

Drill to tap into Peninsula aquifer

SFPUC, Cal Water, San Bruno, Colma agree to seismic, drought plan

Samantha Weigel, San Mateo Daily Journal, 10-13-15

For the first time in decades, Peninsula customers served by one of the region's largest water suppliers could soon be sipping from a massive underground aquifer as the San Francisco Public Utilities Commission has commenced drilling wells in an effort to diversify its resources.

Nestled between the Caltrain tracks and the Orchard Supply Hardware in Millbrae, officials with the SFPUC and representatives from its partner agencies gathered Tuesday to unveil a drill rig that is working to tap into the South Westside Groundwater Basin source nearly 500 feet underground.

The \$113 project that includes 15 well sites and several treatment facilities, is part of a collaborative effort between the SFPUC, California Water Service Company and the cities of Daly City and San Bruno.

While Cal Water and the cities have previously drawn from the 25-mile-square basin stretching from Burlingame to San Francisco, this agreement will be one of the SFPUC's first forays into groundwater pumping.

The utilities and two cities have agreed not to draw from aquifer during wet years allowing it to replenish, then use it in years of drought. As a tradeoff, the SFPUC will supplement Cal Water, San Bruno and Daly City with free Hetch Hetchy water during wet years.

The goal is to diversify water sources to promote sustainability during drought years and a reliant supply in the aftermath of an earthquake.

The SFPUC provides water to 2.5 million people through an intricate delivery system that begins more than a hundred miles away near the Hetch Hetchy Reservoir. Once the drill project is complete and online in late 2018, customers throughout the region will have access to 20 billion gallons stored within the basin during a drought or after a natural disaster.

"We all know, especially now, we can't control our destiny. Both the current drought and water shortages are reminding us how important a stable water supply is. It's important for us to remember that natural disasters don't know any boundaries. When an earthquake or an emergency occurs, we all rely on one another," said Daly City Manager Patricia Martel, who previously worked for the SFPUC. "This project is the best example of how mutual cooperation, that I can think of, allows us to assure our residents ... that we have a back-up plan and that in an emergency, we have prepared long and hard to address the issues of providing high-quality water."

The Regional Groundwater Storage and Recovery Project could contribute 7.2 million gallons of water per day during drought years and is part of the SFPUC's multi-billion dollar Water System Improvement Program.

"One of our major supplies is 167 miles in the Sierra Mountain and across three major seismic faults. So we invested \$4.8 billion to harden that system to make it seismically reliant. But also, one of the goals of our system is to diversify our water supply and look at ways of utilizing ground water," said SFPUC General Manager Harlan Kelly, who added the utility is also looking at digging wells in San Francisco as well as investigating the feasibility of producing recycled water.

The drill project has been years in the making with the concept first arising nearly 20 years ago. After negotiating the terms of how the SFPUC, Cal Water and two cities will sustain the large basin running along the Peninsula, beginning to drill is an exciting development, said Kelly and Greg Bartow, the SFPUC's groundwater program manager.

“In the water industry, people have gone to diversifying their water supplies. We were nearly 100 percent surface water and now, we're expanding to ground water, recycled water,” Bartow said. “Kind of like your stock portfolio, it's good not to have all your eggs in one basket.”

The Millbrae drill rig site is the southernmost well that will be established with others in Daly City, Colma and South San Francisco. Some will reach depths of up to 700 feet and have been carefully plotted after geologists examined soil quality and the capacity of the aquifer, said Bartow and Dan Wade, director of the Water System Improvement Program.

The entire \$4.8 billion upgrade includes 86 projects, 280 miles of pipeline replaced or repaired, treatment plant retrofits and three new tunnels — including the first ever to be drilled under the San Francisco Bay floor. With that multi-year effort now at 90 percent completion, Wade said the drill project is the final and now largest on the Peninsula that will continue into 2018.

While the seismic upgrades are critical to sustaining the millions of customers across the Peninsula who might otherwise be without clean water during the aftermath of an earthquake, officials noted the projects to diversify and increase supply are made poignant by the drought.

Still, SFPUC officials are looking to the past as an example of how to prepare for the future noting the anniversary of one of the Bay Area's worst natural disasters in history.

“It's almost 26 years to the day of the Loma Prieta earthquake that struck in 1989 on Oct. 17. That earthquake caused an estimated \$10 billion worth of damages,” said SFPUC Commissioner Vince Courtney. “Most people believe that we'll have a similar event sometime in our lifetime. So we believe it's important as leadership in the government, to make sure that we have an opportunity to make sure that water is being made available to the people that rely on it during an emergency.”