

BRACKISH GROUNDWATER RECLAMATION PROGRAM

Rendering of the Torrance Groundwater Desalter Expansion Project

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THE 2040 PLAN FOR REGIONAL
WATER INDEPENDENCE

A PATH TO SUSTAINABLE WATER SUPPLY

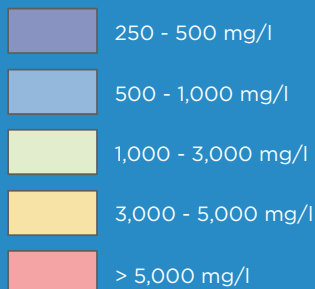
The Brackish Groundwater Reclamation Program (BGRP) enhances climate resilience in the region by addressing critical water supply challenges in the West Coast Groundwater Basin by reclaiming the brackish (salty) groundwater plume. This program includes multiple capital projects designed to desalinate brackish water, creating a sustainable local drinking water supply.

ESTIMATED BRACKISH PLUME TOTAL VOLUME

= 600,000 acre-feet
(20,000,000,000 gallons)

2017 Saline Plume Concentrations for the Silverado Aquifer

mg/l = milligrams per liter



 West Coast Basin Barrier Project



HISTORY OF BRACKISH GROUNDWATER

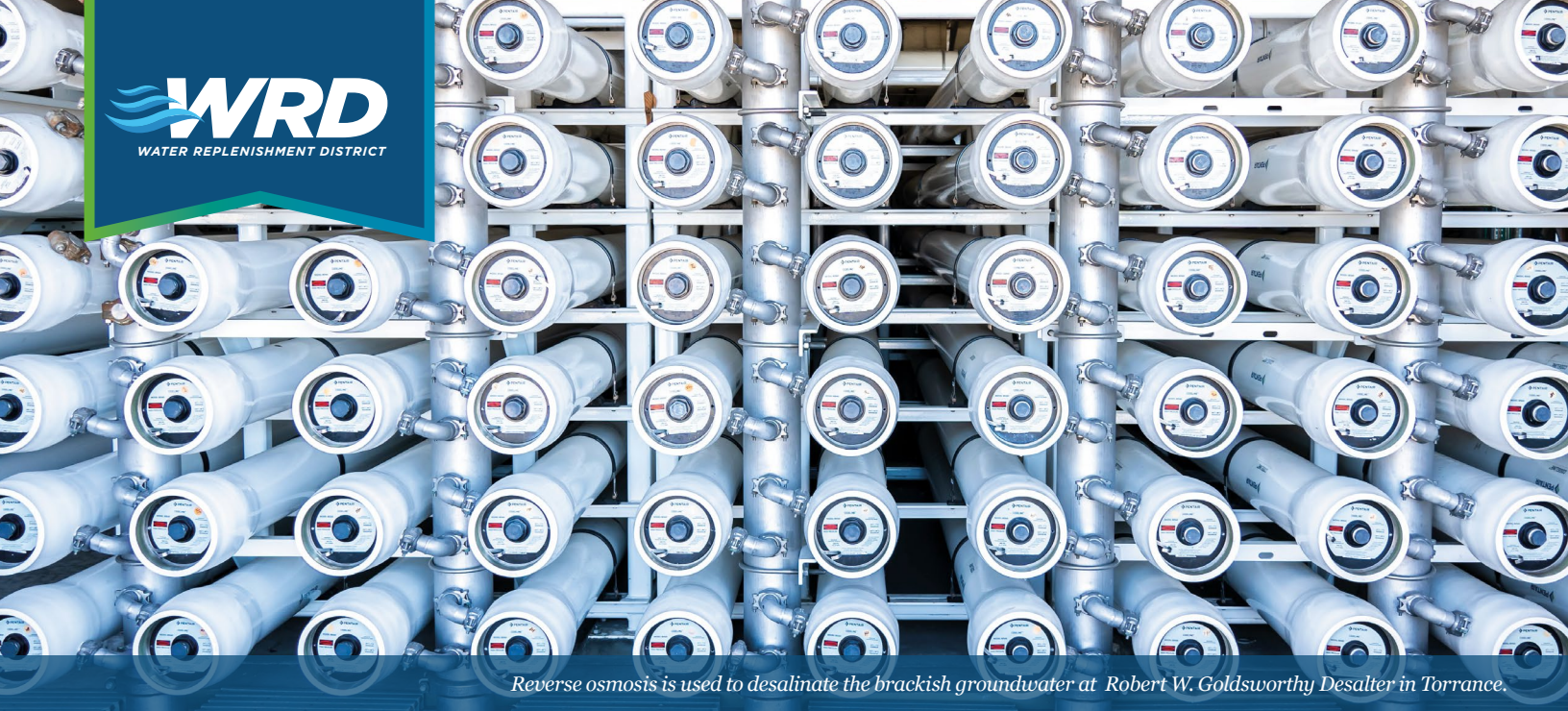
Brackish groundwater in the South Bay exists due to over-pumping in the early 1900's, causing seawater intrusion into freshwater aquifers. To combat this, LA County constructed seawater barrier injection wells, successfully protecting aquifers but creating a brackish groundwater plume that persists today.

TORRANCE GROUNDWATER DESALTER EXPANSION PROJECT

A pivotal component of BGRP is the Torrance Groundwater Desalter Expansion (TGDE) Project. When complete this project will use reverse osmosis, to desalinate brackish water for a total of 7,100 acre-feet per year (2.3 billion gallons) per year of high-quality drinking water for local communities in the South Bay. The total cost for this project is estimated to be \$187 million.

WATER REPLENISHMENT DISTRICT'S EXPERTISE

WRD has experience in brackish groundwater reclamation, notably with the Robert W. Goldsworthy Desalter, established in 2001 and expanded in 2018, can treat up to 5 million gallons a day. This facility provides a significant portion of the City of Torrance's water needs. WRD plans to apply this expertise to the Torrance Groundwater Desalter Expansion Project.



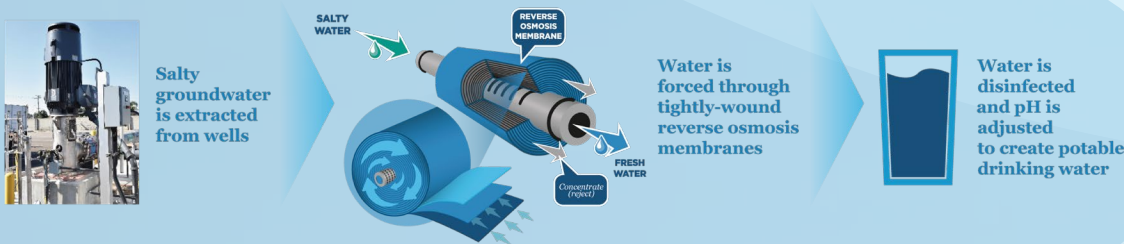
Reverse osmosis is used to desalinate the brackish groundwater at Robert W. Goldsworthy Desalter in Torrance.

BGRP PROGRAM BENEFITS

Implementation of this project will provide multiple regional benefits, including:

-  Make room for more groundwater storage in the basin to support regional projects.
-  Increase reliance on a sustainable groundwater supply to achieve regional water independence.
-  Remediate the southern portion of the 14-square-mile brackish groundwater plume.
-  Create a new drinking water supply for local water purveyors to advance their efforts towards imported water independence.
-  Allow for new groundwater well construction where previously prohibitive.

HOW IS BRACKISH GROUNDWATER TREATED?



The Robert W. Goldsworthy Desalter, located in the City of Torrance, can treat up to 5 million gallons per day (mgd) of salty groundwater extracted from the brackish plume in the West Coast Groundwater Basin using reverse osmosis technology. The Torrance Groundwater Desalter Expansion Project will provide a total of 7,100 acre-feet per year (2.3 billion gallons) of high-quality drinking water for Torrance.

BGRP TIMELINE



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