



Frequently Asked Questions about PFAS

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Frequency Asked Questions about PFAS

The information in this document is obtained from several sources, including the U.S. Environmental Protection Agency (EPA), the Agency for Toxic Substances and Disease Registry (ASTDR), the New Mexico Environment Department (NMED), and the Interstate Technology Regulatory Council (ITRC), among others. Sources are provided throughout the document. The information has not been interpreted or independently verified by Santa Fe County Staff and does not, and is not intended to, constitute legal or medical advice. Readers should contact their attorney or health care provider to obtain advice with respect to any legal or medical matter. Instead, this information is for general informational purposes only.

What is PFAS?

PFAS stands for per-and polyfluoroalkyl substances. PFAS are human-made chemicals that have been used in industry and consumer products since the 1940s. There are thousands of PFAS chemicals, and they are found in many different consumer, commercial, and industrial products, such as food packaging, cleaning products, stain resistant carpet, firefighting foam and other products that resist grease, water, and oil. One common characteristic of concern of PFAS is that many break down very slowly and can build up in people, animals, and the environment over time. Current scientific research suggests that exposure to certain PFAS may lead to adverse health outcomes.

- To learn more, see EPA PFAS Infographic [here](#).
- See an EPA FAQ on PFAS [here](#).

Where does PFOS/PFOA come from?

Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are part of a larger group of chemicals called (PFAS). They are man-made chemicals not naturally found in the environment. They are fluorinated compounds that repel oil and water used in a variety of industrial and consumer products, such as carpet, clothing treatments and firefighting foams. They are readily absorbed after oral exposure and accumulate primarily in the blood serum, kidney, and liver. Studies have found PFOS and PFOA in the blood samples of the general human population and wildlife, indicating that exposure to the chemicals is widespread.

- To learn more about PFOA and PFOS, see the EPA Technical Fact sheet [here](#).

Are PFAS harmful?

The potential health effects of these substances depend on the concentrations to which you may be exposed, the duration of exposure, and personal factors, including age, lifestyle, and overall health. No two people respond the same way to chemical exposure. The risks of health effects associated with PFAS are still being studied, but research indicates an association between PFAS exposure and certain adverse health effects. PFAS may affect reproduction, thyroid function, the immune system, and injure the liver. Studies have also suggested associations between increases in exposure to some PFAS, such as PFOA, and certain types of cancer. More research is necessary to assess the human health effects of exposure to PFAS.

- To learn more about current research on the health effects of PFAS, visit the Agency for Toxic Substances and Disease Registry (ATSDR) web page [here](#).

- To learn more about what EPA is doing to understand the health impacts of PFAS, see [here](#).
- To see a training created by the Interstate Technology Regulatory Council on PFAS human and ecological effects, see [here](#).

How long have people been exposed to PFAS?

PFAS are man-made chemicals that have been widely used in industry and consumer products since the 1940s and remain in the environment for a long time. An individual's exposure to PFAS can vary due to a number of factors. Most people have been exposed to these chemicals through consumer products but drinking water can be an additional source of exposure in communities where these chemicals have contaminated water supplies. Because of their widespread use and their persistence in the environment, many PFAS are found in the blood of people and animals all over the world and are present in a variety of food products and in the environment.

- To learn more, see the ATSDR webpage on PFAS [here](#).

Who do I talk to about consumption of PFAS and my health?

If you are concerned about PFAS exposures, talk with your healthcare provider about your individual risks, whether additional health screening is appropriate for you, and the risks and benefits of additional testing.

- The Agency for Toxic Substances and Disease Registry (ATSDR) has developed education materials for health care providers about PFAS available [here](#).
- You may also visit the NM Environmental Public Health Tracking webpage for more information [here](#).

How do I get my blood tested for PFAS?

Nearly all people in the United States have measurable amounts of PFAS in their blood. If you are concerned about PFAS exposure, you can talk with your healthcare provider. Your healthcare provider can help you consider the risks, benefits, and limitations of PFAS blood testing and help you determine the appropriate next steps based on your unique needs. The Agency for Toxic Substances and Disease Registry (ATSDR) developed a PFAS Blood Level Estimation Tool for community members with exposure to PFAS through drinking water. Estimates from this tool might be helpful when discussing potential PFAS exposures with your healthcare provider.

- You can share the ATSDR's PFAS Information for Clinicians with your healthcare provider, available [here](#).
- You can learn more about the ATSDR tool to estimate levels of PFAS in your blood by viewing web-based document [here](#).

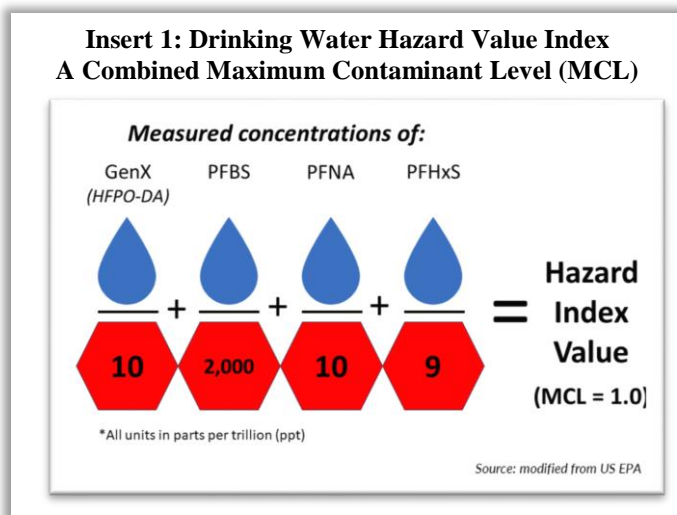
What are safe versus unsafe levels of PFAS in drinking water?

The U.S. Environmental Protection Agency (EPA) recently proposed, but has not yet established, drinking water standards for public water utilities for six different PFAS compounds. EPA anticipates finalizing the regulation for these compounds sometime in 2024. The proposed regulation for maximum contaminant levels (MCLs) for PFOA and PFOS is 4 nanograms per liter (ng/L), which is equivalent to 4 parts per trillion (ppt). One ng/L is about the same as one drop of water in twenty Olympic-sized swimming pools. The proposed regulation for four other PFAS – PFBS, PFHxS, PFNA and HFPO-DA (also known as GenX) – is a combined MCL represented by a hazard index (See Insert 1). The concentrations of these four PFAS are compared to health-based water concentrations (HBWCs) and then normalized to a value of 1.0 (i.e. >1.0 is an MCL exceedance). The HBWCs can be thought of as individual MCLs because a concentration exceeding any one of them constitutes an MCL exceedance. For example, if three of the four PFAS are non-detectable but the measured concentration of PFHxS is >9.0, the hazard index is >1.0.

However, there may be other situations where none of the four PFAS exceed their HBWCs yet still add up to >1.0.

The EPA's proposed standards would apply only to public water utilities; private well water quality is not currently regulated in New Mexico. However, the individuals served by private wells may consider these MCLs when evaluating whether to treat their private well water based upon PFAS test results.

- For additional details on how to calculate a hazard index see the EPA Factsheet [here](#).
- To learn more about PFAS and private well owners see [here](#).



How does PFAS migrate?

The behavior of PFAS following their release into the environment can be described by fate and transport. Fate and transport encompass physical, chemical, and biological processes that influence distribution, chemical transformation, and migration of PFAS. Fate and transport may explain: 1) the mechanisms through which PFAS discharge to and migrate through the environment, 2) the basis for defensible predictions about occurrence, migration, persistence, and potential for exposure, 3) site characterization by providing insight on where efforts should be focused for an appropriate conceptual site model (CSM), and 4) developing and/or selecting remedial/treatment strategies. Different PFAS have different fate and transport properties. For example, some PFAS chemicals move more easily through the soil whereas others are more easily transported in groundwater.

- For more details on fate and transport processes, see information provided by Interstate Technology Regulatory Council [here](#).
- To see an education video on PFAS human and ecological effects see [here](#).

Who is responsible for remediation of PFAS contamination in drinking water in NM?

The EPA is the federal agency that is responsible for setting regulation and holding polluters and other responsible parties accountable for their actions, ensuring that they assume responsibility for remediation efforts and prevent future releases of PFAS into the environment. The EPA has a PFAS Strategic Roadmap for addressing PFAS, which includes information on specific actions to safeguard public health, protect the environment and hold polluters accountable. EPA and the NMED are generally responsible for enforcement action to require responsible parties to conduct remediation. Unfortunately, identifying the source of PFAS contamination, determining responsibility, characterizing the scope of the problem, and identifying remediation strategies are complex and do not happen quickly.

- To read the EPA's PFAS Strategic Roadmap, see [here](#).
- To learn more about the complexity of litigation related to PFAS and NM public drinking water systems see the NMED webpage [here](#).
- To stay up to date on the regulations for PFAS, follow EPA press releases [here](#).
- To see view the memorandum on 2024-2027 National Enforcement and Compliance Initiatives (NECI) that states that exposure to PFAS as one of the six priority areas, see [here](#).

When will the EPA drinking water standards be finalized for PFAS?

Federal regulation of drinking water quality began in 1914, when the US Public Health Service set standards for the bacteriological quality of drinking water. The standards were revised and expanded in 1925, 1946, 1962 and the Safe Drinking Water Act (SWDA) was passed by EPA in 1974. The SWDA was amended in 1986 and 1996. Regulations within the SWDA are periodically developed as contaminants to drinking water are discovered. In March 2023, EPA proposed a National Primary Drinking Water Regulation for PFAS. The proposal includes both non-enforceable Maximum Contaminant Level Goals (MCLGs) and enforceable standards, or Maximum Contaminant Levels (MCLs). If finalized, the proposed regulation would require public water systems to monitor for these contaminants in drinking water, notify consumers if levels are found in exceedance of the MCLs, and take steps to treat drinking water to below the MCLs. EPA anticipates finalizing the regulation for PFAS sometime in 2024.

- To learn more about the SWDA see [here](#).
- To read the EPA proposed National Primary Drinking Water Regulation for PFAS see [here](#).

What can I do to keep informed about PFAS in my water supply?

The NM Environment Department Drinking Water Bureau (NMED-DWB) will have information on PFAS in public water systems. Please note that water quality of private wells is not regulated in New Mexico. Well owners are responsible for well maintenance and protecting their water sources, including regular well testing and when applicable, treating their water.

- You can view information NM public water systems [here](#).
- Santa Fe County will maintain materials and updates on PFAS on their website [here](#).

What should I do if my well has levels of PFAS that are in exceedance of the proposed MCLs?

There are simple, proven technologies for effectively removing PFAS from your home's water supply depending on your specific circumstances. You can choose a solution for treating all the water entering your home (point-of-entry treatment, POET), or simply treating drinking and cooking water (point-of-use treatment, POUT). Water treatment technologies have been around for years, and include activated carbon, anion exchange resins, and reverse osmosis membranes. Water treatment systems come in all shapes and sizes, but the most important part of your decision is looking for third-party product certification. That certification provides a level of confidence that your purchase will provide the water quality protection you're looking for. Always rely on certified water treatment professionals for application, installation, and maintenance of your treatment system. Your treatment system will need regular maintenance, so remember to ask your service provider for details.

- You can contact the NM Environment Department Drinking Water Bureau (NMED DWB) for more information @ 505-476-8620.
- To learn more about PFAS and your private well, see this document created by the NMED [here](#).
- If you own a home drinking water well, you can learn more about how to protect and maintain your well for all contaminants of concern [here](#).
- To learn more about steps you can take to reduce your risk of exposure to PFAS, see [here](#).

If my well has levels of PFAS that are in exceedance of the proposed drinking water MCLs, is it safe to use for other purposes like showering or watering vegetables?

Studies have shown that only a small amount of PFAS can get into your body through skin. Hence, neither bathing nor showering are likely to be primary routes of PFAS exposure.¹ A lot is still unknown about PFAS uptake in plants, such as vegetables, and research is ongoing. The amount of PFAS that builds up depends on a variety of factors, including the type of plant, the type of PFAS chemical, the type of soil, and the PFAS concentration in the soil or water.² Uptake in plants is thought to occur primarily through the roots, with minor contributions from PFAS transported in the ambient atmosphere. In general, plants growing near contaminated sites or irrigated with PFAS-contaminated water would be expected to accumulate higher concentrations of PFAS chemicals.

- For more in depth information on PFAS uptake into plants, see [here](#).

¹ U.S. Environmental Protection Agency. *Questions and Answers: Drinking water Health Advisory PFOA, PFOS, GenX and PFBS*. (2024); <https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs#q6>

² Ghisi R, Vamerali T, Manzetti S. Accumulation of perfluorinated alkyl substances (PFAS) in agricultural plants: A review. *Environ Res*. 2019;169:326-341.

If my well has levels of PFAS that are in exceedance of the proposed drinking water MCLs, can I use the water for my livestock?

Animals raised for food and wildlife species may have contact with PFAS through contaminated air, water, soil, substrate, or feed. However, the extent to which these exposures contribute to PFAS concentrations in food products is not extensively researched.³ Currently there is no scientific consensus regarding levels of PFAS in drinking water that would be considered unsafe for livestock. In one recent New Mexico case, the NMED worked with a dairy farm in Clovis to euthanize thousands of cows because of PFAS contamination sourced from contaminated water caused by Cannon Air Force Base. However, there is not a lot of information on this topic.

- For more information on the situation in Clovis, NM see this video [here](#).
- To read an update on the situation of contamination in Clovis, NM see a news release from the NMED [here](#).
- For more information on PFAS and livestock drinking water, see point 6.5.4 [here](#).

If my water has unsafe levels of PFAS, should I boil my water?

No. These chemicals cannot be removed by heating or boiling water.⁴

Where can I get my well tested?

You can find a list of laboratories certified by NM Environment Department Drinking Water Bureau (NMED-DWB) to analyze drinking water samples for water systems in NM [here](#).

How much does it cost to get my well tested and what is the process?

The most efficient and reliable PFAS sampling option is to obtain a kit from a PFAS certified laboratory. The test kits come with easy-to-follow instructions. Results may take 3-4 weeks to receive. Prices for a test kit and results report vary but can be upwards of \$400.

- The National Ground Water Association (NGWA) has a water testing and treatment fact sheet [here](#).

Who is going to pay for the water testing?

Private well owners are responsible for covering the cost of water testing.

What programs are available to help pay for testing my well?

There are no known programs to help pay specifically for PFAS testing of private wells. However, at least one program offers different types of assistance for private well owners and rural

³ Death, Clare, Cameron Bell, David Champness, Charles Milne, Suzie Reichman, and Tarah Hagen. 2021. "Per- and polyfluoroalkyl substances (PFAS) in livestock and game species: A review." *Science of The Total Environment* 774:144795. <https://doi.org/10.1016/j.scitotenv.2020.144795>

⁴ U.S. Environmental Protection Agency. *Questions and Answers: Drinking water Health Advisory PFOA, PFOS, GenX and PFBS*. (2024); <https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs#q6>

communities. The Rural Community Assistance Corporation (RCAC) operates a private wells program, including well condition assessments and test kits for routine contaminants.

- For more information on the RCAC programs, see [here](#).

How much does it cost to install a filtration system/reverse osmosis system for my home?

The cost of filtration systems varies widely based on the type of filtration. Granular activated carbon (GAC, also known as charcoal filters) and reverse osmosis (RO) are two technologies that can remove PFAS from water. You can choose a solution for treating all the water entering your home (point-of-entry treatment, POET), or simply treating drinking and cooking water (point-of-use treatment, POUT). If you purchase a water filtration system, be sure to look for certifications from National Sanitation Foundation (NSF), Underwriters Laboratory (UL), and the Water Quality Association (WQA). Keep in mind that filters will become contaminated during the process of removing PFAS from your water. The more you use your water filtration system, the more frequently the filters must be changed.

- Contact the NMED Drinking Water Bureau for more information: (505) 205-6964; DWB.PFAS@env.nm.gov; <https://www.env.nm.gov/PFAS/>.
- For NM Department of Health information on treatment options and estimated costs, see [here](#).
- You can learn more about NSF certified filters, see [here](#).

What programs are available to help pay for treatment for my water if it has unsafe levels of PFAS?

There are no known programs at this time that help pay for water treatment of private wells.

Has PFAS been detected in the public drinking water supply of the City and County of Santa Fe water utility systems?

PFAS was not detected in a recent test of the public drinking water supply for The City and County of Santa Fe. Importantly, there are currently no enforceable drinking water standards for PFAS in New Mexico. Thus, detection of PFAS in a public water system at this time would not constitute a compliance violation.

- For the City of Santa Fe and County of Santa Fe water utility system supply test results, See Quick Info on the Santa Fe County Public Works webpage [here](#).
- For NMED information on PFAS and New Mexico's Public Drinking Systems, see [here](#).

What is the County doing to address potential groundwater contamination in the La Cienega and La Cieneguilla areas?

Santa Fe County has been granted funds from the NM Environment Department to investigate, model, and plan for PFAS contamination. Grant funds will be used to characterize PFAS contamination and determine if and how the chemicals are migrating. Santa Fe County may sample water from select private wells as part of the grant funded work. Testing water from

private wells, however, is not an independent objective of the grant. In other words, any private wells from which water will be tested will be selected based upon the work plan to investigate, model, and characterize PFAS contaminants. It is critical to note that Santa Fe County had no part in activities that may have caused this issue and has no legal access to pertinent locations. As such, the County is currently attempting to work with the appropriate parties to identify the magnitude of the problem and identify solutions which align with state and federal government regulations.

What is NMED doing to address PFAS contamination issues?

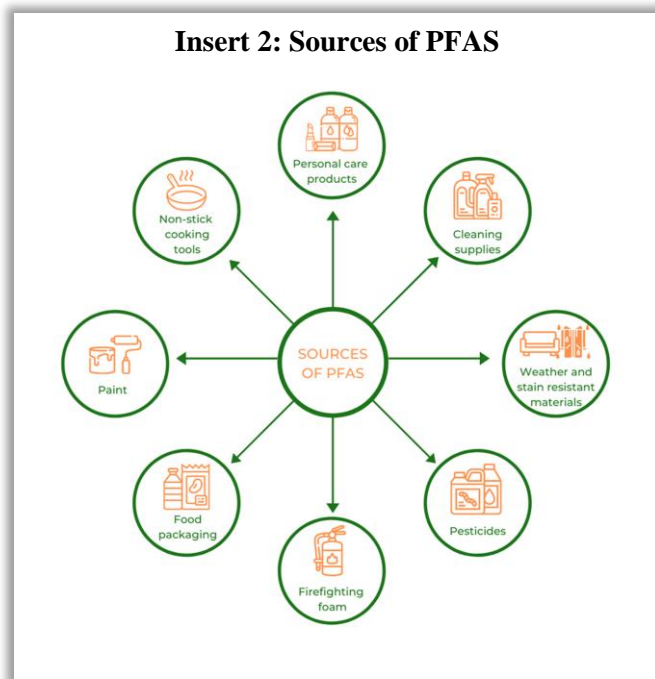
To better understand the scope of potential and existing PFAS contamination in NM, the NMED has worked with state and federal partners to conduct sampling for PFAS in water around the state. As part of their efforts to protect public drinking water, NMED, in collaboration with the United States Geological Survey (USGS), also sampled drinking water supplies across the state. This sampling effort focused on multiple ground and surface water supplies in 19 NM counties. NMED will continue to work with its regulated utilities to address PFAS contamination in source waters as federal drinking water standards for these chemicals come into effect.

- To learn more, please visit the NMED website [here](#).
- To see data from PFAS sampling in NM, see [here](#).
- Results from 15 public water systems and multiple surface water sampling locations in NM are available [here](#).

In addition to contaminated drinking water, what other sources of PFAS exposure should I be aware of?

Most people in the United States have been exposed to PFAS and have PFAS in their blood. The main ways people can be exposed to PFAS are through drinking water from PFAS contaminated sources. Other sources include eating fish caught from water contaminated by PFAS, swallowing or breathing contaminated soil or dust, eating food produced near places where PFAS were used or made, eating food packed in material that contains PFAS, or swallowing residue or dust from consumer products containing PFAS. See Insert 2 for an overview of sources of PFAS.

- To learn more, see the ATSDR website [here](#).



Where can I find more resources on PFAS?

Additional information on PFAS can be found on the webpages at the links provided:

- EPA: Per-and Polyfluoroalkyl Substances (PFAS): <https://www.epa.gov/pfas>
- Información básica sobre PFAS: <https://espanol.epa.gov/espanol/informacion-basica-sobre-pfas>
- Interstate Technology Regulatory Council (ITRC) on PFAS: <https://pfas-1.itrcweb.org/>; go directly to a series of fact sheets [here](#).
- What are the health effects of PFAS? <https://www.atsdr.cdc.gov/pfas/health-effects/index.html>
- ¿Qué efectos tienen las PFAS en la salud? <https://www.atsdr.cdc.gov/es/pfas/efectos-salud/index.html>
- NM Environment Department PFAS in New Mexico: <https://www.env.nm.gov/pfas/>
- NM Department of Health Environmental Public Health Tracking Program: <https://nmtracking.doh.nm.gov/environment/water/PrivateWellTreatment.html>
- Santa Fe County Public Works _PFAS: <https://www.santafecountynm.gov/public-works/pfas>

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