FACT SHEET

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

PFAS Treatment for Private Wells

Office of Land Quality

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Information in this fact sheet is intended to help homeowners understand PFAS testing and treatment options and effectively discuss options with a water treatment professional.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a family of thousands of man-made chemicals containing fluorine and carbon. PFAS have been linked to a number of adverse health effects. The U.S. EPA has established legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS chemicals in drinking water (see References for IDEM's PFAS webpage).

People are generally exposed to PFAS from contaminated water sources and by using products that contain them. Only small amounts of PFAS can be absorbed through the skin. If low levels of PFAS are present in your water, activities like washing dishes, washing clothes, showering, bathing, and brushing teeth (minimal water ingestion) are unlikely to pose a significant risk of exposure.

Testing for PFAS

Unless part of an investigation, IDEM does not conduct residential well testing. To test your well water for PFAS, you can purchase a testing kit from a certified laboratory (See References for a list of certified laboratories) or hire an environmental professional. Long-term health impacts are unlikely if the results show levels below the U.S. EPA's established MCLs. If your results indicate levels that are above MCLs, a water treatment solution may be necessary.

POE vs POU Treatment systems

Home water treatment systems can be installed to treat the water at the point of entry or at the point of use. Point of entry (POE) water treatment systems, also called whole house treatment systems, treat all the water entering the household plumbing system. Point of use (POU) water treatment systems treat the water at a specific location within the house, typically the kitchen sink or primary source of water for drinking and cooking (some also provide water to the refrigerator). There are also filtered water pitchers that provide treated water for personal use. Either type of water treatment has pros and cons that should be considered when selecting the best treatment option for your household. Factors you should consider include:

- The volume of water used inside the home;
- The number and location of sites where water is consumed; and
- The type of PFAS chemical(s) identified when testing.

If water for drinking, cooking, and making ice is primarily obtained from the kitchen sink, then the installation of a treatment unit below the sink or on the sink faucet is an option. If drinking water and ice are obtained from the refrigerator, then it is important to consider treating the water line to the refrigerator as well. If drinking water is obtained from multiple locations in a home, then a point of entry or whole house treatment system may be preferred. If possible, choose a treatment system that has been tested and certified to remove the PFAS present in the water (See References for available products).

GAC Filters vs. RO Systems

There are two types of treatments that remove PFAS from drinking water: granular activated carbon (GAC) filters and reverse osmosis (RO) systems.

GAC filters treat water used in a pitcher or at a specific faucet (POU) or can be used to treat water for an entire house (POE). A GAC system provides less water flow than a standard water faucet, but greater flow than a RO system. GAC POU filters do not waste water. GAC POE systems require occasional backwashing to clean the system. Carbon filterers trap contaminants, preventing them from flowing through your tap. Carbon filters allow contaminants to collect on a large surface area. Homeowners should replace filters according to the manufacturer's recommended schedule.

RO systems are generally used to treat water from a specific faucet although Whole-house RO systems are available but less common. A RO system requires more frequent changes of filtration cartridges and RO membranes. In addition, RO uses more water than a GAC system. Depending on water quality, you may also need to purchase and maintain additional treatment devices such as a water softener or iron filter. A RO system provides less water flow than a standard water faucet or GAC system. The reverse osmosis process sifts out many types of sediment, bacteria, fluoride and lead particulates in addition to PFAS.

Filtration systems must be National Sanitation Foundation (NSF) certified. For GAC systems, look for a product that is certified to ANSI/NSF Standard 53. For RO systems, look for a product that is certified to ANSI/NSF Standard 58. The link to a list of NSF certified filtration systems is provided in the references section below.

Here is a table comparing the pros and cons of the treatment types listed above:

Treatment Type	Pros	Cons
GAC Filters	• Less expensive than RO systems • Does not waste water • Low maintenance. Usually only need a periodic filter swap • Generally, provides more water flow than an RO	• May not effectively treat shorter chain PFAS* such as PFBA and PFBS • Filters must be replaced based on the manufacturer's schedule to remain effective.
Reverse Osmosis (RO) Systems	• Generally, removes more contaminants than carbon filters • Provides better water for cooking (minerals in water are removed)	• Higher upfront cost • More water wasted in the treatment process • Noticeable water pressure drop • Membranes must be replaced on a regular schedule (identified by the manufacturer) in addition to any pre-filtration • RO systems without a filter component can concentrate PFAS in the untreated portion of water leaving the system, potentially reintroducing contamination to the environment

* Note: Some technologies are more effective against longer or shorter chains (See References at IDEM PFAS page). Please check with the laboratory that generated the water testing result to determine the PFAS chain category present in your well water.

Treatment systems must be properly maintained to effectively remove PFAS. Refer to the manufacturer's documentation for maintenance information.

References

For questions about PFAS contamination or environmental cleanup, contact IDEM's Office of Land Quality (OLQ) at 317-234-0338 or 800-451-6027, or email: info@idem.IN.gov.

Indiana Department of Environmental Management (IDEM) Fact Sheet "Per- and Polyfluoroalkyl Substances (PFAS)", idem.IN.gov/fact-sheets

IDEM PFAS information page: idem.IN.gov/resources/nonrule-policies/per-and-polyfluoroalkyl-substances-pfas/

Duke University: Nicholas School of the Environment. PFAS Exposure Study. January 2025. https://sites.nicholas.duke.edu/pfas/f-a-qs/

California Regional Water Quality Control Board (RWQCB): National Laboratories Accredited for PFAS Analysis. November 2023. waterboards.ca.gov/pfas/docs/pfas-laboratories.pdf

List of National Sanitation Foundation (NSF) certified filtration systems. https://info.nsf.org/Certified/DWTU/Listings.asp?ProductFunction=053%7CPFOA+Reduction&ProductFunction=053%7CPFOS+Reduction&ProductFunction=P473%7CPFOA+Reduction&ProductFunction=P473%7CPFOS+Reduction&ProductType=&submit2=Search&_sm_au_=irVD4sJqvVkD0SWNBLQtv

EPA Fact Sheet: Reducing PFAS in Your Drinking Water with a Home Filter. April 2024. epa.gov/system/files/documents/2024-04/water-filter-fact-sheet.pdf

Michigan Department of Environment, Great Lakes, and Energy (EGLE): Private Residential Well PFAS Sampling Guidance. June 2024. michigan.gov/pfasresponse/-/media/Project/Websites/PFAS-Response/Sampling-Guidance/Residential-Well-Residents.pdf?rev=7ebf598953894afba2c0b2faf271b20d&hash=6945B9BCFB08778473C2EE4BCEADFB06