

BUILDING RESILIENCE THROUGH...

The Salinity Management Pipeline

Calleguas's approach to building water resilience includes the Salinity Management Pipeline (SMP), which enables water agencies in and around the Calleguas Creek Watershed to make the most of local water supplies. Since the SMP began operating in 2014, it has been a critical piece of Ventura County's water infrastructure.

The SMP is vital to the region's water reliability as costly supplies from Northern California imported via the State Water Project (SWP) have become increasingly vulnerable to drought and challenges in the Sacramento-based Delta area, where the SWP maintains much of its infrastructure. These challenges include potential catastrophic levee failures from floods or seismic events and regulatory shutdowns of pumping facilities to protect endangered species. The SMP facilitates local Ventura County projects that reduce demand for imported water and improve reliability by diversifying the region's water supply portfolio.



The SMP allows salty groundwater to be treated and used.

Brackish water:

Saltier than fresh water but less salty than sea water. Unusable for drinking water and irrigation unless it is treated.

Brine:

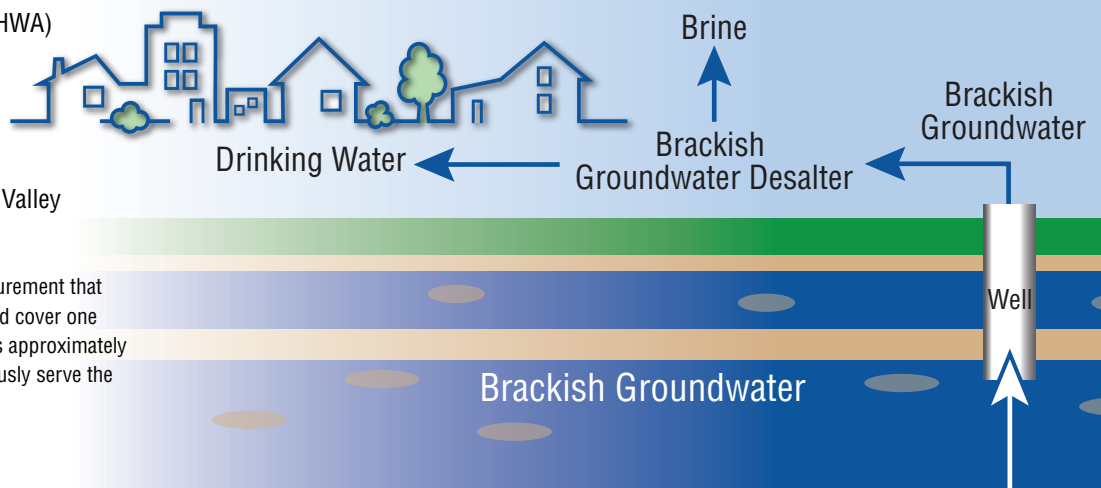
A high-concentration solution of salt in water.

Like many agencies throughout California, Calleguas and its purveyors are largely dependent upon imported water sources from Northern California, despite the availability of local groundwater supplies. Unfortunately, much of this local groundwater is not readily usable, because it is too salty or brackish. To make this water resource suitable for drinking or irrigation, a treatment process, typically reverse osmosis, is employed to remove the salts. However, this treatment generates a brine that requires proper management and disposal, since it is too salty for inland waterways but safe for discharge into the ocean, where natural salt levels are higher.

This is where the SMP comes in: by transporting the brine to an ocean outfall, it allows for safe discharge. By efficiently managing brine disposal, the SMP facilitates brackish groundwater treatment that results in new drinking water supplies. Without a conduit to safely move brine from brackish groundwater treatment facilities to the ocean, these supplies could not be developed and additional imported water would be required.

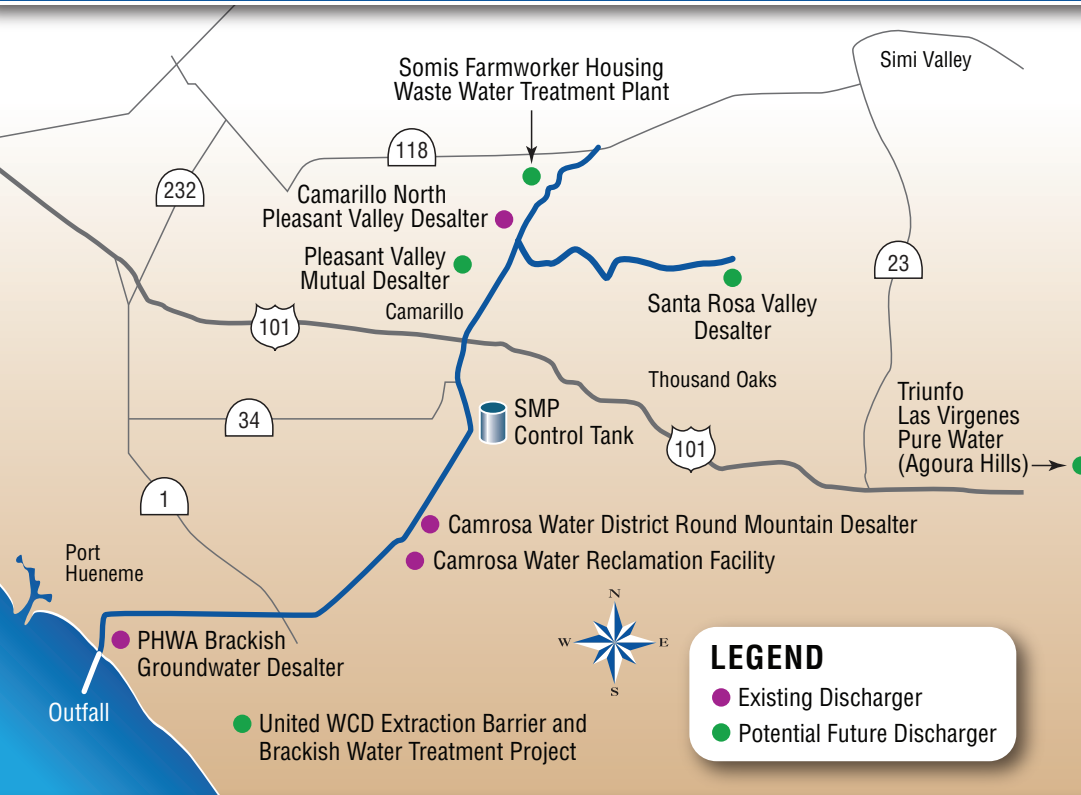
The SMP currently supports three brackish groundwater desalters that convert salty groundwater into drinking water.

- Port Hueneme Water Agency (PHWA) Brackish Groundwater Desalter (4,000 AFY)
- Camrosa Water District Round Mountain Desalter (900 AFY)
- City of Camarillo North Pleasant Valley Desalter (4,500 AFY)



AFY (acre feet per year) is a unit of measurement that represents the amount of water that would cover one acre of land to a depth of one foot. This is approximately the size of a football field and can generously serve the needs of two households for one year.

The SMP makes it possible for wastewater to be treated to an advanced level and be reused.



Additionally, the SMP enables the advanced treatment of highly treated recycled water for addition to aboveground reservoir storage or groundwater storage. This allows the region to utilize its recycled water for the highest possible use, by augmenting potable supplies and reducing reliance on imported water. This treatment process also generates a brine that can be safely discharged to the SMP and these types of projects would not be feasible without it. At least one potable reuse project anticipated to discharge to the SMP is under development.

SMP Benefits

Water Supply

- Improves the region's water reliability.
- Enables water agencies to develop new local water from existing poor-quality groundwater and highly treated recycled water.

Water Quality

- Moves salts to the ocean where the brine can be safely discharged since it is less salty than sea water.
- Facilitates the transformation of poor-quality groundwater from an unusable source to an important source of local drinking water.

Financial

- Promotes development of local brackish groundwater, which is typically less costly than imported water.
- Less expensive water supply sources save money for ratepayers.

Environmental

- Reduces greenhouse gas emissions by utilizing local water resources instead of imported sources.
- Reduces dependence on imported water from the sensitive Delta ecosystem in Northern California.
- Reuses water previously considered unavailable for productive uses.



For More Information...
 Call: **805.526.9323**
 Email: Info@calleguas.com
 Visit: Calleguas.com