



September 12, 2024

Wisconsin's Green Fire Comments on Proposed Guidance for Developing and Implementing PFOA and PFOS Minimization Plans

Submitted Electronically

*To: Wisconsin Department of Natural Resources:
Bureau of Water Quality, Wastewater Policy and Management Team*

Thank you for the opportunity to comment on the proposed guidance for developing and implementing perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) minimization plans for identified publicly owned wastewater treatment plants.

Wisconsin's Green Fire (WGF) is a conservation organization advancing science-informed analysis and policy solutions that address Wisconsin's greatest conservation challenges. WGF has formed a Contaminants of Emerging Concern (CEC) work group that has a high level of technical and management expertise for per- and polyfluoroalkyl substances, commonly known as PFAS.

As a group, the CEC has:

- closely tracked PFAS in Wisconsin's more than 1800 public drinking water systems;
- closely reviewed PFAS in surface waters;
- has up-to-date knowledge of PFAS in various industries over time;
- has specific expertise in various source sectors, such as landfills;
- has knowledge of PFAS found in many of Wisconsin's contaminated sites; and
- has a high level of knowledge of PFAS in the rapidly changing consumer products sector.

WGF acknowledges that the Wisconsin Department of Natural Resources (DNR) is proposing guidance for PFOA and PFOS minimization plans based on the template of mercury minimization plans. As such, these are not full PFAS minimization plans. However, at times it seems the guidance strays from PFOA and PFOS to broader application. As surface water quality criteria are developed for additional PFAS, we anticipate this guidance will need to be revised to address additional PFAS.

Page 1 of 4

Comments:

1. The greatest weakness of the draft guidance is the inadequacy of the discussion on the sewerage system itself as a continuing source of PFOA and PFOS. A growing number of reports are showing PFOA and PFOS coating sewer pipes — likely including those within the treatment plant itself — that leach PFOA and PFOS over time. Monitoring of discharges from industrial sources shows discharge of PFOA and PFOS for years after use of these two PFAS has ceased. For example, on page 4, there is a paragraph on transformation of PFAS within a wastewater treatment plant. While we believe that some transformation of PFAS does occur within the wastewater treatment process, especially for precursors of PFOA and PFOS, the reports we've read on transformation of PFAS did not look at the piping system as a source.
2. While we find the discussion of “site-specific literature reviews,” “finger printing” and multi-wastewater treatment plant statistical analyses interesting, we question how useful they are developing a PFOA and PFOS minimization plan. If site-specific literature reviews do exist, they should be used. However, we question whether they are up-to-date, especially as they pertain to the phased out PFOA and PFOS. Finger printing is of course useful, but standard finger prints have not been established. We acknowledge that a relatively standard finger print may exist for use of 3M Light Water aqueous film-forming foam (AFFF), but we would expect to see that more often in public drinking water systems. It is unclear how anyone would use the statistical analysis presented for a single wastewater treatment plant.
3. The discussion of potential sources in Appendix D seems useful, but the information provided is minimal and should be expanded.

Landfills

We agree that leachate from all landfills older than a few years is likely to contain PFOA, PFOS and a variety of other PFAS. However, whether they amounts are minor depends on the situation. As discussed in the guidance, significant sources of PFOA and PFOS are likely “outliers.” For example, leachate from the industrial landfill formerly owned by Wausau Papers located northeast of Rhinelander would not be considered minor.

Airports

Airports where AFFF containing PFOA or PFOS was used could be sources if there is infiltration into the sanitary sewer system. The description should also mention “first generation” AFFF based on PFOA, such as what was manufactured by DuPont. (See [Interstate Technology Regulatory Council \[ITRC\] website on Fire Fighting Foams.](#))

Firefighting Training Centers

There is no mention of firefighting training centers where AFFF has been used. Contaminated public drinking water system wells have been in close proximity to firefighting

training centers at Adams, the village of Pewaukee and possibly Green Lake. (See [DNR Public Drinking Water Database](#).)

Fire Suppression Systems

There is no mention of fire suppression systems where PFOA, PFOS and 6:2 FTSA are or were commonly used. There are no standard practices for cleaning and changing the AFFF used. Although stabilization with concrete is now recommended prior to disposal at a landfill, discharge to wastewater treatment plants may be or has been relatively common. (See [ITRC website on Fire Fighting Foams](#).)

Pulp/Paper Manufacturers

It should be mentioned that based on an agreement with the Food and Drug Administration, 6:2 FTOH is no longer applied to coated food contact papers. 6:2 FTOH replaced PFOA for this application. Residual amount of PFOA may be found in discharges from certain coated paper manufacturers. (See [FDA agreement with eight manufacturers](#).)

Metal Finishers

There is no mention of use of PFOA and PFOS (likely 2016 or earlier) in the aluminum products manufacturing industry. Groundwater monitoring at the Mirro Aluminum Plant #4 found maximum PFOS and PFOA values in the groundwater of 1900 ppt and 170 ppt, respectively. (See 7/31/2024 email from Romball to DNR R&R Program.)

For completeness purposes, there should be mention that the majority of the chrome plating industry switched from use of PFOS to 6:2 FTS, as should in the chart presented. (See [EPA Multi-industry Per- and Polyfluoroalkyl Substances Study, 2021 Preliminary Report](#).)

Plastics Industry

There is no mention of use of PFOA and other PFAS in the vast plastics industry. PFOA was commonly used as a mold release.

Electronics

There is no mention of historic use of PFOA and PFOS in the electronics sector, especially semiconductors. Today the semiconductor sector uses short-chain PFAS, such as PFHxA. Admittedly semiconductor manufacturing in Wisconsin may be viewed as a potential new industry. (See [PFOS and PFOA Conversion to Short-Chain PFAS-Containing Materials Used in Semiconductor Manufacturing Semiconductor PFAS Consortium Photolithography Working Group](#).)

Source Water

Whether source water is the primary or secondary source of PFOA and PFOS will depend on the situation. Currently, PFAS concentration information is available for about 1800 public water systems in Wisconsin. Most private systems have not been sampled.



The guidance should mention that for the 42 or so municipal public water systems exceeding the new federal drinking water enforcement standards, federal funding is available to install needed treatment to meet standards by the July 2029 federal compliance date.

Domestic Sources

We concur that domestic sources as a sole source are unlikely to result in discharges from a municipal wastewater treatment plant having a reasonable potential to exceed the current surface water quality standards. The guidance could include a list of domestic sources currently discharging PFOA or PFOS, such as through the consumption of PFAS contaminated fish or through the inhalation of dust from carpets. However, the list is relatively small as the manufacturers switched from use of PFOA to a variety of other PFAS.

We want to thank the DNR for this opportunity to comment on the proposed guidance and hope that these recommendations are helpful.

As we stated recently in our comments on DNR's Triennial Standards Review priority list, we strongly support adding additional PFAS, such as PFHxS, PFNA, and GenX to Wisconsin's surface water quality standards. At the time of promulgation, we presume this guidance will be revised to address these additional PFAS. The decision to regulate this class of chemicals is based on sound science. The citizens of Wisconsin deserve to have clean, drinkable, and swimmable water as envisioned by the Clean Water Act and the Safe Drinking Water Act.

On behalf of the members of WGF's Contaminants of Emerging Concern work group, sincerely,

Meleesa Johnson

Executive Director,
Wisconsin's Green Fire