

MPART PFAS Community Meeting  
Riverside Sand and Gravel Landfill and Surrounding  
Millennium Park

The Webinar will Begin Shortly

May 17, 2022

MPART

# Webinar Housekeeping



All lines are muted during the webinar.



We are recording this webinar

# How to ask a question in Zoom



Submit your questions using the “Q/A” box in at the bottom of your screen.



Click the “hand” icon at the bottom of your screen.



Type #2 to raise your hand.

**#2**

# MPART PFAS Community Meeting - Riverside Sand and Gravel Landfill and Surrounding Millennium Park

---

Abigail Hendershott, MPART Executive Director  
Michigan PFAS Action Response Team  
(616) 888-0528

[HendershottA@Michigan.gov](mailto:HendershottA@Michigan.gov)

# Introductions, Logistics and Agenda

- Introductions – Abigail Hendershott, MPART Executive Director
- Agenda:
  - MPART Overview – Heidi Hollenbach, Michigan Department of Environment, Great Lakes, and Energy (EGLE)
  - Health – Rosa Jaiman, Michigan Department of Health and Human Services
  - Investigation Area – Kent Walters, EGLE
  - MPART Website – Abby
- Logistics/Housekeeping – Q&A at the end; how to ask questions – Michael Gurnee
- Q&A

*\*\* This meeting is being recorded.\*\**

# MPART Overview

---

Heidi Hollenbach, Regional PFAS Lead

Michigan Department of Environment, Great Lakes, and Energy

616-540-1136

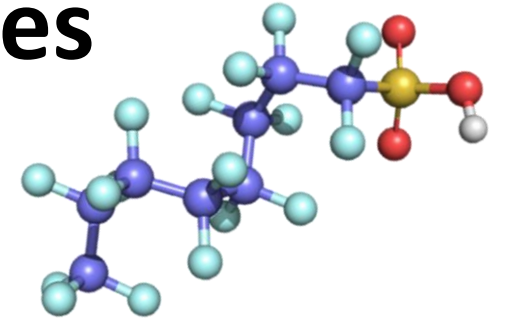
[HollenbachH@Michigan.gov](mailto:HollenbachH@Michigan.gov)

# Michigan PFAS Action Response Team (MPART)



- Executive Order 2019-03
- Unique Multi-Agency Approach
- Leads Coordination and Cooperation Among All Levels of Government
- Directs Implementation of State's Action Strategy

# Per- and Polyfluoroalkyl Substances (PFAS)



## What are they?

- Strong Carbon-Fluorine Bonds
- Surfactants
- Highly Stable
- Repel Water, Oil, Fat, and Grease
- Began Developing in 1940s
- 5,000+ Compounds Today

## Why the concern?

- Widespread through the ecosystem
- Don't Break Down Easily - Hard to Get Rid of
- Bioaccumulate – Build Up in Our Bodies
- Some PFAS May Affect Health
- Some emerging science/information
- Lack of Federal Standards



# PFAS Uses



<https://www.sixclasses.org/videos/pfas>



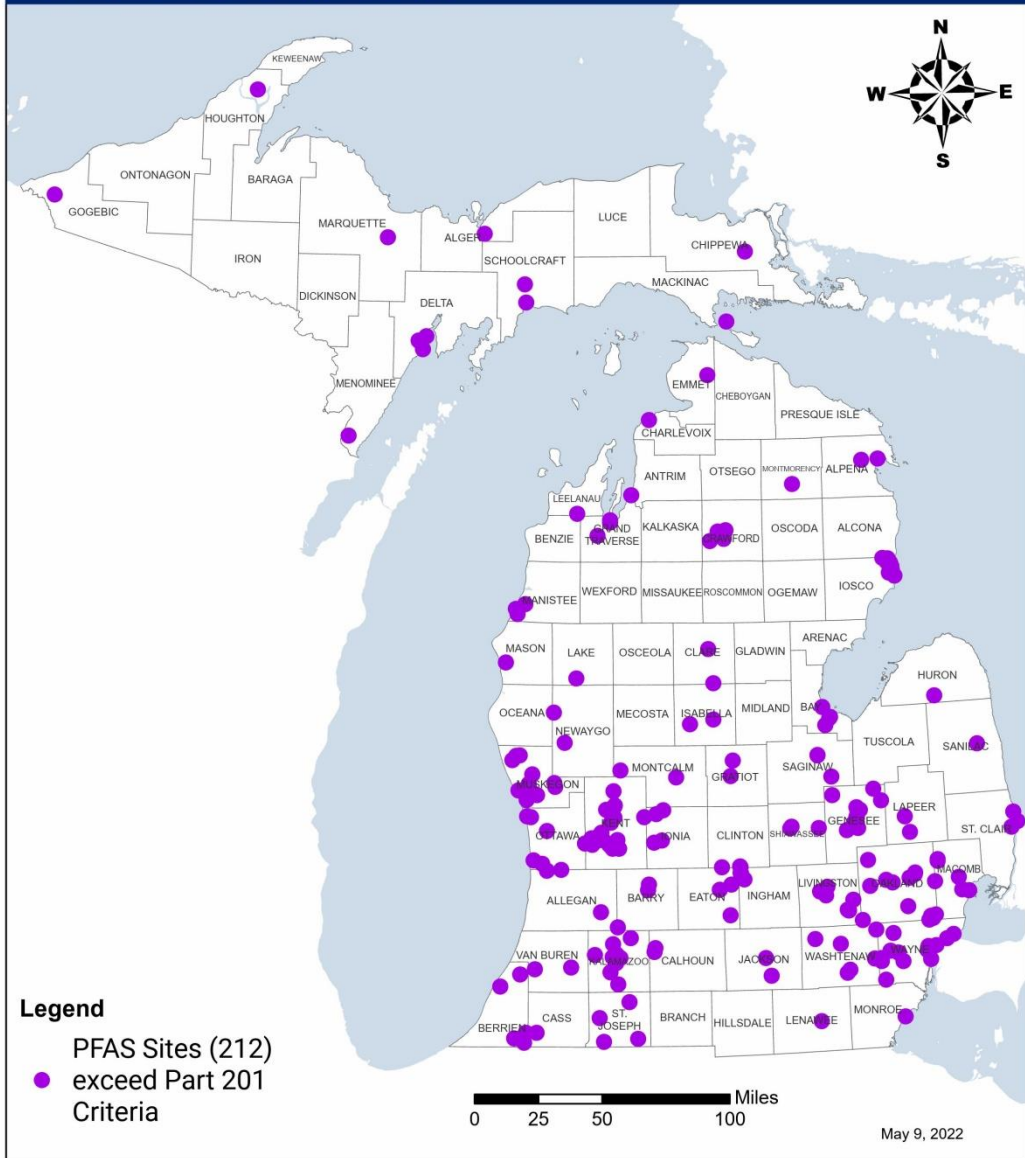
# Michigan PFAS Standards

Compound	Michigan Standards
PFNA	6 ppt
PFOA	8 ppt
PFOS	16 ppt
PFHxS	51 ppt
GenX (HFPO-DA)	370 ppt
PFBS	420 ppt
PFHxA	400,000 ppt



## Lakes and Streams Investigations

- Collecting water and fish samples

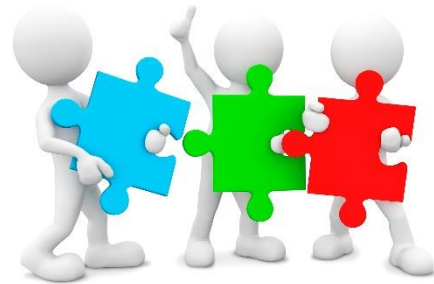
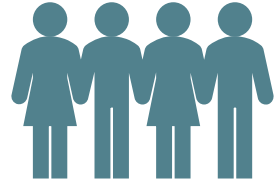


# Sites Being Investigated

- Prioritized Investigations Based on Known or Suspected Sources, Potential for Exposure
- Protect Drinking Water Pathway
- Multiple Other Investigations Underway

# Citizens Advisory Workgroup

- Residents From Impacted Communities
- Key Charges:
  - Recommend How to Engage and Empower Communities
  - Recommend How to Educate the General Public



# PFAS and Health

---

Rosa Jaiman, Toxicologist  
Michigan Department of Health and Human Services  
517-331-1049  
[JaimanR@Michigan.gov](mailto:JaimanR@Michigan.gov)

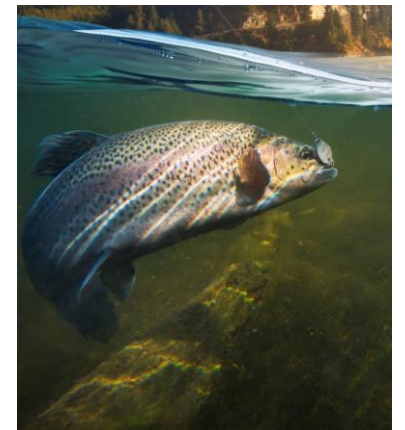
# The Role of MDHHS/ Local Health Department (LHD)

- Understand the health concerns facing your community
- Develop a plan to investigate and address health risks
  - EGLE leads the site investigation
  - MDHHS and the Local Health Department lead the public health planning and response
- Evaluate PFAS exposures to residents in the community
  - Recommend public health actions as needed

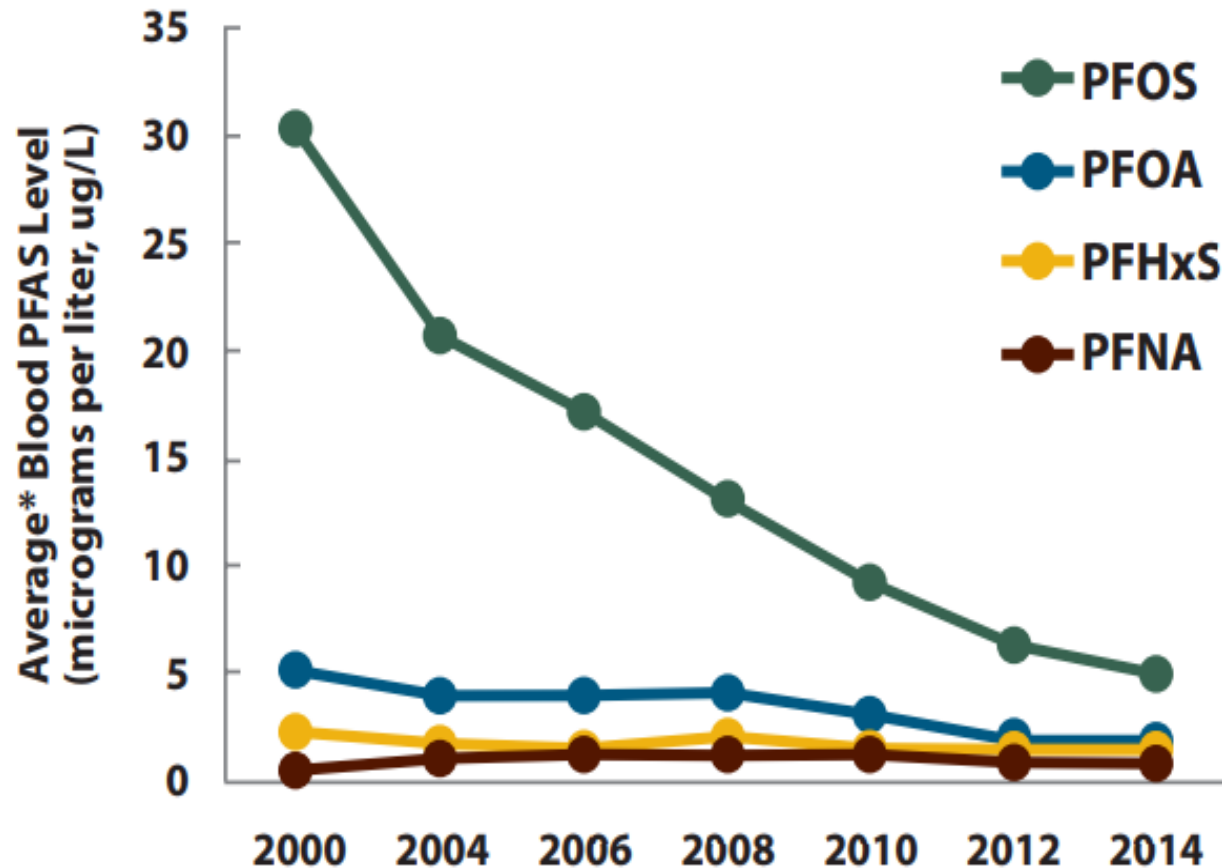


# Exposure to PFAS Chemicals

- Drinking contaminated water
- Eating fish caught from water contaminated by PFAS
  - “Eat Safe Fish” Guidelines
- Incidental swallowing of contaminated soil or dust
- Eating food packaged in materials containing PFAS
- Using some consumer products
- PFAS absorption through skin is typically not a concern



# Blood levels of the most common PFAS in people in the United States 2000-2014



\* Average = geometric mean

**Data Source:** Centers for Disease Control and Prevention. Fourth Report on Human Exposure to Environmental Chemicals, Updated Tables, (January 2017).

# Associated Human Health Outcomes PFOA and/or PFOS

- Reduced fertility
- High blood pressure or pre-eclampsia in pregnant women
- Small decreases in infant birth weight
- Higher cholesterol
  - Especially total cholesterol and LDL cholesterol

# Associated Human Health Outcomes PFOA and/or PFOS

- Thyroid disease
- Liver damage
- Decreased immune system response to vaccines
- Developing certain types of cancer
  - In particular, kidney and testicular cancers\*

\* PFOA only

# eat safe fish

[Michigan.gov/eatsafefish](http://Michigan.gov/eatsafefish)

Learn about PFAS fish testing results



From the Eat Safe Fish Website – Click Here

## Grand River

(between Webber Dam in Ionia Co. and Grand Haven in Ottawa Co.)

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month <sup>a</sup>
Carp	PCBs	Any	Limited <sup>Δ</sup>
Catfish	PCBs	Any	1 <sup>2x</sup>
Northern Pike	PCBs	Under 30"	2 <sup>2x</sup>
	PCBs & Mercury	Over 30"	2
Suckers	PCBs	Any	1 <sup>2x</sup>
Walleye	PCBs	Any	6 Per Year <sup>Δ</sup>


Limited

If you:

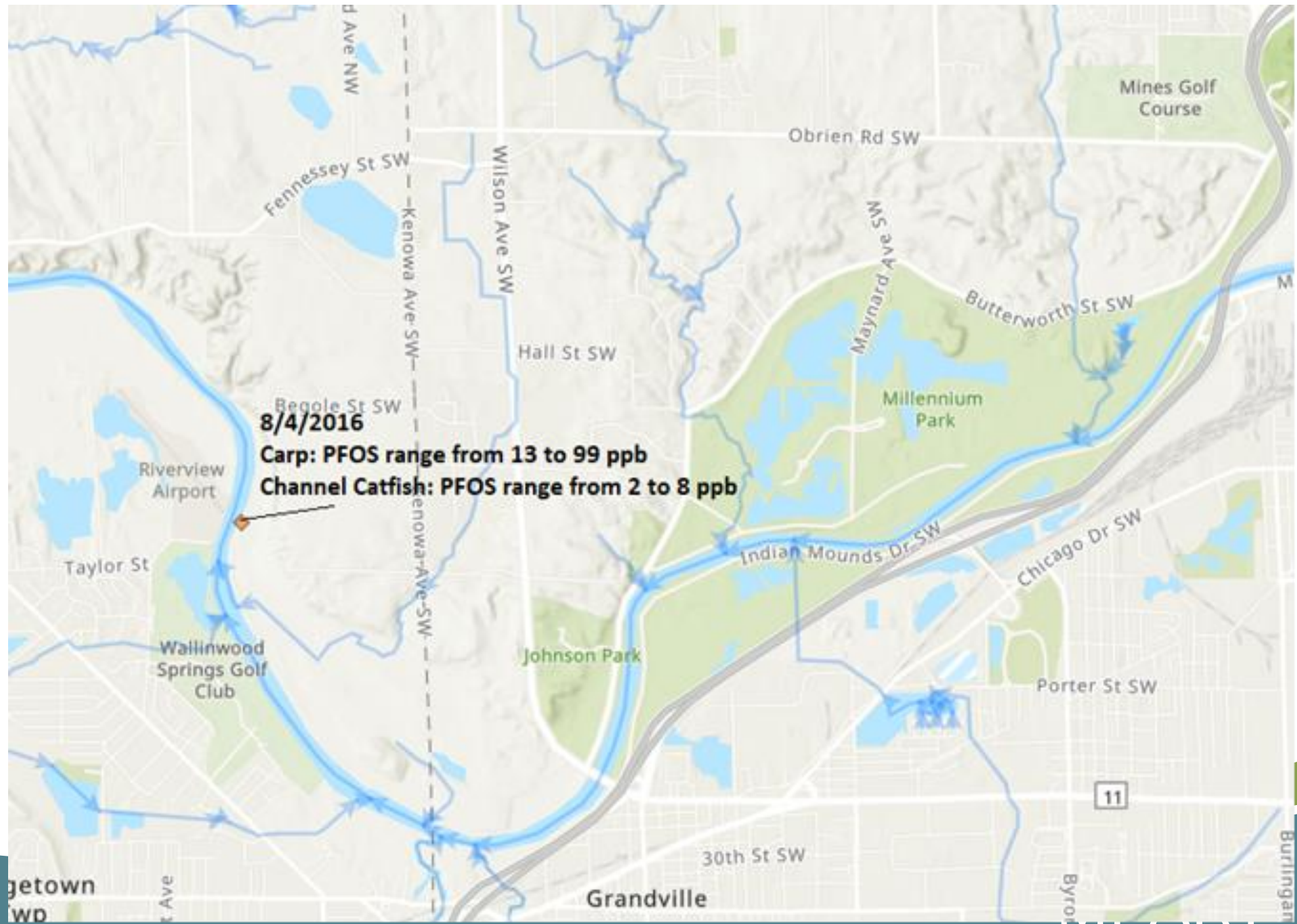
- are under the age of 15,  
-or-
- have health problems, like cancer or diabetes,  
-or-
- are planning on having children in the next several years, currently pregnant, or breastfeeding,

MDHHS suggests you avoid eating all fish listed as "Limited" because of higher levels of chemicals.

If **NONE** of the above apply to you, it is usually OK to eat fish listed as "Limited" **1 or 2 times each year.**



# Fish Monitoring



# Riverside Sand and Gravel Landfill Site Investigation

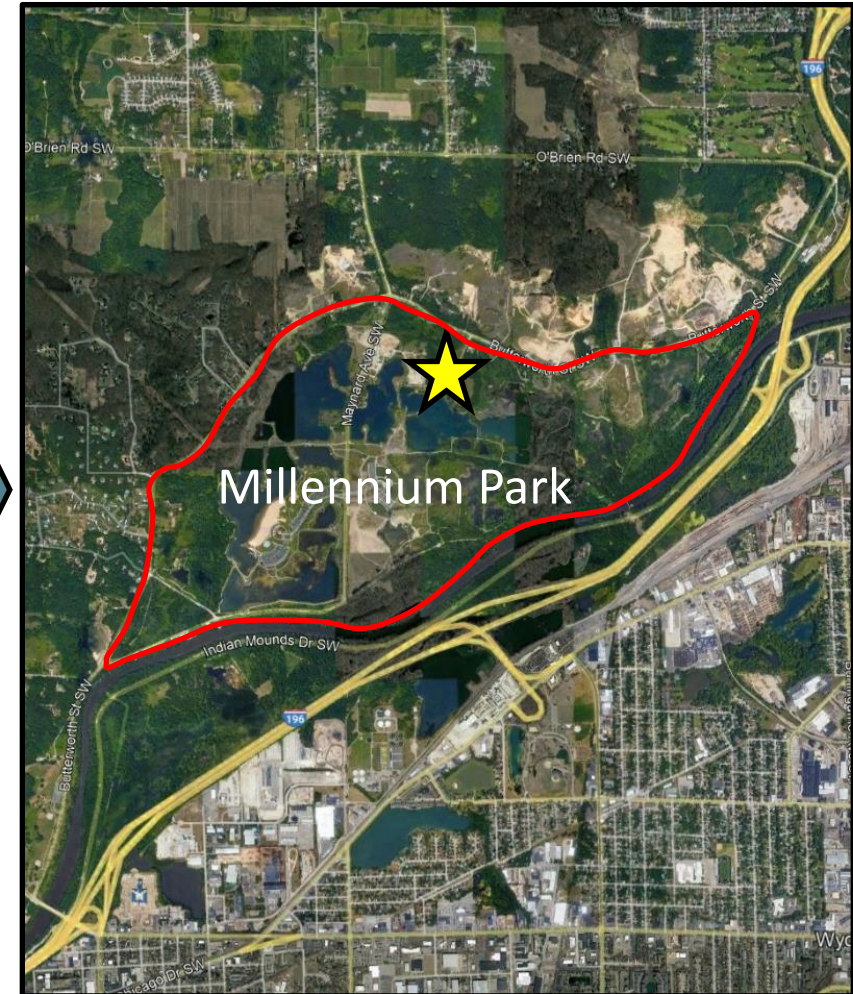
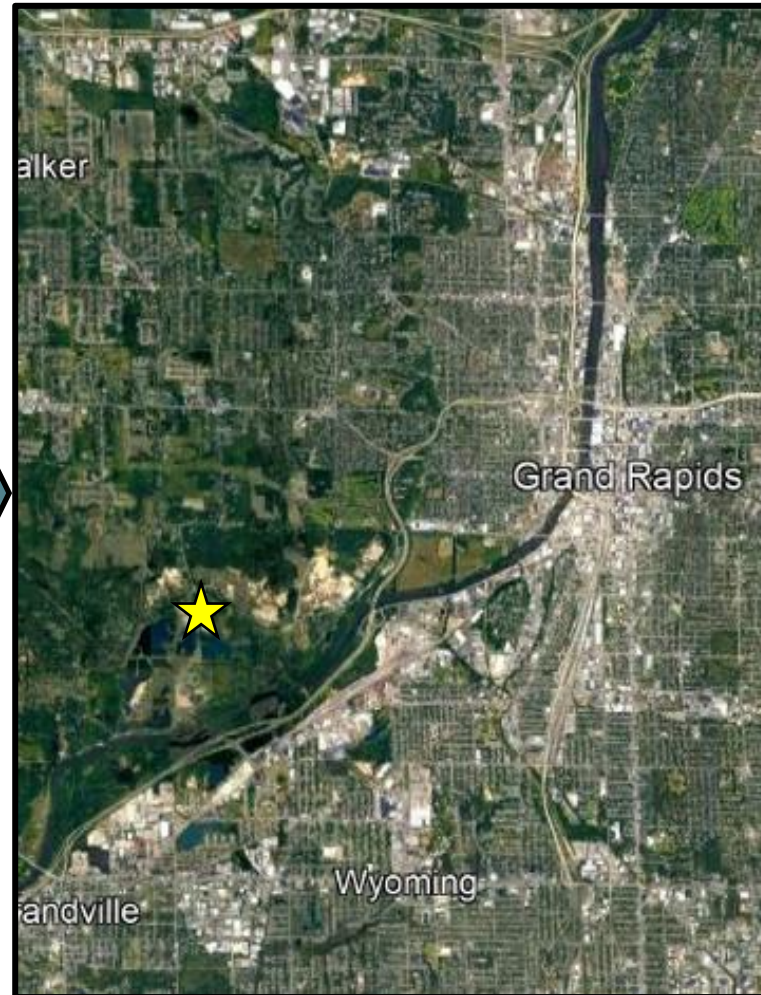
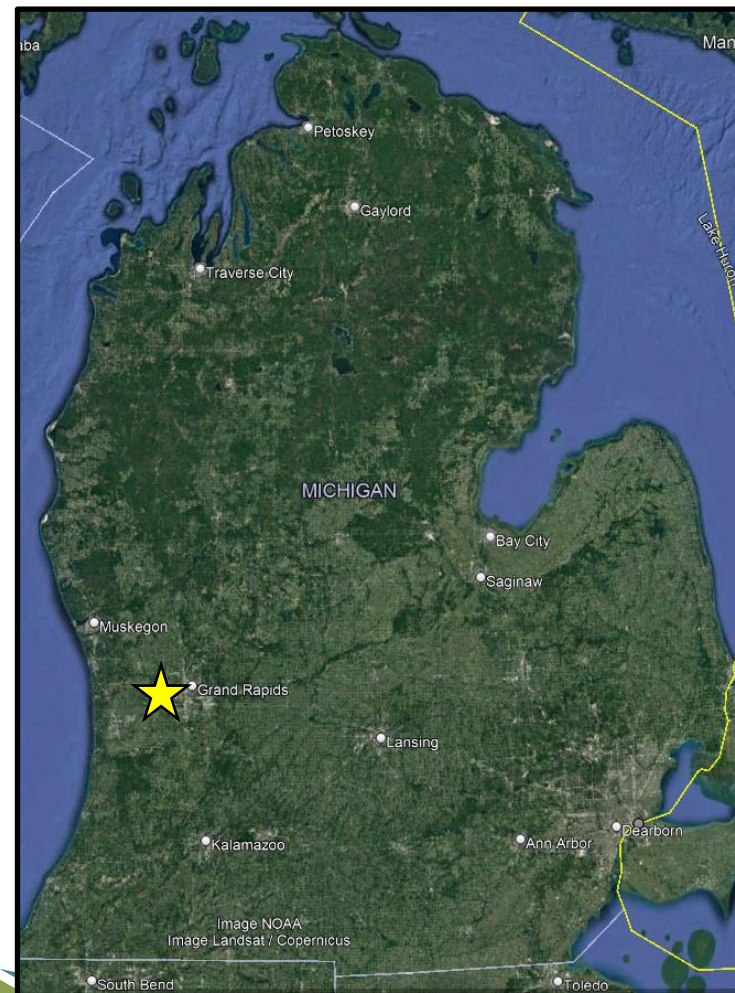
---

Kent Walters, PFAS Site Lead  
Michigan Department of Environment, Great Lakes, and Energy

[WaltersK7@Michigan.gov](mailto:WaltersK7@Michigan.gov)

616-278-4350

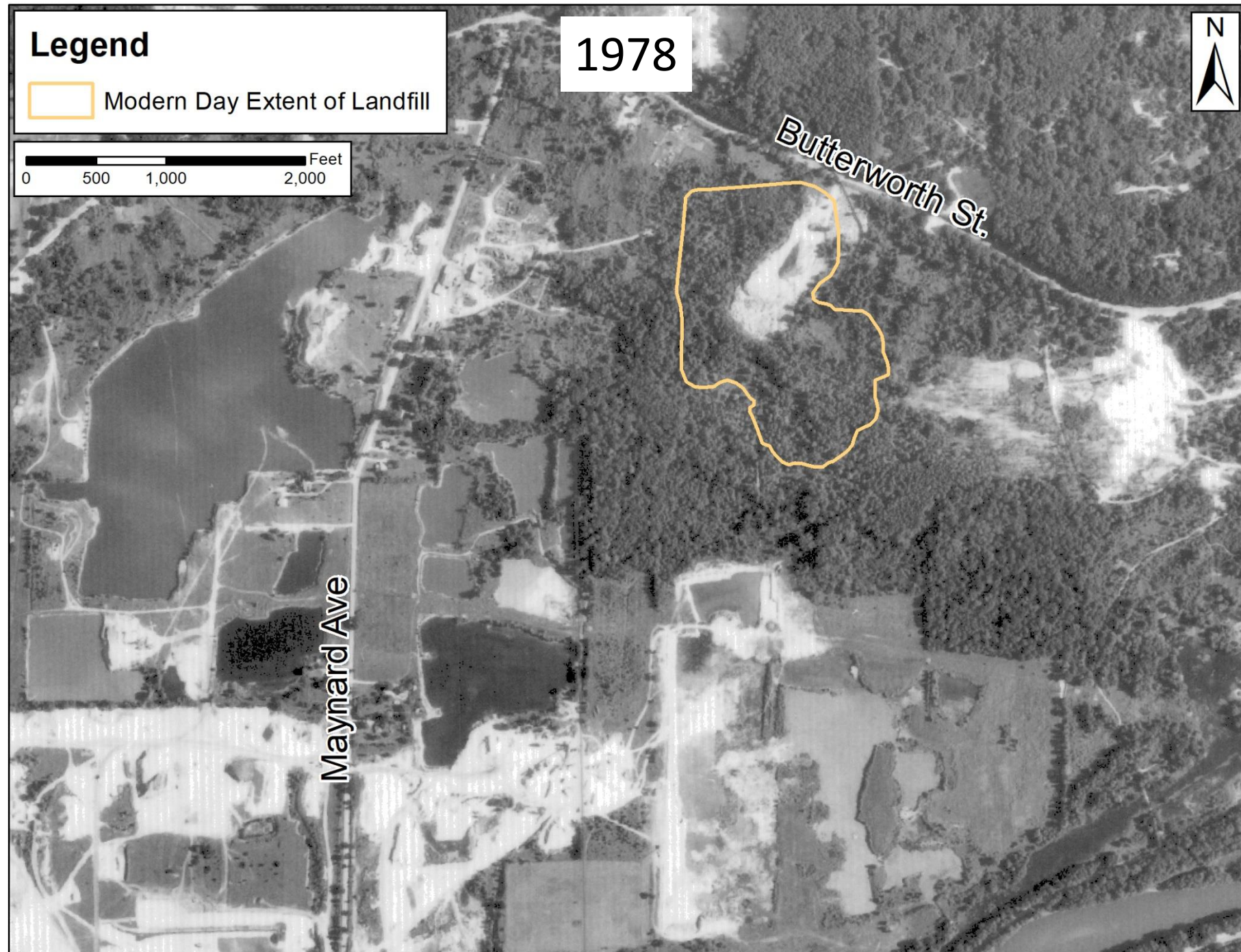
# Riverside Sand and Gravel Landfill Location





# Why Sample for PFAS?

- Unlined Landfill.
- Construction and Demolition Landfill but did accept other wastes.
- Documented impacts to groundwater downgradient of the waste disposal area.



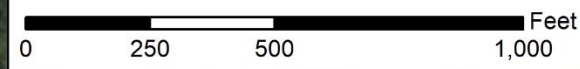
# Groundwater Sample Location and Results Map



Leachate Seep Sampling

## Riverside Sand and Gravel Landfill Regulated PFAS Sampling Results December 2, 2021

- Groundwater Sample
- △ Seep Sample
- Non-Detect
- Detection
- Exceedance
- Approximate Groundwater Flow Direction
- Approximate Landfill Extent



Compound	Michigan Standards
PFNA	6 ppt
PFOA	8 ppt
PFOS	16 ppt
PFHxS	51 ppt
GenX (HFPO-DA)	370 ppt
PFBS	420 ppt
PFHxA	400,000 ppt

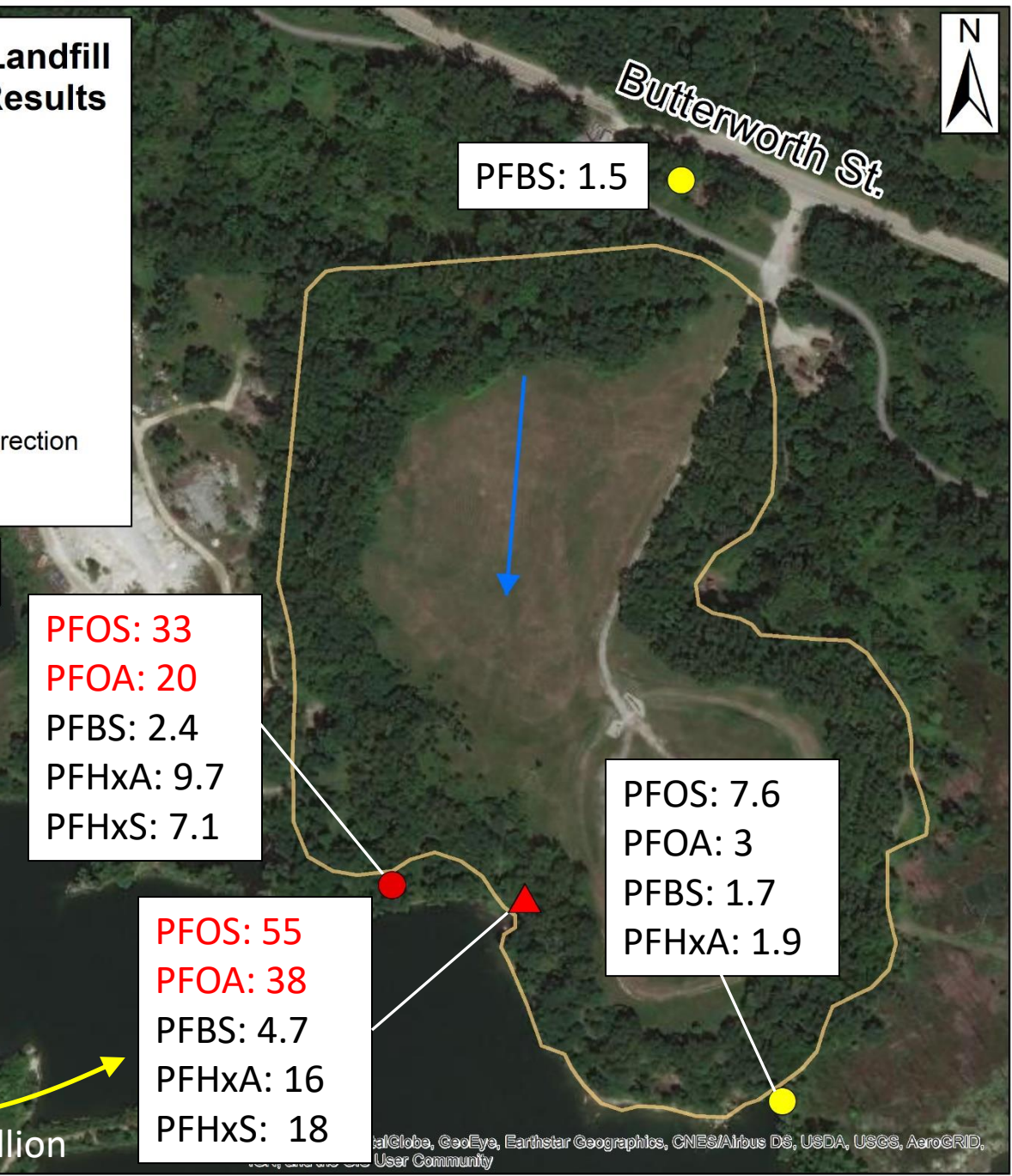
\*all results are in parts per trillion

PFOS: 33  
PFOA: 20  
PFBS: 2.4  
PFHxA: 9.7  
PFHxS: 7.1

PFOS: 55  
PFOA: 38  
PFBS: 4.7  
PFHxA: 16  
PFHxS: 18

PFOS: 7.6  
PFOA: 3  
PFBS: 1.7  
PFHxA: 1.9

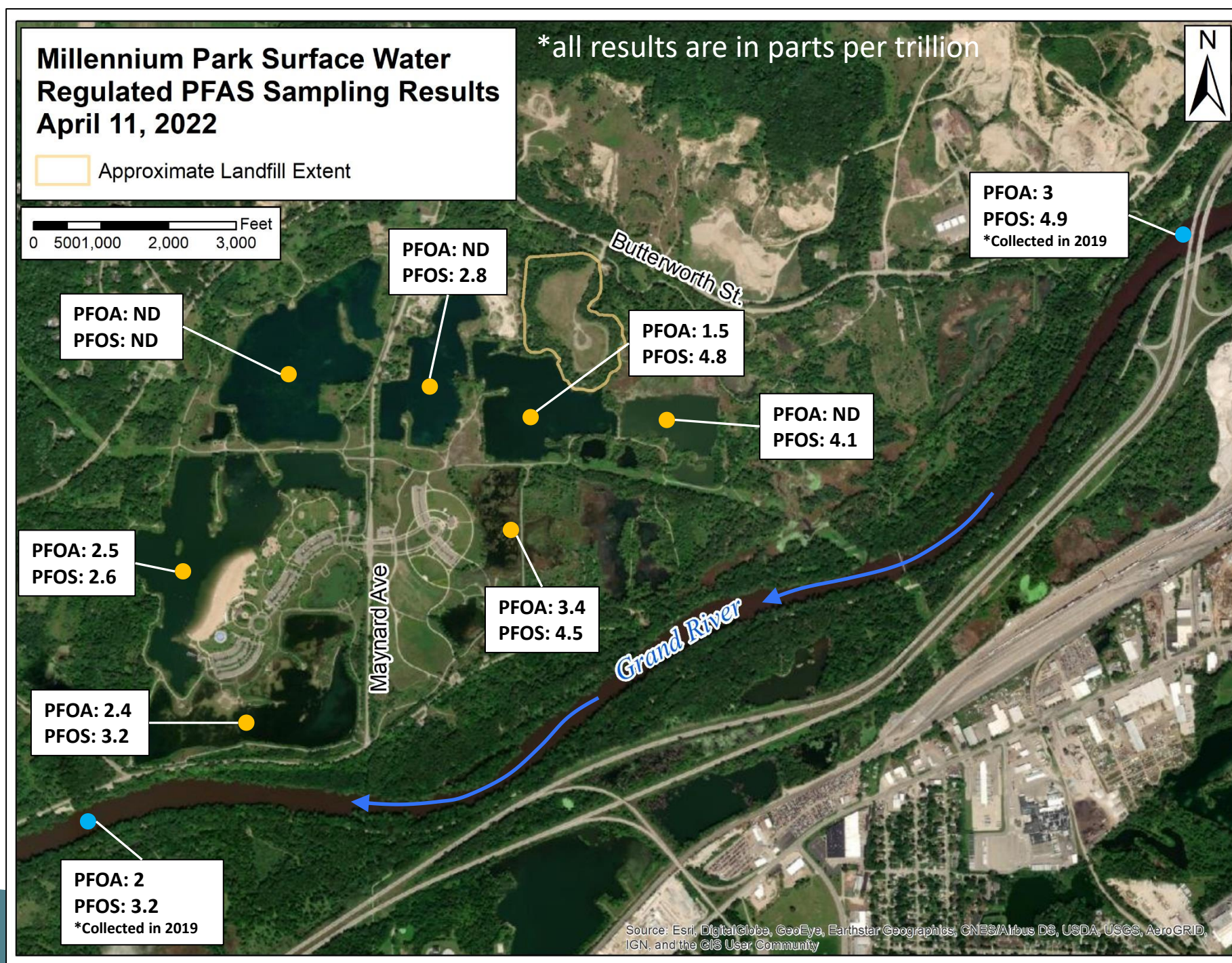
PFBS: 1.5



© 2021 Global, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, User Community

# Surface water Sample Location and Results Map

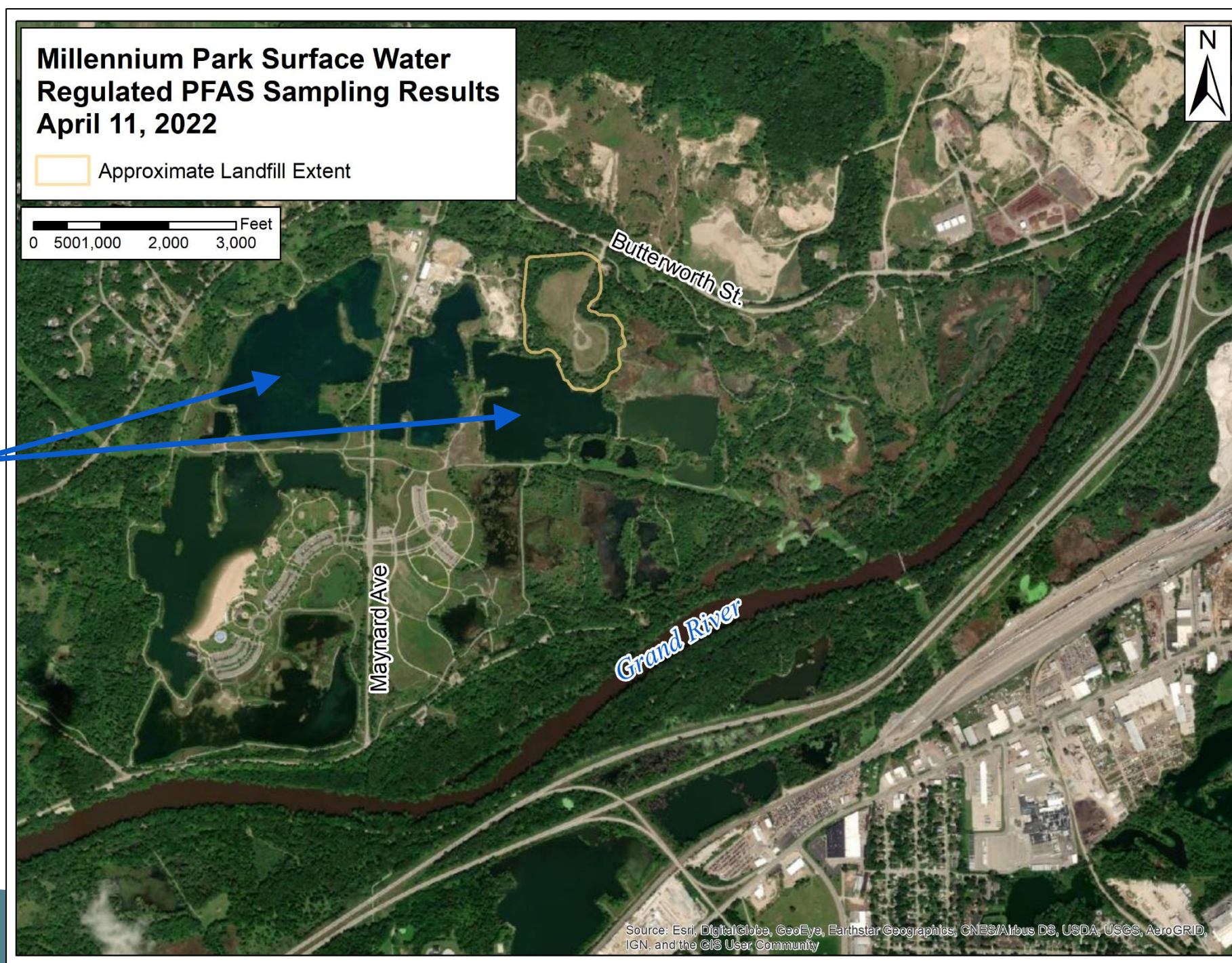
Compound	Michigan Surface Water Quality Values
PFOA	12,000 ppt
PFOS	12 ppt



# Fish Sampling

Blue Gill and Pumpkin Seed Sunfish Collected on May 12, 2022

- Results may not be available until 2023



# Site Summary

- Waste disposal in an unlined landfill with historical documented groundwater impacts
- One well and a landfill leachate seep downgradient of the disposal area exceed clean-up criteria
- All Millennium Park surface water samples were below water quality values
- No potential drinking water wells downgradient
- Fish collected for PFAS analysis on May 12, 2022

## **Next Steps:**

- Landfill owners to determine next steps to better define PFAS impacts.

# Public Drinking Water

The area is served by the City of Grand Rapids Community Water Supply

PFAS Compliance Sample Results:

- November 2020 – Non-Detect
- April 2021 – 2 ppt PFOS
- Annual compliance monitoring moving forward

# MICHIGAN PFAS ACTION RESPONSE TEAM (MPART)

[www.Michigan.gov/PfasResponse](http://www.Michigan.gov/PfasResponse)

The logo for the Michigan Department of Environment, Great Lakes, and Energy (EGLE). It features the letters 'EGLE' in a bold, sans-serif font. The 'E' is green, and the 'GLE' is blue. A white wave-like line runs through the middle of the letters.

MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY



# How to ask a question in Zoom



Submit your questions using the “Q/A” box in at the bottom of your screen.



Click the “hand” icon at the bottom of your screen.



Type #2 to raise your hand.

**#2**



# Questions?

## **Other Resources:**

Riverside Sand and Gravel PFAS Response Page:  
<https://www.michigan.gov/pfasresponse/investigations/sites-aoi/kent-county/riverside-sand-and-gravel-landfill>