

THE FRESNO BEE

California wells will go dry this summer. 'Alarm bells are sounding' in the Valley

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Thousands of wells that bring water to San Joaquin Valley homes are at risk of drying up this summer, leaving families without running water for drinking, cleaning and bathing.

While no one knows the extent of the threat from this second year of drought conditions, Jonathan Nelson with the Community Water Center says "the alarm bells are sounding."

Homes, farms and entire communities that rely on shallow wells as their only source of water are vulnerable to declining groundwater levels from dry conditions and agricultural pumping.



Maria Enriquez holds a plastic cup with cloudy water that is clearing Wednesday afternoon, Aug. 12, 2020 in Fairmead. Some water wells in Fairmead, many private, are drying up. The County of Madera is building a new public well, but it is not yet finished.

"It's going to be ugly. It's going to be real bad," said Wesley Harmon, a well driller with Big River Drilling in Riverdale. "It's going to get worse and worse. And, the price of wells is going up."

He's preparing for a busy season. Last Friday, he got 15 to 20 calls by midday, all from residents in Fresno and Kings counties needing their pump lowered or a new well drilled. They may be surprised with the cost, as the price of gravel and plastic piping doubled in the last six months.

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The price is out of reach for many rural families, who won't have drinking water if a well fails. It's a health and racial justice issue, as rural residents who rely on private wells are more likely to be Latino.

"This issue is the most acute human crisis and emergency from the drought," said Laurel Firestone, a member of the California Water Board, at Tuesday's agency meeting about drought preparation.

More than 2,000 residential wells went dry in the Valley during the 2012 to 2016 drought, and residents who couldn't afford the \$20,000 or more it costs to drill a new well relied on bottled water for all their water needs until other solutions were found.

Juana Garcia and her family went a year without running water in their East Porterville home until Tulare County installed a 2,500-gallon water tank in her yard with state emergency funds.

For many rural residents, particularly in communities of color, a drinking water crisis continued past the drought. Hundreds of community water systems and thousands of private wells rely on contaminated aquifers, and dozens of wells failed in the last few years since the last drought officially ended.

"The last drought crisis was worsened by a lack of pre-drought preparedness, which forced state and local officials to scramble and left families without water for months or even longer, said Susana De Anda, executive director and co-founder of Community Water Center.

"What can, and must, be new with this drought is how we respond, both in the moment and in the long-term," she said.

She and others are calling for state legislators and the governor to invest in drought-resilient infrastructure "to make communities on the frontlines of California's climate crises ... more resilient to future droughts and less at risk of losing water entirely."

This year, the State Water Board and community-based organizations are preparing to respond to emergency water needs based on lessons from the last drought. But those efforts will not prevent wells from failing, and no one knows exactly when or where the crisis will strike.

"We have an opportunity to proactively protect drinking water access and avoid the next East Porterville, but we need to move quickly and prepare quickly," Michael Claiborne of Leadership Counsel for Justice and Accountability said at a recent State Water Board meeting.

"It's going to take emergency response, including tanks and bottled water, also assistance for low-income households that need to drill deeper wells, as well as technical assistance and funding to small, at-risk water systems."

WHY ARE WELLS AT RISK NOW?

Groundwater basins lost significant volumes of water from increased agricultural pumping last year and haven't had a chance to replenish, data from local water agencies show. More pumping this summer will draw down levels more.

The Kings Sub-basin, for example, lost an estimated 550,000 acre-feet of groundwater storage last year, according to the groundwater sustainability agency's annual report. That's more than the entire capacity of Millerton Lake pumped from the aquifer.

Kassy Chauhan, director of North Kings Groundwater Sustainability Agency, told The Bee she expects an increase in groundwater pumping, as well as an increase in well permits, for both new and deeper replacement wells.

With low snowpack in the Sierra Nevada again, Valley farmers this summer will get less water from statewide reservoirs and will instead pump more groundwater to irrigate thirsty crops.

Farmers who rely on water from the Fresno Irrigation District may get half the amount of surface water imported than they did last year, one month of irrigation instead of two.

“That’s the worst-case scenario,” Chauhan said. “If we’re only delivering water for a single month, then the rest of the water will be supplied from groundwater.”

It’s a similar scenario across the Valley.

With increased pumping, the volume of groundwater in storage will decrease more. As a result, water levels in high agricultural areas will decline, and some may drop below 2015 levels.

WHERE ARE WELLS MOST AT RISK?

A new state map highlights potential drought and water shortage risks to help residents on private wells. Among those most at risk, according to the state, include areas on the east side of Madera, Fresno and Tulare counties, particularly neighborhoods outside Madera, Orosi, Orange Cove and Porterville.

The risk level is an estimation and lacks some crucial data that isn’t publicly available, such as water levels and the depth of individual wells. Scores are based on exposure to climate change such as temperature and projected wildfire, existing conditions, physical vulnerability, social vulnerability and a record of shortage.

Wells anywhere can be at risk of failing as a result of age, damage, groundwater basin overdraft or new, deeper wells drilled nearby. Some areas are more at risk of declining water levels than others.

Residents who live outside of city limits in unincorporated areas are much more likely to rely on wells pumping groundwater for their running water.

Another tool to understand risk level is the SGMA Data Viewer, an interactive map that shows where groundwater levels have changed and the locations of wells that went dry in the last month, last year or in previous years, based on locally reported household water supply shortages.

In the last year, residents have reported dry wells or that their “well is pumping sand” in several places in the central San Joaquin Valley. Reports came from in and around the Madera Ranchos, outside Chowchilla, north of Madera, southwest of Raisin City, south of Fresno and south of Hanford.

WHAT SHOULD I DO IF MY WELL IS AT-RISK OR ALREADY FAILED?

Resources are available for help with well assessment, emergency water supplies and financial assistance for well repair and replacement.

If you are concerned your well may go dry, Self-Help Enterprises offers a well assessment program for low-income residents to identify any risks to your water supply from well depth, aging infrastructure or water contamination.

The organization’s well-repair program can assist with grants or loans for new wells, repairs, abandonment, connections to a nearby system and even water filtration systems.

To learn more or to sign up visit selfhelpenterprises.org online for the safe drinking water program and fill out an intake form or call 559-651-1000.

If your well fails, counties and organizations including Self-Help Enterprises can provide emergency tanks and water deliveries or bottled water deliveries, and may be able to provide financial assistance for a new well if you meet certain income requirements.

In Fresno County, a Housing Assistance Rehabilitation Program might provide financial assistance for repair or replacement of wells

Report your well failure to the Department of Water Resources online at the Household Water Supply Shortage Reporting System, which has reporting options in both Spanish and English. This will help water agencies, the state and your neighbors to understand where there is a risk.

WHAT IS BEING DONE TO PREPARE?

Some water providers and nonprofit organizations are working with state and local agencies to learn from the last drought and prepare programs to assist families and communities that may need emergency supplies.

In the last drought, the State Water Board allocated \$55.5 million to 356 projects across the state between 2014 and 2017 for well repair and rehabilitation, bottled water deliveries, water treatment, water tanks and hauling and system consolidation, according to Leslie Laudon with the State Water Board's Division of Financial Assistance.

Additional funding came from the Office Emergency Services, Department of Water Resources and the U.S. Department of Agriculture.

Some state agreements with nonprofits like Self-Help Enterprises are still in place to distribute funding for well-replacement and bottled-water programs. There's about \$11 million in remaining funds for additional needs.

The State Water Board is working with community organizations, small water systems and others to share information about the risks so people can prepare.