

Groundwater

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with that situation up there.”

It was back in the early 1990s that residents began voicing increasing concern that the area’s aquifer was being overpumped to serve quickening development, with groundwater levels showing evidence of continued decline and little recovery year to year. Shallow private wells went dry at an increasing pace, with affected homeowners pointing fingers at deeper municipal wells operated by Washoe County and an associated general improvement district.

Between 1990 and 2011, when Washoe County Department of Water Resources Director Rosemary Menard admitted the county’s large production wells were having a “pretty big impact” on private wells in the area, more than 150 homeowners were forced to deepen wells, with a big spike occurring in 2000 when several new production wells went on line. Another 60-plus homeowners whose wells failed were forced to connect to municipal water between 2004 and 2011, when the county adopted a program to assist homeowners in connecting to public water systems or deepen existing wells.

The problem didn’t go away and was squarely on the radar screen during lengthy negotiations that led to the January 2015 merger of the county’s water system and the larger Truckee Meadows Water Authority. According to authority estimates, water levels in two key wells monitored there dropped 80 feet over the last 10 years.

Officials came to the conclusion that in the Galena-Mount Rose fan area, more water existed on paper than actually existed underground.

A drought now four years in duration is worsening the problem, as is a resurgence in the post-recession housing market that is resulting in more homes going up in the affected area.

Plans call to address the situation through “conjunctive” water use made possible by the water system merger. Essentially, the idea is to use more of TMWA’s surface water drawn from the Truckee River – as well as additional supplies drawn from area creeks – to end the long-standing practice of 100 percent reliance on groundwater to meet demand.

“The current level of pumping is not sustainable,” Scott Estes, TMWA’s engineering chief, said last April as he briefed the utility’s board of directors of the need to accelerate plans to address the situation.

“We’ve known for some time conjunctive water use was headed for this area,” Estes said. “We just didn’t anticipate having to implement this plan this quickly.”

Planned is a \$27.6 million effort to expand use of surface water to the area and in doing so, ease up on that overburdened groundwater resource. TMWA immediately initiated the process last winter, sending some 3,000 acre-feet of surface water to the Galena area – supplies that allowed it to shut down 15 wells that otherwise would have been pumping from the ground to meet demand.

A \$2.8 million project to pipe treated Truckee River surface water up to the area above Zolezzi Lane is now under construction as the utility moves to expand the process.

Other plans are longer term and more expensive. One is the construction of an \$8.2 million plant to treat surface water drawn from Thomas and Whites creeks in the upper Galena area. Another \$11.6 million will be spent to purchase water rights from those creeks. Money for those projects will be raised through connection fees charged to new development, with no impact on rates paid by existing water customers, Foree said.

The utility is meanwhile exploring increased injection of treated surface water directly into groundwater wells – an effort that will further improve the health and reliability of a currently overstressed aquifer, Foree said.

Kathy Bowling, a long-time Callahan Ranch area resident active in the region's groundwater issues for years, said she has mixed feelings about the utility's conjunctive water use plans. Bowling's home is still served by a domestic well but she was forced to pay \$15,000 to deepen it from 178 feet to 380 feet in 2005 due to declining water levels.

"We do need the water," Bowling said. "It will make the existing private wells healthier and it makes the production wells healthier, which is a good thing."

She also sees a minus. New water supplies will likely mean new development. Existing plans, based on county-approved active tentative maps, call for as many as 1,171 new homes in the area, according to a report prepared by the water authority. TMWA is requiring these additional surface water supplies to protect the area's groundwater resources.

"This is going to replenish the groundwater out here but it also will bring more water out here for more development," Bowling said. "It could create more urban sprawl out in this direction."

Utility officials, however, insist the idea is to fix a long-standing problem caused by overuse of a limited resource. Once improvements are completed, they say, that overstressed aquifer should start to recover.

"This issue is about protecting the long-term viability of the groundwater," Estes said.



Water flows from a well into a standpipe in California's Tulare County.

Groundwater levels have fallen to record lows in the Central Valley during the drought. This photo is part of the special report 'Pumped Dry: The Global Crisis of Vanishing Groundwater.' Read the complete series on USAToday.com.

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