

PFAS IN ALABAMA DRINKING WATER SYSTEMS SUMMARY AS OF NOVEMBER 2020

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that have properties useful in the manufacture of nonstick cookware, stain-resistant carpet and textiles, firefighting foams, food wrappers, and many more industrial and consumer applications. These chemicals, which have been produced in the United States since the early 1940's, are very persistent in the environment. Studies have shown possible adverse human health effects from exposure to PFAS.

Documents, including testing and monitoring results, are available in [eFile](#) by selected one or more media areas, entering a facility or permit number (optional), and entering "PFC" for the file name.

PFAS in Drinking Water

EPA Health Advisories

On May 19, 2016, EPA issued [lifetime health advisories](#) for two PFAS substances, Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS). The advisories, which are non-regulatory, provide information on human health effects from a lifetime of exposure to PFOA and PFOS from drinking water. The health advisory level (a combined 70 parts per trillion for PFOA and PFOS) is set to be protective over a person's lifetime resulting from exposure to PFOA and PFOS from drinking water.

PFOA and PFOS are "chains" of eight carbon atoms that are attached to fluorine and other atoms. Replacement chemicals, like GenX, tend to have fewer carbon atoms in the chain, but have many similar physical and chemical properties as their predecessors (e.g. they both repel oil and water). Industries in the United States have phased out production of PFOA and PFOS because of concerns about health risks and have been using replacement PFAS, such as GenX. There is a substantial body of knowledge for managing risk from PFOS and PFOA, but much less knowledge about the PFAS replacements.

The U.S. Environmental Protection Agency (EPA) has not established national primary drinking water regulations for PFOA, PFOS or other PFAS substances. However, EPA is evaluating PFOA and PFOS as drinking water contaminants in accordance with the process required by the Safe Drinking Water Act (SDWA). To regulate a contaminant under SDWA, EPA must find that it: (1) may have adverse health effects; (2) occurs frequently (or there is a substantial likelihood that it occurs frequently) at levels of public health concern; and (3) there is a meaningful opportunity for health risk reduction for people served by public water systems.

UCMR3

EPA included PFOA and PFOS among the list of contaminants that drinking water systems were required to monitor under the third Unregulated Contaminant Monitoring Rule (UCMR 3) in 2012. Results of this monitoring effort can be found at the [National Contaminant Occurrence Database](#).

As part of UCMR3, 124 public water systems out of a total of 582 in Alabama analyzed 1,056 samples from 220 sites for six PFAS substances. Seven systems (West Morgan – East Lawrence Water and Sewer Authority, Gadsden Water Works & Sewer Board, Vinemont Anon West Point Water System (VAW),

West Lawrence Water Co-Op, Northeast Alabama Water District, Southside Water Works and Sewer Board, and the Utilities Board of Rainbow City) had results at or over the 70 parts per trillion (ppt) EPA health advisory level for combined PFOA/PFOS. An additional system, Centre Water and Sewer Board, was the supplier of water to Northeast Alabama Water District, and thus was determined to be at or over the EPA health advisory level.

The affected drinking water systems provided consumers information about the levels of PFOA and PFOS in their drinking water, including options that consumers may consider to reduce risk such as seeking an alternative drinking water source, or in the case of parents of formula-fed infants, using formula that does not require adding water.

Water System Responses to the EPA Health Advisory

West Morgan-East Lawrence Water and Sewer Authority (WMEL) – On June 8, 2016, WMEL began purchasing and blending water from Decatur Utilities, in order to lower the levels of PFOA and PFOS below the lifetime health advisory level. On June 13, 2016, testing confirmed PFOA and PFOS were below detectable limits. In December, 2016, granulated activated carbon (GAC) treatment was installed, and subsequent testing showed no detection or results well below the health advisory level. WMEL is installing a reverse osmosis system as a long-term solution for treating its drinking water.

Gadsden Water Works & Sewer Board has installed GAC, which was placed into full operation by January, 2019. Sampling results indicate the finished water is now well below the health advisory levels for PFOA and PFOS.

VAW Water System temporarily purchased water from another source until West Morgan – East Lawrence reduced the level of PFOA and PFOS in its finished water.

West Lawrence Water Co-Op purchases water from West Morgan – East Lawrence Water Authority, which has since installed treatment.

Northeast Alabama Water District supplied its customers with water from various sources, including Centre Water and Sewer Board. Shortly before issuance of the health advisory, they discontinued use of finished water purchased from Centre.

Southside Water Works and Sewer Board has an interconnection with Gadsden. Testing at the meter between Southside and Gadsden indicated levels of PFAS at or above the EPA Health Advisories, but it was determined that it was not hydraulically possible for water to flow at that connection from Gadsden to Southside.

The Utilities Board of Rainbow City switched suppliers from Gadsden to unaffected sources.

Centre Water and Sewer Board has secured financing from the ADEM Drinking Water State Revolving Fund program and has begun construction of its new GAC treatment system.

2020 Per- and Polyfluoroalkyl Substances (PFAS) Sampling Program

In May 2016, the US Environmental Protection Agency (EPA) issued long-term health advisories for two per- and polyfluoroalkyl substances (PFAS) known as PFOA and PFOS. As a result of data collected during the Unregulated Contaminant Monitoring Rule 3 (UCMR3), several water systems were identified that exceeded the health advisory levels. The Department has worked with the Alabama Department of Public Health to monitor and ensure that these water systems take appropriate action to notify their customers, and if needed, switch to alternate sources or install treatment.

UCMR3 required all large systems and a representative sample of small systems to monitor for several PFAS compounds. To view a list of systems that were required to monitor during UCMR3, click [here](#). The data for UCMR3 is available from EPA [here](#).

In accordance with ADEM Admin. Code r. 335-7-2-.10, the Department instructed water systems to carry out PFAS monitoring at all sources not previously sampled during UCMR3. The prescribed method is EPA Method 537.1, which measures 18 PFAS chemicals. Ground sources (wells) are required to sample once January 1 – June 30, 2020, and once July 1 – December 31, 2020. Surface water sources are required to sample once per quarter. This sampling will take place from January 1, 2020 through December 31, 2020. Any results that are above the method reporting limit will be posted here shortly after the end of each quarter.

EPA has not yet established regulatory standards for PFAS in drinking water. The lifetime health advisory level for PFOA and PFOS is a combined 70 parts per trillion, or 0.00007 mg/L. Currently, EPA has not developed advisory levels for any other PFAS.

The results for PFAS detections are tabulated alphabetically by water system name. If you wish to view all monitoring data that has been submitted to ADEM for your water system, go to [eFile](#), select Media Area “Water”, enter the PWSID number for the Permit Number, and enter “PFC” for the File Name. This will return all PFAS-related documents for your water system.

[January 1, 2020 – September 30, 2020 PFAS Detections](#)