



July 22, 2019

Subject: PFAS Monitoring Request for Municipal Wastewater Treatment Facilities with Industrial Pretreatment Programs or Users Expected to be PFAS sources

Dear Permittee:

The Department of Natural Resources (hereafter department) is launching a statewide initiative to identify and quantify sources of perfluoroalkyl and polyfluoroalkyl substances (PFAS, formerly referred to as PFCs) with specific emphasis on perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). In order to accomplish this, the department is requesting that municipal wastewater treatment facilities with industrial pretreatment programs or contributing industries expected to be sources of PFAS to sample their influent and effluent for PFAS compounds.

Background

PFAS are a group of humanmade chemical compounds that have been widely used in industrial and consumer products since the 1940s. Common products containing these compounds include: nonstick coatings, paper and packaging materials, certain firefighting foams, and metal plating materials.

Studies indicate that PFOA and PFOS can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals.¹ For humans, the most consistent findings are increased cholesterol levels among exposed populations, with more limited findings related to infant birth weights and effects on the immune system.¹ Additionally, PFAS have been shown to bioaccumulate in people, with detectable blood serum levels found in >98% of the US population.²

With some exceptions for limited industrial uses, chemical manufacturers in the United States have voluntarily ceased production of PFOA and PFOS, but these compounds are still manufactured in other countries and may be imported through consumer goods including carpets, paper and packaging, and coatings. It is also still legal to use existing stocks of PFOS-containing firefighting foams (Class B) in the United States. Due to the persistent nature of these compounds, PFAS may be present on or near sites years after they were used.

The following types of industries are known sources of PFAS compounds³:

- Platers/metal finishers
- Paper and packaging manufacturers
- Tanneries and leather/fabric/carpet treaters
- Manufacturers of parts with PTFE (polytetrafluoroethylene, Teflon type)
- Facilities that manufacture or use coatings
- Centralized waste treaters

- Dairy processing facilities and cheesemakers, where milk supply is sourced from livestock grazing on fields that have received PFAS-contaminated biosolids
- Fire-fighting equipment manufacturers
- Military bases
- Airports
- Household cleaning product manufacturers

Centralized waste treaters and/or wastewater treatment facilities are not sources that generate PFAS compounds; however, the compounds are often directed to and accumulate in or passed through these facilities.

Note: The above list may not be exhaustive.

Requested Actions

As Phase 1 of the department's initiative, the department is requesting that if your POTW has an industrial pretreatment program, industries expected to be sources of PFAS discharge wastewater to your POTW, or if you have other reason to believe your POTW effluent may contain PFAS, the department requests that your facility completes the following steps:

1. Monitor influent and effluent for PFAS: The department is requesting that the influent and effluent of your facility be sampled and analyzed for PFAS within 90 days of receipt of this letter. Although PFOS and PFOA are the primary pollutants of concern at this time, the department has an interest in a suite of 34 additional PFAS compounds. Based on past experience, the department expects that lab costs will be approximately \$300 - \$400/sample. Please submit all of the reported PFAS compound results reported by the laboratory to the department. Results should be sent to DNRWYPFASWastewater@wisconsin.gov. As our understanding of these emerging pollutants progresses, this information will likely be useful in quantifying the extent of contamination statewide. Currently, there are no USEPA-approved methods for PFAS analysis of wastewater, but the department recommends that facilities use a laboratory that utilizes an isotope dilution procedure.

2. Investigate/Reduce Sources: If the combined (additive) concentration of PFOS and PFOA in the influent or effluent is at or above 20 nanograms per liter (ng/L), the department recommends that you also conduct a review of your industrial users to identify facilities that may be potential sources of PFOA and PFOS. You will likely need to review records and interview your contacts to find out which industrial or commercial contributors use/have used or accept/have accepted PFAS-containing materials or wastes. Please note that since these compounds are persistent, they may adhere to the bottoms or sides of tanks and pits and be present long after PFAS-containing chemicals were used.

Once you have samples collected and have identified potential PFAS sources, the department would like to work with you to establish a sampling protocol of the wastewater from probable PFAS sources. After representative samples are collected and PFAS sources are more clearly identified, department staff would like to collaboratively work with municipalities and the industrial sources to reduce and eliminate PFAS in the effluent. Source reduction efforts may include: product substitution, operational controls, pretreatment, and clean-up of historical contamination.

1 – US Environmental Protection Agency (www.epa.gov/pfas/basic-information-pfas#health)

2 – Calafat et al, *Polyfluoroalkyl Chemicals in the U.S. Population: Data from the National Health and Nutrition Examination Survey (NHANES) 2003–2004 and Comparisons with NHANES 1999–2000* (ehp.niehs.nih.gov/doi/pdf/10.1289/ehp.10598)

3 – Organisation for Economic Cooperation and Development (www.oecd.org/chemicalsafety/portal-perfluorinated-chemicals/aboutpfass)

Fate and Transport Study Participation

The University of Wisconsin - Madison plans to conduct a study of twelve municipalities throughout the state that will examine the fate and transport of PFAS compounds within wastewater treatment facilities. The study will involve sampling of each facility's influent, internal points of interest, biosolids, effluent, upstream receiving water, and downstream receiving water in order to conduct a mass balance analysis and to assess how these compounds behave. For facilities participating in the study, all costs associated with the study's sampling efforts will be covered.

If you are interested in participating in this study, please contact Nate Willis at nathaniel.willis@wisconsin.gov within 45 days of receipt of this letter for consideration. Please note that interest in this study does not necessarily mean your facility will be chosen for participation. Several factors will go into determining which facilities are chosen, including but not limited to: likelihood of presence of PFAS in the effluent, the design flow of the facility, the portion of the influent that originates from industrial contributors, etc. If your facility is chosen for this study and PFAS is detected above thresholds discussed in step 2, the department requests that you complete step 2 as outlined above. Additionally, if your facility is not chosen for this study, the department still requests that the actions outlined above be completed.

The department appreciates your efforts to support this initiative. Data collected through this initiative will be used to mitigate PFAS impacts statewide. The data will also be used to evaluate and support rulemaking and associated economic impact analyses to adopt statewide water quality standards for PFAS compounds. Development of surface water quality standards for PFAS was identified as a priority in the most recent Triennial Standards Review, and the Department of Health Services has developed a recommendation for a groundwater enforcement standard of 20 ng/L combined PFOA and PFOS that the department intends to adopt. The department's intent is that completion of the steps outlined will position facilities to more easily comply with expected PFAS standards upon promulgation.

More Information

To find out more about PFAS, go to dnr.wi.gov/topic/Contaminants/PFAS.html, <https://pfas-1.itrcweb.org/fact-sheets/> or www.epa.gov/pfas. More information on industrial sources can be found at www.oecd.org/chemicalsafety/portal-perfluorinated-chemicals/aboutpfass. Toxicological information can be found at www.atsdr.cdc.gov/pfas.

If you have any questions or comments regarding this monitoring request, please contact Nate Willis at nathaniel.willis@wisconsin.gov.

STATE OF WISCONSIN
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