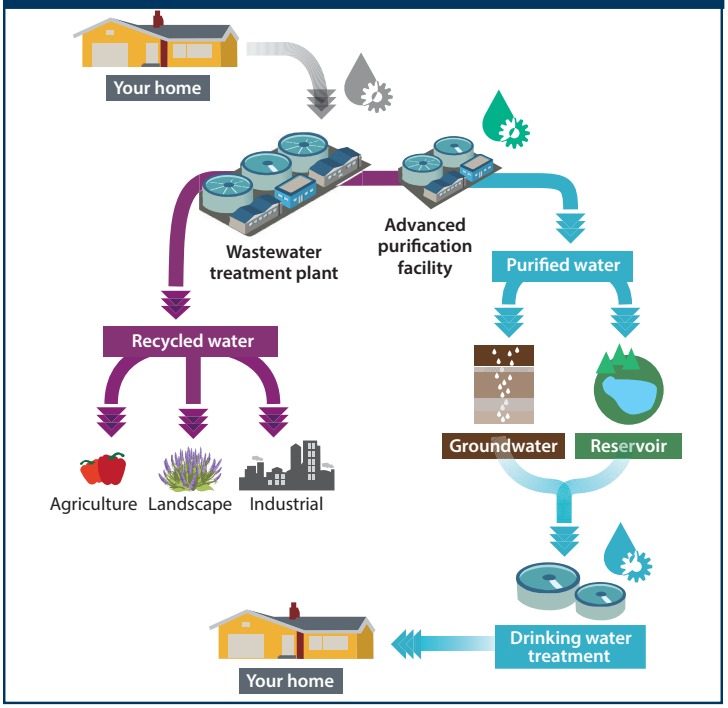
By supporting rigorous scientific analysis, securing money for studies, and sponsoring state legislation to speed the adoption of regulations, the Water Authority and its member agencies have become leading advocates for potable reuse as the next generation of locally controlled, drought-resilient drinking water supplies. It is estimated that by 2045, potable reuse projects in San Diego County will comprise approximately 18 percent of the region's water supply portfolio.

## REGION PLAYS LEADING ROLE

Incidental potable reuse has occurred for generations throughout the country when treated wastewater has been discharged to rivers or lakes, then withdrawn, treated and distributed for municipal, industrial, and agricultural users downstream. For instance, there are more than 300 wastewater outfalls on the Colorado River, a major source of drinking water for Southern California. Potable reuse projects in California have been safely recharging groundwater basins for decades in Los Angeles and Orange counties.

## INDIRECT POTABLE REUSE

This diagram shows the water purification and recycled water processes and how the water is used in our community.




In late 2021, the City of Oceanside began operations at the first operating advanced water purification facility in San Diego County. The State of California has developed regulations for potable reuse that delivers purified water to drinking water reservoirs and groundwater basins. Recently, the state also adopted regulations for direct potable reuse projects.

The Water Authority is working with its member agencies to advance potable reuse in the San Diego region. Water Authority staff provide support in three key areas: public outreach and messaging, legislative and regulatory advocacy, and helping secure funding for local projects. The Water Authority actively engages in the WateReuse Association, and with the member agency Potable Reuse Coordination Committee and the Joint Public Information Council (JPIC).

San Diego County Water Authority

# MULTI-BARRIER PURIFICATION PROCESS

Potable reuse relies on a multi-barrier treatment process to make recycled water safe to drink. Purified water produced in California with state-of-the-art technologies is higher quality than most bottled water. In coming years, potable reuse projects are expected to help water agencies optimize existing infrastructure, increase locally controlled water supplies, and provide environmental benefits while continuing to protect public health.

Water purification processes and technologies differ from project to project, but they generally follow a series of steps to produce water that fully complies with both state and federal drinking water quality standards.

**Those steps include:**

- Ozonation and Biological Activated Carbon (BAC)
- Microfiltration/ultrafiltration
- Reverse osmosis
- Ultra-violet advanced oxidation

# LOCAL PROJECTS ON TAP

San Diego County is a leader in water technology, and several local agencies have developed or are developing potable reuse plans and projects as part of their commitment to make the most of every drop. Three major initiatives are either built or underway, with more expected in coming years.

## OCEANSIDE PURE WATER


Oceanside Pure Water is a potable reuse project that began operations in 2021. It is the first operating advanced water purification facility in San Diego County. The project recharges the Mission Basin Aquifer with advanced-treated water from the San Luis Rey Water Reclamation Facility. The purified water supplements natural recharge of the groundwater basin, providing the City of Oceanside with more than 30% of the city's water supply.

## PURE WATER SAN DIEGO

Pure Water San Diego is the City of San Diego's phased, multi-year program that will provide one-half of the city's water supply by 2035. The Pure Water program uses proven technology to treat recycled water to produce safe, high-quality drinking water. It also will reduce the amount of treated wastewater that is discharged to the ocean by more than 50 percent.

## EAST COUNTY ADVANCED WATER PURIFICATION PROGRAM

The East County Advanced Water Purification Program will create a new, local, sustainable and drought-proof drinking water supply using state-of-the-art technology to meet 30 percent of East County's current drinking water demands. The project is a partnership between Padre Dam Municipal Water District, Helix Water District, the County of San Diego and the City of El Cajon. It is expected to be completed in 2026.

**Additional water purification projects under consideration in the region include:**

- Potable Reuse Feasibility Study (San Dieguito Water District, Santa Fe Irrigation District, and San Elijo Joint Powers Authority)
- Camp Pendleton Groundwater Recharge Project
- Encina Wastewater Authority Water Augmentation Project

**MORE INFO**