



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
**IDEM PFAS Sampling Project for Community Public
 Water Systems**

Office of Water Quality/Drinking Water Branch

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What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a class of synthetic, organic chemicals that contain fluorine. There are more than 3,000 PFAS. Because many PFAS have useful properties, they have been used since the 1940s in products like textiles, paper, cookware, firefighting foams, and electronics. Though U.S. production of some of these chemicals has declined, many are still produced in other countries. Perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) have been among the most used PFAS. The U.S. Environmental Protection Agency (U.S. EPA) has added PFAS chemicals to the Toxics Release Inventory and is also developing rules to regulate exposures of certain PFAS chemicals.

PFAS are commonly present at fire training and response sites, certain industrial facilities, landfills, wastewater treatment plants, and in biosolids. PFAS persist in the environment, can bioaccumulate, and are often present in people and in wildlife. Due to the large volumes of PFOS and PFOA used in the past, these chemicals are the most frequently detected PFAS.

Why is IDEM asking community water systems to sample for PFAS?

The Indiana Department of Environmental Management (IDEM) will facilitate PFAS monitoring at all Community Public Water Systems (CWS) throughout the state of Indiana (a CWS regularly serves drinking water to at least 25 year-around residents or has at least 15 service connections for residents). Samples will be collected at all raw water (i.e. wells and intakes) and finished (after treatment) water points in a CWS’s supply. The purpose of the sampling program is to evaluate the statewide occurrence of PFAS compounds in CWS across the state and determine the efficacy of conventional drinking water treatment for PFAS. All results will be posted on IDEM’s [PFAS website](#).

What is the timeline for sampling PFAS at community water systems?

IDEM’s sampling plan is outlined below and is dependent upon available funding. IDEM is first sampling at community systems serving a population of less than 10,000 because most of these smaller systems were not sampled for PFAS during U.S. EPA’s Unregulated Contaminant Monitoring Rule (UCMR) sampling completed in 2014 and 2015. Systems serving a population greater than 10,000 will be sampled last since they were sampled as part of the U.S. EPA’s UCMR sampling. **No verified PFAS detections were found in Indiana during the UCMR sampling event.**

	<u>Population Served</u>	<u>Tentative sampling schedule</u>
Phase 1	3,300 to 10,000	March 2021 - October 2021
Phase 2	< 3,300	November 2021 - December 2022
Phase 3	>10,000	January 2023 - May 2023

Why is IDEM testing for these chemicals?

Both PFOA and PFOS are commonly found in the environment. Studies indicate that exposure to PFOA and PFOS above certain levels may result in adverse health effects.

The U.S. EPA has established drinking water health advisory levels for PFOA and PFOS at 70 parts per trillion (ppt). This health advisory level provides protection from adverse health effects resulting from exposure throughout a person's lifetime to PFOA and PFOS in drinking water. In addition, IDEM has identified action levels for additional PFAS compounds including GenX, PFBS, PFHxS, and PFNA. IDEM will use these levels as thresholds in providing guidance to drinking water system owners/operators in mitigating health risks if PFAS are found in their samples.

PFAS Chemicals

	<u>PFOA</u>	<u>PFOS</u>	<u>GenX</u>	<u>PFBS</u>	<u>PFHxS</u>	<u>PFNA</u>
Action Level (ppt)	>70 single or combined with PFOS	>70 single or combined with PFOA	> 700	>2,100	> 140	> 21

What happens if PFAS are detected and/or if the results are above U.S. EPA health advisory or IDEM action levels?

When IDEM receives the results from the Indiana Department of Health, the results will be provided to the community water system. If the reported levels of PFAS chemicals are collectively below the U.S. EPA health advisory and IDEM action levels, no action will be necessary. If the results are above these levels, IDEM will arrange for resampling to confirm the initial results. If the results are confirmed greater than either U.S. EPA health advisory or IDEM action levels, additional investigation may be necessary and mitigation options will be evaluated. Currently available remedies for PFAS in water include filtration and chemical treatment.

Additional Resources

- [IDEM: Per- and Polyfluoroalkyl Substances \(PFAS\)](#)
- [IDEM: Remediation Closure Guide \(RCG\) - Screening Levels](#)
- [Indiana Department of Health: Per- and Polyfluoroalkyl Substances \(PFAS\) in Fish \[PDF\]](#)
- [Agency for Toxic Substances and Disease Registry](#)
- [U.S. Department of Defense: PFAS](#)
- [U.S. EPA: PFAS](#)
- [U.S. EPA: PFAS Strategic Roadmap](#)
- [U.S. EPA: Treating PFAS in Drinking Water](#)