

Cadillac Industrial Park Area of Interest

Frequently Asked Questions (FAQ)

OVERVIEW

Michigan PFAS Action Response Team (MPART) held a town hall in Cadillac on November 6, 2024, to share information about PFAS with residents in the community. This event was held before MPART had the results from private drinking water wells that were sampled near the Cadillac Industrial Park Area of Interest. As of the end of December 2024, MPART has collected three rounds of private drinking water well samples and had shared the results with the community from the first two rounds. Results have been shared in the form of “heat maps” showing results as either non-detect, detections below criteria, or detections over criteria. The heat maps have generated a lot of questions and some misinformation on social media. This FAQ is intended to answer some of the questions posed.

For information about MPART go to Michigan.gov/PFASresponse.

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FAQS

1. Which residents on private drinking water wells in Cadillac are eligible to receive point-of-use filters?

All households in the PFAS investigation area that are sampled by MPART and whose wells have any detection of PFAS are offered point-of-use filters (typically installed under the kitchen sink) through a Michigan Department of Health and Human Services (MDHHS) filter recommendation. District Health Department #10 in Cadillac will coordinate with a certified plumber and the resident to have the filter installed free of charge.

2. How effective are the point-of-use filters being offered to eligible homeowners?

PFAS-reducing filters, like the ones offered by your local health department, have an NSF/ANSI 53 designation, which means they were shown in a laboratory to reduce **total** PFAS down to 20 ppt.

When the EPA announced the federal PFAS MCLs in April 2024, they noted they would be working with certifying bodies (NSF, ANSI) to get the certification specifications down to meet the EPA MCLs for PFAS. That work is still currently ongoing. However, MDHHS has evaluated numerous homes across the state with concentrations both similar to and substantially higher than those being found in Cadillac and have found that filters are effective in outperforming the filter certification requirements.

To remain effective, filter cartridges need to be changed out according to the manufacturer's instructions. Depending on usage, this is typically about every six months. Households who were recommended filters can obtain filter replacement cartridges from their local health department.

3. Why are households being provided point-of-use filters and not whole house filtration?

Ingestion, or swallowing, is the primary exposure route of concern for PFAS exposure. This includes water used for drinking, cooking, and making baby formula. The point-of-use filter is an effective interim mitigation tool for the primary exposure route of concern. PFAS do not easily travel through the skin so showering, washing clothes, and cleaning with water containing PFAS is not a health concern. Consequentially, other types of filters are not offered.

4. I've noticed the private drinking water well investigation area keeps expanding. How does MPART determine when to expand the investigation area and how will I be notified if my home becomes part of the investigation?

MPART agencies evaluate data as it is received. If results in the area show detections or exceedances, the investigation is expanded. If you are on a private drinking water well and

your home becomes part of the investigation area, you will receive a letter requesting your permission for MPART to sample your drinking water.

5. My home is outside of the investigation area, and I would like to pay to sample my own private drinking water well for PFAS, what should I do?

Residents who decide to self-sample are encouraged to contact Michigan Department of Environment, Great Lakes, and Energy (EGLE) laboratory to order a test kit. If you order the test kit from the EGLE laboratory, the analysis cost is \$290. They will send you the test kit in the mail with guidance on how to collect the sample.

- Video: [Homeowner's Guide – Collecting Samples for PFAS Water Analysis](#)

EGLE laboratory will analyze the sample, and results will be mailed to you. MPART will also receive a copy of the results and share results with MDHHS. MPART and MDHHS will evaluate the result and determine if additional outreach is necessary based on the result.

6. I self-sampled my drinking water and used a lab other than the EGLE lab to analyze for PFAS, can I still contact MDHHS?

Residents who self-sample and use a lab other than EGLE's can still contact the MDHHS' Environmental Health Hotline at 800-648-6942 to discuss their results with a toxicologist.

7. If a resident has their blood tested for PFAS, what should they do?

Any resident who decides to have their blood tested should discuss results with their doctor. Note that nearly all people in the U.S. have been exposed to PFAS and have it in their blood. See the following table for the national average PFAS blood levels in males and females at 12 years of age and older*. Blood testing will not identify a current or future health problem, provide information for treatment, or predict or rule out future health problems due to exposure. That's why it's important to reduce your exposure to PFAS and to discuss limitations, benefits, risks, and individual results with a doctor. For more information on blood testing, visit: [Testing for PFAS | PFAS and Your Health | ATSDR](#).

PFAS	5 th Percentile (ug/L)	25 th Percentile (ug/L)	50 th Percentile (ug/L)	75 th Percentile (ug/L)	95 th Percentile (ug/L)
PFNA	0.07	0.3	0.4	0.7	1.4
PFOS	1.1	2.6	4.3	7.5	14.6
PFOA	0.5	0.97	1.47	2.07	3.77
PFHxS	0.3	0.6	1.1	1.9	3.7

*Blood serum concentrations listed above are reported in micrograms/liter (ug/L) or parts per billion.

8. When were community public water supplies first sampled for PFAS and when were they required to sample under the Michigan Safe Drinking Water Act?

EGLE conducted statewide sampling of community public water supplies between 2018 and 2020. Prior to the beginning of this statewide survey, the United States Environmental Protection Agency (EPA) set a Lifetime Health Advisory (LHA) level for two PFAS in drinking water: perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). The LHA level was 70 parts per trillion (ppt, equal to 70 ng/L) for PFOA and PFOS combined. In the absence of a promulgated drinking water PFAS standard(s) at the time, the State of Michigan used 70 ppt for decision making purposes during the statewide survey.

In August 2020, EGLE promulgated more stringent drinking water criteria under the Michigan Safe Drinking Water Act. Since August 2020, community public water supplies took over the responsibility of sampling their own supplies for PFAS and reporting their results to EGLE. Community water supplies are either on annual PFAS sampling or on quarterly PFAS sampling, depending on whether prior sampling had shown detections of PFAS.

9. Where in the public water supply system are samples collected?

Under the Michigan Safe Drinking Water Act, for PFAS, samples are required to be collected at the entry point to distribution. In the case of Cadillac and Haring Township, this point is after the drinking water is treated and before it goes into the distribution system. There is no requirement to sample for PFAS at other points in the system, such as at the water tower or an individual home.

10. What are the City of Cadillac's PFAS results?

The City of Cadillac's drinking water has tested **non-detect for all PFAS** since it was first tested in 2018 and through the most recent sample in 2024. The city is on annual compliance monitoring for PFAS.

11. When did the city move the municipal wells from the Cadillac Industrial Area to their current location and why?

An EGLE employee who worked for the City of Cadillac from 2006-2017 verified that the city began plans to abandon the wellfield at 6th Avenue/8th Street prior to 2011 due to the fact that the wells were over 50 years old and because of the potential for contamination due to the industrial area. Only one well had detections for Trichloroethylene (TCE) during that time but it was not used to provide water to residents (it was on standby for emergency use, but not used).

History of the Cadillac wells:**6th Ave./8th St. Wells:**

- Well 1: Installed in 1960s and inactive in 2012
- Wells 2-4: Installed in 1960s and inactive in Nov. 2022 due to two new wellfields being online
- Well 5: Installed in 1960s. Well casing shattered, undermined the building and was taken out of service
- Well 6: Installed in 1960s and inactive in 2013
- Well 7: Installed in 1970s to replace well 5 and inactive in 1994 (had TCE detects and no longer fed the system but available for emergencies before 2012)

Crosby Road Wells:

- Wells 8-10: Installed in July 2012, all still active

44 Road Wells:

- Wells 11-13: Installed in November 2022, all still active

12. What are Haring Township's community water supply PFAS results?

The following table summarizes the township's water supply results. Note that the township is in compliance with Michigan Safe Drinking Water Act standards, Maximum Contaminant Levels (MCLs). Haring Township's community water supply is currently on quarterly compliance monitoring for PFAS.

**Public Water Supply Compliance Monitoring
Haring Charter Township Community Water Supply
(Compared to Michigan Drinking Water Criteria)**

Sample Location	Collection Date	PFHxA MCL is 400,000 ppt	PFOA MCL is 8 ppt	PFNA MCL is 6 ppt	PFBS MCL is 420 ppt	PFHxS MCL is 51 ppt	PFOS MCL is 16 ppt	HFPO-DA MCL is 370 ppt
Well 1 - 2 Treated	October 27, 2020	ND	3.2	ND	ND	2.6	3	ND
Well 1 - 2 Treated	March 17, 2021	ND	2.2	ND	ND	2.1	2.2	ND
Well 1 - 2 Treated	February 14, 2022	ND	2.6	ND	ND	ND	3.4	ND
Well 1 - 2 Treated	June 26, 2023	ND	4	ND	2	3	3	ND
Well 1 - 2 Treated	September 12, 2023	ND	4	ND	2	2	3	ND
Well 1 - 2 Treated	October 23, 2023	3	6	ND	2	4	4	ND
Well 1 - 2 Treated	March 5, 2024	2	6	ND	2	3	4	ND
Well 1 - 2 Treated	April 9, 2024	2	6	ND	2	3	4	ND
Well 1 - Treated	July 15, 2024	3	7	ND	2	4	4	ND
Well 2 - Treated	July 15, 2024	ND	4	ND	2	2	2	ND
Well 1 - Treated	November 14, 2024	ND	ND	ND	ND	ND	ND	ND
Well 2 - Treated	November 14, 2024	ND	4	ND	2	2	2	ND

Compliance with PFAS MCLs for a community water supply in Michigan is determined based on a running annual average for each compound, calculated at each sampling point. A supply is not out of compliance until either: 1) one full year of quarterly sampling is complete, or 2) fewer samples cause the running annual average to exceed one or more MCLs. If a supply is determined to be out of compliance with one or more PFAS MCLs, the supply is required to notify the public within 30 days.

13. What is Haring Township doing to improve drinking water in the township?

Even though the township is in compliance with the Michigan Safe Drinking Water Act, the township is taking steps to address PFAS. A permit was issued November 1, 2024, that will allow the township to begin going through the bid process for installing a water main to connect the Wexford-Missaukee Career Technical Center to the township’s water. The township is currently getting bids and will likely begin construction in the spring.

In addition, the township is installing new municipal water wells, with the test well approval letter issued by EGLE on April 15, 2024. The township has completed the initial site investigation and is in the process of constructing a proposed production well to serve as the primary source water for the community. As of December 2024, the test well has been non-detect for PFAS. The township will conduct the required aquifer test, including a pump test and additional water quality monitoring. The results of the test will be evaluated and then the township could submit for a permit to equip the well for production. This will likely be done before the end of 2025. After the well is permitted by EGLE and an approval to commence operations is granted, the township will be able to use the new well to supply water to the people served by Haring Township's water supply.

14. Are residents on municipal water eligible to receive filters?

MPART is only offering filters to residents in the Cadillac Industrial Area of Interest who are on private drinking water wells sampled by MPART that have PFAS detections or exceedances in their drinking water. Haring Township and the City of Cadillac public water supplies are both regulated under the Michigan Safe Drinking Water Act. They are currently in compliance with the Michigan Safe Drinking Water Act. Therefore, a PFAS-reducing filter will not be provided nor is needed for households on municipal water.

15. If a resident wants to further protect their family, what can they do?

Visit the [MPART Resources for Residents web page](#).

16. Why are sampling results not being compared to EPA criteria?

The drinking water criteria that are legally enforceable in Michigan for community public water supplies are the Michigan Safe Drinking Water Act criteria. Therefore, results for community public water supplies are compared to Michigan's criteria. There are no regulatory requirements or criteria for private residential drinking water wells.

The EPA's maximum contaminant levels for PFAS are not enforceable until adopted by the state. Michigan is currently in the process of going through the rule making process to update Michigan's criteria to reflect the EPA's new criteria. Until the rulemaking process is complete, the new EPA criteria are not enforceable for community water supplies (municipal water).

17. Does the Cadillac Wastewater Treatment Plant (WWTP) and Haring Township WWTP accept wastewater from industry in addition to sanitary sewage?

Yes. Both WWTPs accept wastewater from industry. These WWTPs can accept wastewater from industry because they have Industrial Pretreatment Programs (IPP) approved by EGLE. The City of Cadillac's IPP was approved in 1985 and Haring Township's IPP was approved in 2017.

18. Did Cadillac WWTP and Haring Township WWTP participate in the IPP PFAS Initiative in 2018?

Yes. Both WWTPs participated in the IPP PFAS Initiative. Under the IPP PFAS Initiative, both WWTPs evaluated their industrial facilities and collection system to identify potential sources of PFOS to the WWTP. Haring Township did not identify any potential sources of PFOS. EGLE agreed with the Township's assessment and in a letter sent to the Township on September 27, 2018, determined the Township had completed the requirements of the IPP PFAS Initiative.

The City of Cadillac identified one industrial source of PFOS to the WWTP, the Wexford County Landfill. In a March 4, 2019, letter EGLE required the city to sample the discharge from the WWTP on a semi-annual basis and to work with the landfill to reduce and/or eliminate PFOS from the discharge of landfill. The city ceased accepting the discharge from the landfill in the summer of 2019. Upon re-issuance of the city's NPDES permit on November 29, 2023, EGLE determined the city completed the requirements of the IPP PFAS Initiative.

Visit EGLE's [IPP PFAS Initiative](#) web page for more information.

19. What PFAS requirements are included in the NPDES permits for Cadillac and Haring Township?

NPDES permit requires Cadillac WWTP and Haring Township WWTP to sample final effluent prior to discharging to the Clam River for PFAS at a frequency of three times per year (January, May, and September).

Both WWTPs are required to submit the results of the PFAS sampling to EGLE and are accessible to the public via the MiEnviro Portal.

MiEnviro link to Cadillac WWTP NPDES related documents:

mienviro.michigan.gov/nsite/map/results/detail/2113288482639133030/documents

MiEnviro link to Haring Twp WWTP NPDES related documents:

mienviro.michigan.gov/nsite/map/results/detail/861570700673792980/documents

For more information on how EGLE regulates PFAS from municipal wastewater treatment plants:

- [Municipal NPDES Permitting Strategy for PFAS](#)
- [Addressing PFAS from Public and Private Municipal Groundwater Discharges Compliance Strategy](#)

20. What are the PFAS levels detected in the discharge from Cadillac WWTP and Haring Township WWTP to the Clam River?

The discharge from both WWTPs has been in compliance with EGLE's Rule 57 Water Quality Values for PFOS; PFOA; PFBS; PFNA; and PFHxS since they began monitoring for PFAS in 2019.

21. What surface water sampling has occurred in the area?

In 2022, EGLE collected samples from Lake Mitchell, Lake Cadillac and at two locations in the Clam River downstream of Lake Cadillac. All samples were well below water quality criteria. PFOS results were **below** the typical levels found in lakes throughout Michigan.

22. Have fish from Lake Cadillac and Lake Mitchell been tested?

Some fish species from Lake Cadillac and Lake Mitchell have been tested for PFAS. MDHHS is reviewing those results and will include updated fish consumption guidelines in the 2025 Eat Safe Fish Guide for Northwest Michigan. Currently, all fish consumption guidelines for these two lakes are due to mercury, published in the [2023 Eat Safe Fish Guide – Northwest Michigan](#) (page 46). For species not listed under these two lakes, MDHHS recommends following the statewide safe fish guidelines, which are listed on page 9 of the guide.

23. What are the PFOS and PFOA levels found in biosolids from Cadillac WWTP and Haring Township WWTP?

PFOS and PFOA biosolids concentration data is available from 2021 through 2024 for the Cadillac WWTP, which PFOS levels have been **non-detect** by laboratory analysis all years except 2024 which they measured 1.5 parts per billion ppb, which are below the statewide average of 8.4 ppb. PFOA levels were also **non-detect** by laboratory analysis all years except 2024, which they measured 2.3 ppb, below the statewide average of 4.8 ppb. It is important to note for 2021, 2022, and 2023, the reporting levels (the lowest reportable detectable level by the laboratory) were greater than the detections in 2024.

PFOS and PFOA biosolids concentration data is available for 2022 and 2024 for Haring Township, which measured PFOS at 5.7 ppb in 2022, and 3.0 ppb in 2024, both below, the statewide averages for those time periods. PFOA was measured at 1.6 ppb in 2022 and 0.6 ppb in 2024, both also below statewide averages for those time periods.

24. What is EGLE doing to address PFAS in biosolids?

EGLE implemented the Land Application of Biosolids Containing PFAS Interim Strategy (Hereafter, Interim Strategy) first in 2021, with subsequent modifications in 2022 and 2024. This strategy put in place thresholds for how biosolids may be land applied (along with other requirements for the WWTP) based on concentrations of PFOS and PFOA (PFOA included in 2024 Interim Strategy Update). The details of the strategy are briefly detailed in the following table. For more information, please access the [Michigan Biosolids PFAS-related information and links](#) webpage.

2024 Interim Strategy

Tier / Threshold	PFOS and/or PFOA concentration	Facility Requirements
Below 20 ppb	<20 µg/kg	<ul style="list-style-type: none"> • Notify landowner and/or farmer of PFAS results
Between 20 ppb and 100 ppb	>=20 µg/kg, <100 µg/kg	<ul style="list-style-type: none"> • Notify landowner and/or farmer of PFAS results • Reduce application rate to a maximum of 1.5 dry tons per acre • Collect facility effluent sample within 30 days • Implement a source reduction plan
Industrially Impacted	>= 100 µg/kg	<ul style="list-style-type: none"> • Land application is prohibited • Collect facility effluent sample within 30 days • Implement a source reduction plan

25. Do municipalities sell biosolids to farmers/landowners?

Municipalities typically pay for the hauling and land application of biosolids, providing a fertilizer alternative at zero charge to local farmers and/or landowners. From some facilities biosolids are sold, but this is not the typical case in Michigan. The Cadillac and Haring Twp WWTPs both land apply the solids at a cost to the municipality.

26. Has EGLE identified the source(s) of the PFAS contamination in Cadillac?

There are currently several sources being investigated in the Cadillac area.

When determining what wells may be affected, PFAS concentrations are typically localized near the source. Samples coming back from across the Cadillac area do not point to a singular source yet and sources may be from a variety of causes like impacted septic fields where PFAS products are disposed, industrial processes, or other factors.

More defined and investigated PFAS areas like the Wexford-Missaukee Career Technical Center may be due to a septic tank issue, but other newer investigation areas in Cadillac will need further investigation to determine the depth and source where PFAS is potentially located to help determine affected wells.

27. Has any Volatile Organic Compounds (VOCs) sampling been conducted in conjunction with the PFAS investigation?

While EGLE's contractor was sampling homes for PFAS near the industrial area, they collected 20 VOC samples northwest and south of the industrial area at the City's request. All 20 samples were non-detect.

Websites and online resources referenced in this FAQ:

Michigan PFAS Action Response Team – MPART: Michigan.gov/pfasresponse

MPART – Resources for Residents: Michigan.gov/PFASresponse/resources

EGLE Video: Homeowner's Guide – Collecting Samples for PFAS Water Analysis: youtu.be/LafurbLLQSY

ATSDR - Testing for PFAS | PFAS and Your Health: atsdr.cdc.gov/pfas/blood-testing/index.html

EGLE – IPP PFAS Initiative

Michigan.gov/egle/about/organization/water-resources/industrial-pretreatment/pfas-initiative

EGLE – Municipal NPDES Permitting Strategy for PFAS

Michigan.gov/PFASresponse/-/media/Project/Websites/egle/Documents/Programs/WRD/NPDES/Municipal-permitting-strategy-PFAS.pdf

EGLE – Addressing PFAS from Public and Private Municipal Groundwater Discharges Compliance Strategy

Michigan.gov/pfasresponse/-/media/Project/Websites/egle/Documents/Programs/WRD/Groundwater-Discharge/PFAS-Municipal-Groundwater-Discharge-Compliance-Strategy.pdf

MDHHS - 2023 Eat Safe Fish Guide – Northwest Michigan

Michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/DEH/Eat-Safe-Fish/Documents/NW_EAT_SAFE_FISH_GUIDE_-_NORTHWEST_MI_WEB.pdf

EGLE - Michigan Biosolids PFAS-Related Information and Links

Michigan.gov/egle/about/organization/water-resources/biosolids/pfas-related

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