New database: Water sources in 43 states contain potentially unsafe chemical levels

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More than 610 drinking water sources in 43 states contain potentially unsafe levels of chemical compounds that have been linked to birth defects, cancers, infertility and reduced immune responses in children, according to a new database compiled by the Environmental Working Group and Northeastern University.

Using Pentagon data released last year and recently obtained public water utility reports, the researchers now estimate that more than 19 million people are exposed to water contaminated with per-and polyfluoroalkyl substances, known as PFAS.

The new research shows the broad extent of the problem, that the harmful chemical compounds found concentrated in military water sources across the United States have also been reported hundreds more public drinking water systems than was previously known.

"This is a national crisis and it requires a national response," said Bill Walker, vice president of the Environmental Working Group, a nonprofit organization focused on health and the environment.

While PFAS are found in everyday items such as Teflon and fast-food wrappers, the chemicals are concentrated in the fire-fighting foam that military bases, ships and commercial airports have used for decades.

Military bases and the communities surrounding them report some of the highest levels of contamination—much higher than the Environmental Protection Agency's 2016 recommendation of a maximum exposure level of 70 parts per trillion.

Naval Air Station Whidbey Island in the state of Washington reports some water sources have levels as high as 58,000 parts per trillion and former Myrtle Beach Air Force Base in South Carolina reports some water sources contain as much as 264,000 parts per trillion of the compounds. Naval Air Weapons Station China Lake in California reports one of the highest levels across the military, at 8 million parts per trillion.

The contamination was not just discovered on military bases. The Pentagon tested off-base wells and public water sources near each facility. In cases where the water source reported PFAS levels higher than 70 parts per trillion, the Pentagon provided filters or alternate drinking water supplies.

The new data shows a broader picture that includes nonmilitary base communities. For example it includes data from Miami Dade Water and Sewer Authority, finding that Miami has previously reported up to 43 parts per trillion of PFAS in its water samples.

"We believe that is way too high," Walker said. The EWG has argued that exposure levels as low as 1 part per trillion could lead to adverse health effects, and would like to see a national standard set lower than 70 parts per trillion.

For now, without an enforceable standard, there is no requirement for the military to clean up the groundwater or wells to the EPA standard or any other. The Pentagon estimates cleanup at the known contaminated sites could cost more than $2 billion.

And Miami's data, although only recently obtained, dates back to 2015 and doesn't give residents the tools they need to know if their water supply now is safe, the researchers said.

"Because there is no legal requirement to continue monitoring for these chemicals, the residents of Miami don't know if the PFAS contamination has remained the same, gotten better or gotten worse over the last three years," said Alexis Temkin, an EWG toxicologist.

A bipartisan group of lawmakers introduced legislation in late April that would require the EPA to set an enforceable standard, known as a minimum contaminant level, for PFAS within the next two years.

Chairman of the House Oversight subcommittee on the environment, Rep. Harley Rouda, D-Calif., held the first congressional hearing on the issue earlier this year and said additional legislation is possible.

"All options for future oversight action remain on the table," Rouda said.

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