



NEWS RELEASE

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ORANGE COUNTY WATER DISTRICT RECEIVES \$100,000 RESEARCH GRANT TO PILOT TEST FLOW-REVERSAL REVERSE OSMOSIS TECHNOLOGY

FOUNTAIN VALLEY, Calif. (June 10, 2021) — Building on its long history of innovation and research initiatives, the Orange County Water District (OCWD; the District) recently received a \$100,000 grant from the Southern California Salinity Coalition (SCSC) to study ways to expand water reuse and further improve water quality.

An 18-month pilot study will evaluate the feasibility of flow-reversal reverse osmosis (FR-RO) for municipal potable reuse at OCWD. This test will be the first time that FR-RO, a ROTEC LTD technology collaborating in the United States with AdEdge Water Technology, has been piloted for this application in the country. The primary goal of the study is to evaluate whether FR-RO technology can create more clean water from the District's Groundwater Replenishment System (GWRS) at two intermediate process points: microfiltration (MF) effluent, and RO concentrate. The GWRS uses a three-step purification process, consisting of MF, RO, and ultraviolet light with hydrogen peroxide, to purify wastewater to drinking water standards. If successful, recovering additional water from either point would reduce the amount of concentrate disposal that occurs during the recycled water process at GWRS, while also generating more clean water.

“A big shout out to OCWD Director of Research and Development Dr. Megan Plumlee and her entire team for their ongoing R&D efforts to increase our water supply. Their latest technologies benefit OCWD's operations, as well as the entire water industry,” said OCWD President Steve Sheldon. “Our R&D team is striving to constantly identify improvements to the water supply for our 2.5 million constituents in north and central Orange County.”

The GWRS is undergoing its final expansion that, when completed in 2023, will increase water production from 100 million gallons of drinking water a day to 130 – enough to serve 1 million people. If FR-RO is found to be feasible and implemented at full-scale at the GWRS after the current facility expansion, OCWD could create an additional 12 million gallons of highly purified replenishment water every day, based on an assumption of 93% overall recovery. This additional source of water would be put into the groundwater basin, increasing the quantity of

local supply as well as the overall quality of water stored in the basin due to the addition of this purified, low-salinity water.

The funding agency, SCSC, is a coalition of water and wastewater agencies in Southern California dedicated to managing salinity in public water supplies. Project partners for the FR-RO pilot study represent a national level of expertise and include OCWD, AdEdge Water Technologies, Gwinnett County Department of Water Resources, Brown and Caldwell, and the United States Bureau of Reclamation (USBR). AdEdge will provide the FR-RO pilot licensed from Israel-based Rotec LTD and support the pilot operations. The USBR's Desalination and Water Purification Research Program has also provided research grant funding of \$150,000 to AdEdge to support the pilot test including the cost of the small-scale FR-RO system that will be operated at OCWD.

To learn more about OCWD, its Research and Development Department, or the GWRS, please visit the [District's website](#).

About Orange County Water District

The Orange County Water District is committed to enhancing Orange County's groundwater quality and reliability in an environmentally friendly and economical manner. The following cities rely on the groundwater basin, managed by OCWD, to provide 77% of their water demands: Anaheim, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, La Palma, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda. For more information about OCWD, please visit www.ocwd.com, like @OCWaterDistrict on Facebook, follow @OCWDWaterNews on Twitter, follow @OCWD on Instagram, and follow Orange County Water District on LinkedIn.

About Southern California Salinity Coalition

Southern California Salinity Coalition (SCSC) is a nonprofit association of Southern California water resources management agencies. Formed in 2000, SCSC focuses on research, advocacy, and outreach to mitigate the destructive effects of salinity on water systems. For more information, visit www.socalsalinity.org.

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