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San Diego Water Board approves nation's first ocean desalination facility that eliminates harm to fish

Subsurface slant wells draw water beneath ocean floor

March 10, 2022 Contact: Ailene Voisin, Public Information Officer

SAN DIEGO – The San Diego Regional Water Quality Control Board yesterday renewed a waste discharge permit governing combined wastewater discharges in south coastal Orange County, including those from a proposed desalination project that will expand California's drought-impacted water supply and become the first facility in the nation to utilize one of the most advanced seawater intake methods to protect marine life and habitat.

The Doheny Ocean Desalination Project will be built on an existing South Coast Water District property in Dana Point, with underground infrastructure nearby at Doheny State Beach.

Unlike traditional desalination operations that utilize intake screens that trap or draw fish and organisms into the filtering system, the hydrogeology at the site allows for the use of subsurface slant wells to draw seawater from beneath the ocean floor, eliminating harm to marine life. The water then moves through a reverse osmosis process that removes the salt. Before being returned to the ocean, the brine is diluted and blended with existing wastewater flows to minimize toxic impact on bottom-dwelling marine species and habitat.

"This is a significant step toward improving long term drought resiliency in south Orange County," said Celeste Cantu, chair of the San Diego Water Board, "and, for the first time, a desalination facility complies with the preferred measures of the California Ocean Plan, balancing the need to diversify water supply and protect water quality and marine life."

The projected \$120 million facility will produce up to five million gallons per day of potable water, enough for 35,000 individuals, with the potential for a daily supply of up to 15 million gallons, furthering the state's efforts to secure alternative sources to combat climate change impacts threatening water supplies.

Currently, the district imports 85 to 100 percent of its drinking water from Northern California and the Colorado River and serves approximately 40,000 residents and





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businesses in Dana Point, South Laguna and parts of San Clemente and San Juan Capistrano.

The permit issued to the South Orange County Wastewater Authority, which is a joint powers authority responsible for wastewater treatment and effluent discharges in a 200-square mile service area, authorizes a combined discharge of approximately 43.8 million gallons per day from several member agency sources to the San Juan Creek Ocean Outfall.

All new and expanded desalination projects in California are required to comply with the State Water Resources Control Board's Water Quality Control Plan for Ocean Waters (Ocean Plan). Amended in 2015, the plan mandates that facilities use the best available site, design, technology, and mitigation measures feasible – including subsurface intakes - to control ocean waste discharges and minimize negative impacts on marine life.

The renewed Doheny permit also requires the district to offset potential harm from brine discharge by creating 7.45 acres of wetland mitigation in the South Los Cerritos Wetlands Restoration Project that is located approximately 30 miles north within the cities of Seal Beach and Long Beach.

Additionally, it includes new technology for monitoring water quality near the outfall, the outfall wastewater plume location and potential migration to recreational areas, as well as a fecal source marker to identify bacteria that poses a potential health threat to swimmers, surfers and others who engage in ocean-related activities.

The proposed project still must obtain permits from California's Coastal Commission and State Lands Commission.

More information on <u>desalination</u> and the <u>12 existing facilities</u> within the state is available on the Water Boards' website.

The San Diego region stretches 85 miles of scenic coastline from Laguna Beach to the Mexican border and extends 50 miles inland to the crest of the coastal mountain range. Known for its mild climate, the area's growing population enjoys many water-related recreational activities, including surfing, swimming, snorkeling and kayaking. Yet because of minimal precipitation, about 90 percent of the region's water supply is imported from Northern California and the Colorado River.