Antioch Awarded $10 Million for Desalination Plant to Keep Drinking the Delta

City of Antioch water treatment plant superintendent Tim Coley sits next to a large pipe that transfers water from a river pump station in Antioch, California, on Thursday. The pump draws water from the San Joaquin River which is then sent to a treatment plant and processed into drinking water. Antioch is one of only three cities/water agencies to receive $10,000,000 in State of California Proposition 1 Grant Funding for the construction of a water desalination facility. The desalination facility will help Antioch treat water when salt levels rise in the river. (Jose Carlos Fajardo/Bay Area News Group)

By AARON DAVIS | aarondavis@bayareanewsgroup.com | Bay Area News Group

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ANTIOCH — For generations, the city has drawn its water from the Delta and now a $10 million grant for a desalination plant will secure its source from the increasing salinity brought on by diversion, drought and climate change.

On Monday, the state’s Department of Water Resources approved the grant for the city’s project, which is slated to cost $62.2 million to complete. The city is expecting to borrow the rest of the money through the State Revolving Fund.

“It if all works out the way we envision, it will really be a great project for Antioch,” City Manager Ron Bernal said. “This would help us provide a sustainable, affordable water supply for our customers and businesses.”

When finished, the plan will pump water from the San Joaquin River at the city’s intake by Fulton Shipyard. The brackish water would be piped over to the city’s treatment plant first and then over to the desalination plant where it would go through a reverse osmosis filter. The brine that is filtered out would head to the Delta Diablo Wastewater Treatment Plant, and the rest of the water would be treated once more before coming through the tap.

The city already pumps from the San Joaquin River, but has to stop in summer and fall when the Sacramento River flow lessens and the sea encroaches. During these times, the city buys raw water from the Contra Costa Water District’s canal and treats it itself.

The city expects the plant to treat 6 million gallons of drinking water per day, which is approximately one-third of average daily demand. The city will still purchase water from CCWD, but will take less from Los Vaqueros Reservoir during droughts.

State water officials also approved $44.4 million for nine projects throughout the state. Antioch’s desalination plant was one of three cities to receive funding.

In 2014, voters approved Proposition 1, which set aside $725 million in grants and loans for water recycling, treatment and desalination projects.

“Desalination statewide doesn’t make up a huge contribution of our state’s water supply, but these local projects can be more drought-resistant than other water supplies,” said Richard Mills, section chief of DWR’s Water Recycling and Desalination division.

The Sierra Nevada mountains’ snowpack — the source of the Sacramento River — saw some snowfall that brought its seasonal total to 40 percent of its average for this time of year. Warmer weather is fast approaching and drought conditions loom on the horizon.
“Frankly, this is the first step in our ability to be self-reliant and attracting major industry in our community,” Councilmember Lamar Thorpe said. “It’s the ability to supply water outside of the political realm of California and the threat of drought.”

Another impact looming on the horizon is the Twin Tunnels project, which would divert 9,000 cubic feet of fresh water per second from the Sacramento-San Joaquin Delta down to Southern California, further reducing the river’s ability to push back the encroaching sea. Although the project had been on shaky grounds, a recent promise of $6 billion from the Metropolitan Water District of Southern California has raised the stakes again, the Sacramento Bee reported.

Having been established in 1848, Antioch still retains its pre-1914 water rights, which allows it pump and desalinate as much of the San Joaquin River for 208 days of the year.

“The water rights are an asset to Antioch, but the water quality is degrading over time,” Bernal said.

The city has also considered continued build-out of the plant and its mitigating potential on the region, according to the East Contra Costa Integrated Regional Water Management Plan.

The city is hoping to start purifying water in late 2019.

Aaron Davis reports on East Contra Costa County for the East Bay Times. He has worked for papers throughout the Seacoast of New Hampshire, as well as in Queens, New York and in Amarillo, Texas. Send tips to 408-859-5105 or to aarondavis@bayareanewsgroup.com.

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