

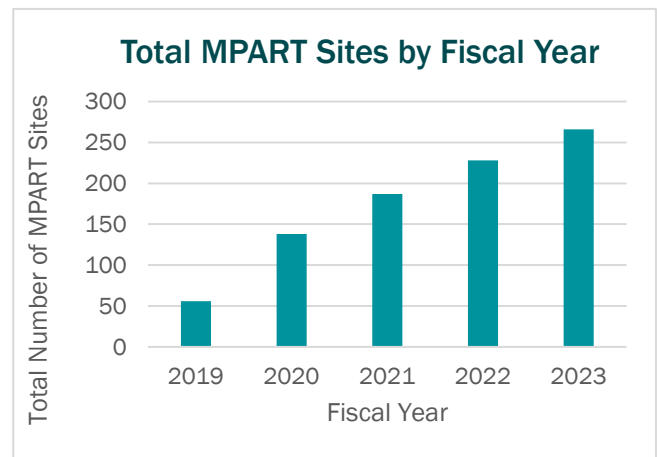
MPART

MICHIGAN PFAS ACTION RESPONSE TEAM

FAST FACTS: Fiscal Year 2023 Update

In fiscal year (FY) 2023, the Michigan legislature continued to support the state’s response to PFAS by appropriating funding across the seven state agencies that make up the Michigan PFAS Action Response Team (MPART). This funding allowed MPART to continue to be a national leader in addressing PFAS.

As of the end of FY 2023, MPART had identified **266 MPART PFAS Sites**. A PFAS site is an area where PFAS contamination has been found in groundwater above Michigan’s criteria, and the source of the contamination has been identified. MPART is also actively conducting investigations at dozens of other areas around the state where the sources of the contamination are still unknown.



What makes MPART unique?

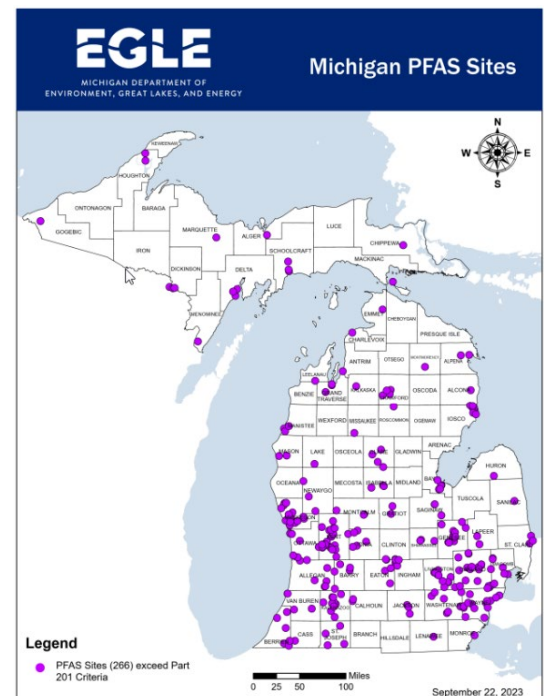
For every new site, drinking water exposure is evaluated.

MPART works with the local health departments to:

- Determine if there are residential/private drinking water wells near the site.
- Review well records to identify wells that are potentially at-risk of PFAS contamination.
- Access property and conduct water sampling of the wells identified to be potentially at-risk.
- Share results with well owners and among agencies, as well as provide filters to residents if necessary.
- Expand sampling areas if results indicate additional potential impact.

In addition to contacting local health departments and informing potentially impacted private well owners, MPART conducts public outreach to ensure awareness among:

[Local officials](#) | [Legislators](#) | [Tribal governments](#)



Transparency and Communicating with the Public



➤ **Citizen Advisory Workgroup (CAWG)** members met 12 times with MPART, in addition to meetings of four subcommittee groups: Engaging the Public; Web Review; Preventative Measures; and Membership.

➤ Continued to update the **MPART Geographic Information System** online, which provides PFAS sites, surface water data, and public water supply data on an interactive online map.

Integrated all compliance monitoring PFAS public drinking water data into the MPART online Geographic Information System.

➤ MPART hosted the December 2022 **Great Lakes PFAS Summit** to with **1900 registrants** from **44 states** and **10 countries**.

➤ Weekly MPART Update GovDelivery emails to **over 5,600 subscribers**

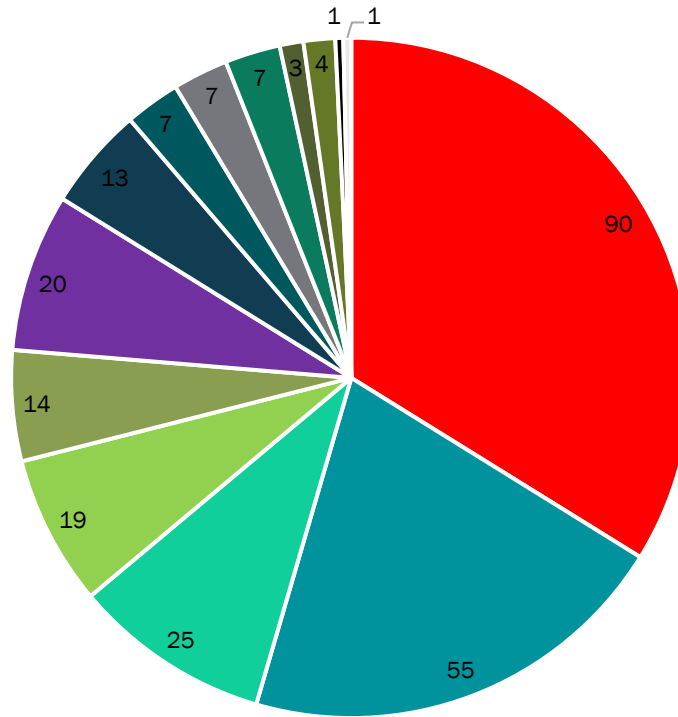
➤ MPART hosted and attended a variety of public meetings with the goal of raising awareness and answering questions in communities regarding PFAS contamination. This included:

- **14** in-person and online meetings led by an MPART agency
- **11** additional meetings attended by MPART staff



The chart below shows PFAS sites by type from sampling done by regulated industry, environmental assessments conducted during property transactions, MPART’s PFAS monitoring activities, and focused studies.

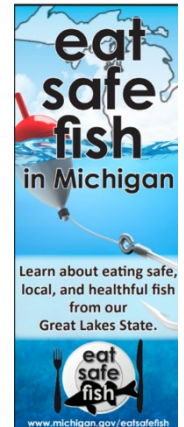
266 PFAS Sites by Type



- Landfill
- Industrial (transportation-related, chemical and other manufacturing)
- Plating
- Airport
- Military
- Wastewater (wastewater treatment plants, a car wash, and a school)
- Fire Related
- Laundromat/Dry Cleaner
- Unknown
- Paper Manufacturing
- Refinery
- Tannery
- Hazardous Waste
- Power Station

Monitoring and Addressing Sources of PFAS Around Michigan

- MPART is administering **18 active grants** that support PFAS **testing and monitoring at airports**.
- Collected **1,551 fish** from **63 different water bodies** to determine the need for fish consumption advisories.
- Released the **2023 Eat Safe Fish Guide**, which includes **over 290 new or updated** fish consumption guidelines.
 - Of the new or updated guidelines, 120 are based on PFOS
- **Collected 504 water samples** from lakes and streams from **45 different watersheds**.



Youth fishing event in Muskegon

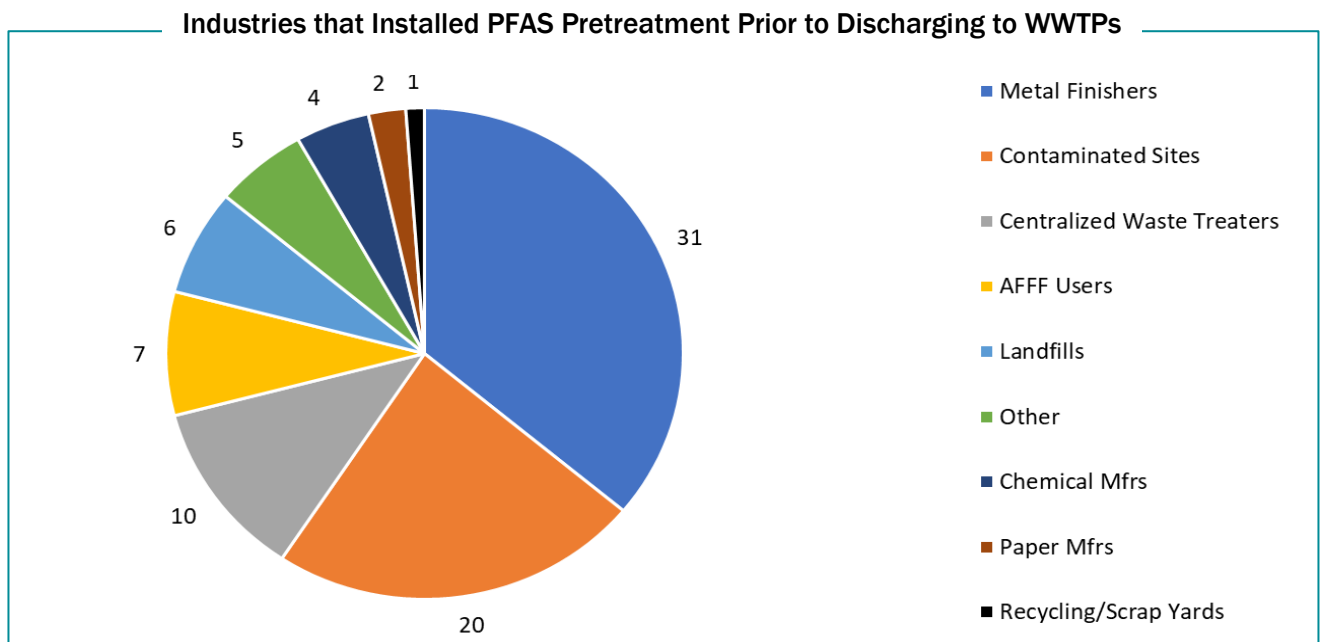
- Coordinated with youth fishing event coordinators in **environmental justice areas** to collect fish in 20 areas heavily fished by youth. This was used to inform fish consumption advisories.
- Collected and analyzed **blood samples from birds** that live in the Lake Huron watershed and eat fish. Also collected and **analyzed herring gull eggs**.



POCIS (Polar Organic Chemical Integrative Samplers) being deployed

- Conducted sampling using POCIS in Plaster Creek near Grand Rapids.

- Three grants that supported PFAS testing and investigation activities at municipal wastewater treatment plants were completed.
- Continued to address PFOS, PFOA, and PFBS, from **Industrial Dischargers** – investigated potential discharges of PFAS to surface water at **43 industrial sites**.
- Implemented the **Land Application of Biosolids Containing PFAS Interim Strategy**.
- Continued to review **legacy land applications** in Michigan.
- A total of **126 municipal wastewater treatment plants (WWTPs)** monitored for PFAS.
- As of November 2023, 86 industries that discharge to municipal WWTPs have installed pretreatment to reduce or eliminate PFOS. In addition, 17 other industries that discharge to WWTPs achieved significant reductions through cleaning, equipment replacement, eliminating PFOS-contaminated processes, or isolating contamination. This is significant because WWTPs are not designed to treat for PFAS.



- Reviewed **74 foam sightings** on Michigan lakes and streams. Reports are used to help guide future lake and stream sampling efforts.
- **Re-evaluated Surface Water Quality Values:** PFHxS and PFNA were added. PFOS, PFOA, and PFBS stayed the same. These are values used to hold facilities that discharge into our lakes and streams to, and for tracking down PFAS sources

Surface Water Quality Values in Parts Per Trillion (ppt)

PFOS Drinking Water Source	PFOS NON-Drinking Water Source	PFOA Drinking Water Source	PFOA NON-Drinking Water Source	PFBS Drinking Water Source	PFBS NON-Drinking Water Source	PFHxS Drinking Water Source	PFHxS NON-Drinking Water Source	PFNA Drinking Water Source	PFNA NON-Drinking Water Source
11	12	66	170	8,300	670,000	59	210	19	30

PFAS Studies

MPART conducted a [“concept validation” study](#) on PFAS concentration in soils. Soils in publicly owned forested areas across the state were sampled for 28 different PFAS. The concentrations observed were consistent with, and in some cases significantly lower than other soils collected around the world. Some samples appeared to be more influenced by industrial or urban sources than others, such as those located in the southern half of the lower peninsula. No significant correlations were found between PFAS concentrations and TOC, moisture, clay content, or metals concentration.

Protecting Drinking Water

FY23 Infrastructure Projects

- **\$20.8 million in grants were awarded** to address PFAS contamination in drinking water. Projects included:
 - Watermain extensions to begin **connection of ~646 homes to existing municipal drinking water systems.**
 - A \$491,122 grant to the City of Ann Arbor to treat PFAS

Filters and Residential Well Sampling:

- Provided more than **125 PFAS-reducing filters** to impacted residents.
- Provided more than **1,060 replacement cartridges** for PFAS-reducing filters.
- Sampled more than **400 drinking water wells** that had not been previously sampled.
- Re-sampled more than **820 drinking water wells** that had been sampled in previous years.



Health: Research and Biomonitoring



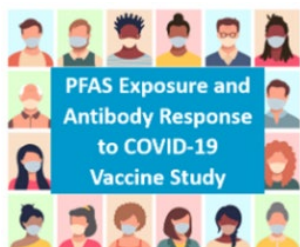
The North Kent County Exposure Assessment is an investigation to understand exposure to PFAS in the Belmont and Rockford areas of Kent County. Over 400 adults and minors participated. Data collection was completed in 2019. All participants learned their blood PFAS levels. The [first report of findings](#) has been published and a second report is in progress.



The Michigan PFAS Exposure and Health Study (MiPEHS) is a longitudinal cohort study designed to understand the effects of PFAS exposure on health. Over 1,600 people have enrolled in MiPEHS so far. The second phase of data collection has ended and the third and final phase will begin in 2025. All participants from phase 1 have learned their blood PFAS levels and health test results, and result letters from phase 2 are currently being mailed. The [first summary report of findings](#) has been published, and more publications are underway.



The Multi-site Health Study (MSS) is a national cross-sectional study designed to research the effects of PFAS exposure on health. Over 600 Michiganders joined others from around the US to participate. Data collection for MSS has ended and data analysis will begin soon. Participants will learn their blood PFAS levels and the results of their health tests.



The PFAS exposure and antibody response to COVID-19 vaccine study uses a longitudinal design to understand an important area of PFAS health effects. Over 250 people participated in this cutting-edge research. Data collection and analysis has been completed. All participants learned their blood PFAS levels. Results were [published in a leading environmental health scientific journal \(nature.com\)](#).



The PFAS in Firefighters of Michigan Surveillance (PFOMS) project is a statewide initiative with the primary goal of determining blood concentrations of PFAS in Michigan firefighters. Over 1,000 firefighters were enrolled before the end of data collection in September 2023. Data analysis has begun. To date, 96% of participants have learned their blood PFAS levels. The PFOMS project was recently highlighted in an article on the Centers for Disease Control and Prevention's (CDC) website regarding their partnership to reduce PFAS exposures in Michigan firefighters.



The Michigan Chemical Exposure Monitoring project is a statewide biomonitoring surveillance effort with the goal of characterizing the amount of 197 chemicals – including lead, mercury, and PFAS – in the blood and urine of adult Michiganders. Recruitment started in September 2022 and over 700 Michigan adults have participated. The project will collect data from at least 700 more through 2024. Participants will learn their results for PFAS and other environmental chemicals.



The Oscoda Area Exposure Assessment is an investigation to understand exposure to environmental chemicals, including PFAS, among residents of the Oscoda area. Over 600 Oscoda area residents are enrolled in the project. Recruitment and data collection is ongoing and will continue throughout 2024. Participants will learn their results for PFAS and other environmental chemicals.

MDHHS Mobile Lab

In FY2023, the MDHHS also rolled out their Mobile Lab. The Mobile Lab is designed to support the work of the MDHHS Division of Environmental Health. The Mobile Lab is a 38-foot-long vehicle that allows for efficient and equitable sample collection for biomonitoring, surveillance, and research projects in Michigan. It is staffed with Commercial Class A/B drivers, phlebotomists, clinic coordinators, and lab technicians from the MDHHS Bureau of Laboratories. As of 10/31/23, the Mobile Lab has been in the field for 42 weeks and has traveled over 11,000 miles to 18 unique locations throughout Michigan supporting the MiChEM Project.



Looking Forward

In FY2024 MPART will:

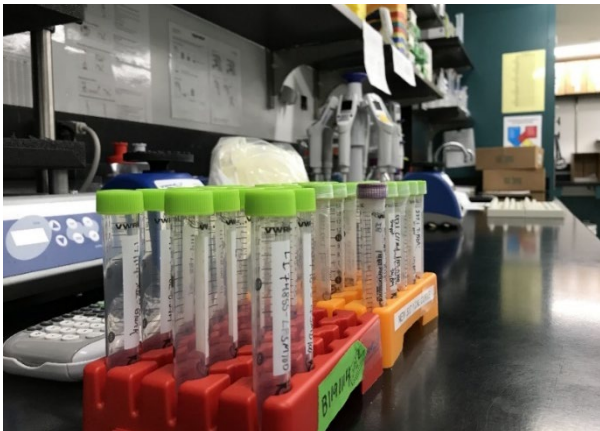
- Continue to track public water supplies approaching criteria to guide further sampling/investigations.
- Implement proactive sampling of residential wells near where firefighters conducted **fire training** using AFFF, including testing nearby residential wells.
- Continue the **AFFF pickup and disposal program** to remove AFFF from fire departments and airports.
- Work with industry and other partners on AFFF foam replacement
- Develop and issue a Request for Proposals (RFP) for \$2M set aside for cleaning out fire trucks at airports.
- Develop and issue an RFP for next phase of airport grants—testing/monitoring and remediation.
- Work with more communities to apply for and implement **infrastructure projects**, such as connecting more residents to municipal water supplies.
- Continue to **identify sources** of PFAS and hold responsible parties accountable for investigation at sites.
- Continue to **sample drinking water wells** near sources of PFAS and continue to keep residents informed.
- Continue to conduct **residential resampling** around select contaminated PFAS sites.
- Continue **implementation of health studies**.
- Launch a “Resources for Residents” page so residents can find information easier, such as residential well sampling “how to” and consumers products information.



Examples of aqueous film forming firefighting foam (AFFF) collected by MPART

Needs:

- Funding and resources to focus on **informing and educating the public** about PFAS.
- Funding to support residents who want to self-sample their **private residential well**.
- Funding to help MPART be **more proactive in sampling types of sources** in a coordinated approach, such as remaining plating facilities, priority landfills and dumps and other sources, and to evaluate the nearby residential wells that could be contaminated. Without additional resources, it will take many, many years to identify sites in Michigan.
- Funding **to support municipalities** with impacts to their wastewater treatment plants and contaminated site clean-up identified in their communities.



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