State Study Finds Numerous Communities Rely On Contaminated Groundwater Sources for their Drinking Water Supply

Arsenic and Nitrates are the Most Common Contaminants Detected In Groundwater Sources That Must Be Treated Before Public Use

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A significant number of California communities rely on a contaminated groundwater source for their drinking water supply – requiring a comprehensive treatment effort to ensure safe drinking water to the communities, according to a report submitted this week to the Governor and Legislature by the State Water Resources Control Board (State Water Board).

The report was prepared with data, input, and support from other state agencies, including the California Department of Public Health (CDPH), which is charged with ensuring safe drinking water is available to state residents. The report identifies communities that rely on contaminated groundwater sources for their drinking water. It also identifies contaminants and chemical constituents in the groundwater, and potential solutions and funding sources to clean up or treat groundwater, or to provide alternative water.

More than 95 percent of California’s 38 million residents get their drinking water from a public water supply and, of that number, 98 percent are served safe drinking water, according to CDPH. Although many water suppliers draw from contaminated groundwater sources, most suppliers are able to treat the water or blend it with cleaner supplies before serving it to the public.

“Groundwater contamination remains a challenge, requiring effort by community water systems to ensure their customers are delivered water that is safe to drink,” said State Water Board Executive Director Tom Howard. “This report offers substantive data on the types of contaminants and the extent of groundwater contamination, while offering several options to improve water quality to those residents who need it most.”

From 2002-2010, 680 (out of 3,037) community water systems serving nearly 21 million residents, relied on a contaminated groundwater source affected by one or more ‘principal contaminants’. A principal contaminant is a chemical detected above a public drinking water standard on two or more occasions during that cycle.

Thirty-one principal contaminants were identified: arsenic was the most detected naturally-occurring principal contaminant (287 community water systems), and nitrates was the most detected human-caused principal contaminant (205 community water systems).

Of the 680 community water systems, 507 (75 percent) rely entirely on groundwater. Community water systems that are entirely reliant on groundwater may be highly vulnerable to groundwater contamination.
contamination, since these systems may not have alternative, uncontaminated sources of water. Some community water systems cannot afford treatment or they lack alternative water sources and have served water that exceeds a public drinking water standard.

Most of the 680 community water systems are located in the Southern California Inland Empire, the east side of the San Joaquin Valley, the Salinas Valley, and the Santa Maria Valley. The three counties with the most community water systems of this type are Kern, Tulare, and Madera.

The report outlines three broad solutions to address this public health concern, including pollution prevention or source protection, cleanup of contaminated groundwater, or providing safe drinking water through treatment or alternative supplies. The report also notes that public funding sources to address groundwater supply and contamination issues are limited.

U.S. EPA estimates California will need $40 billion during the next 20 years for infrastructure development and improvements to ensure the delivery of safe drinking water. These funds may come from a number of sources, including self-financing, contributions from ratepayers and customers, local government fees, federal and state funding sources, and local loans and grants.

The findings in the report do not reflect private domestic wells or other unregulated water systems since the state does not require sampling of those wells, and, consequently, a comprehensive database for these groundwater sources does not exist.

The report is a requirement of AB 2222 (Caballero, Chapter 670, Statutes of 2008)

For a copy of the report and other information related to this process visit: [http://www.waterboards.ca.gov/water_issues/programs/gama/ab2222/index.shtml](http://www.waterboards.ca.gov/water_issues/programs/gama/ab2222/index.shtml)

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