

Fremont tunnel latest in Hetch Hetchy water system improvements

Chris De Benedetti, Bay Area News Group, 3-6-15

After decades of reliable service, a tunnel that has carried drinking water to millions of Bay Area residents will soon take a long-deserved break, stepping aside for a seismically stronger replacement next to it.

The 3.5-mile-long Irvington Tunnel has carried most of the system's water from Sunol Valley to Fremont since 1932, staying in service without a single break since 1966.

San Francisco Public Utilities Commission leaders, who manage the tunnel and the Hetch Hetchy Regional Water System, say they will breathe easier now that the aging pipeline is out of commission.

The system instead will rely on the new \$340-million Irvington Tunnel, as the old one receives inspections without interrupting water delivery, said Daniel Wade, director of the SFPUC's water system improvement program.

"We're going to see if it needs any repairs," Wade said. "That hasn't been done for almost 50 years because the tunnel has been so critical for the system."

The two tunnels lie between the Calaveras and Hayward faults, which scientists say are overdue for a major earthquake. The new tunnel was built to withstand a 7.1 earthquake on the Calaveras Fault and a 7.25 on the Hayward Fault, said SFPUC leaders.

"We were truly in a race against time," Wade said. "Now, we can restore water service to customers within 24 hours of a major earthquake."

Once inspections and repairs on the old tunnel are finished, it will go back into service and help the new one.

The Hetch Hetchy system serves 2.6 million customers in four Bay Area counties. The system's pipelines run about 167 miles long, from the Hetch Hetchy Reservoir in Yosemite National Park to the Bay Area.

The San Francisco utility agency is spending about \$4.8 billion to repair, replace and seismically upgrade 83 of the system's aging pipelines, reservoirs and dams.

"Sixty-five of those projects have been completed," said utility commission spokeswoman Betsy Lauppe Rhodes.

The Irvington Tunnel is a crucial junction in Alameda County, connecting Hetch Hetchy water to two pipelines that go south to Santa Clara County, and three others that travel under the bay to San Mateo County and then north to San Francisco.

Around 100 workers, including about 80 miners, worked on the new Irvington Tunnel project. They broke ground in 2011, building the new tunnel by digging at four entry points between Sunol Valley and Fremont, going as deep as 700 feet.

Miners installed an 8.5-foot-diameter steel pipeline in a tunnel that, on average, will carry 90 million gallons of water a day, commission leaders said.

"Water disruption would have a significant impact on the health, safety and economic viability of the Bay Area," Wade said. "We needed to make an investment in this major asset ... that will last decades for future generations."