



MPART PFAS Community Meeting  
Hillsboro Area of Interest

September 21, 2023

MPART

# MPART PFAS Community Meeting Hillsboro Area of Interest

---

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

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

# Introductions and Agenda

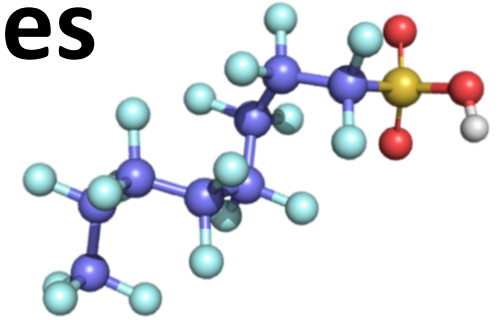
- Introductions – Abigail Hendershott, MPART Executive Director
- Agenda:
  - MPART Overview – Abigail Hendershott
  - Health – Rosa Jaiman, Michigan Department of Health and Human Services
  - Investigation Area – Brent Ritchie, Michigan Department of Environment, Great Lakes, and Energy
  - MPART Website – Abigail Hendershott
  - Q&A

# 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)



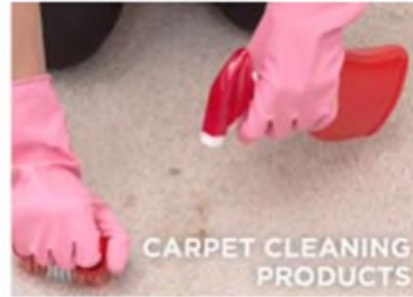
## What are they?

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

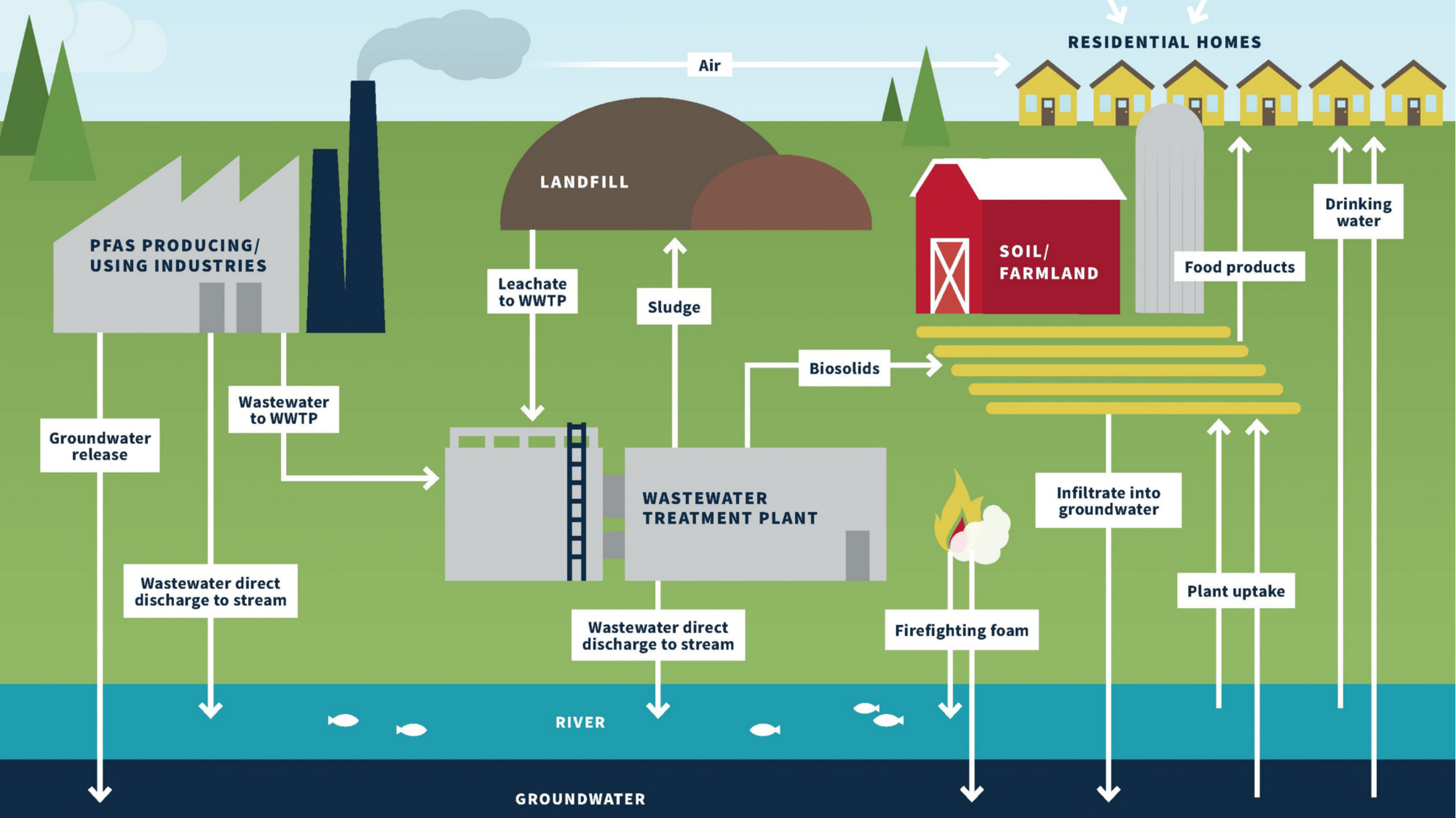
## Why the concern?

- 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

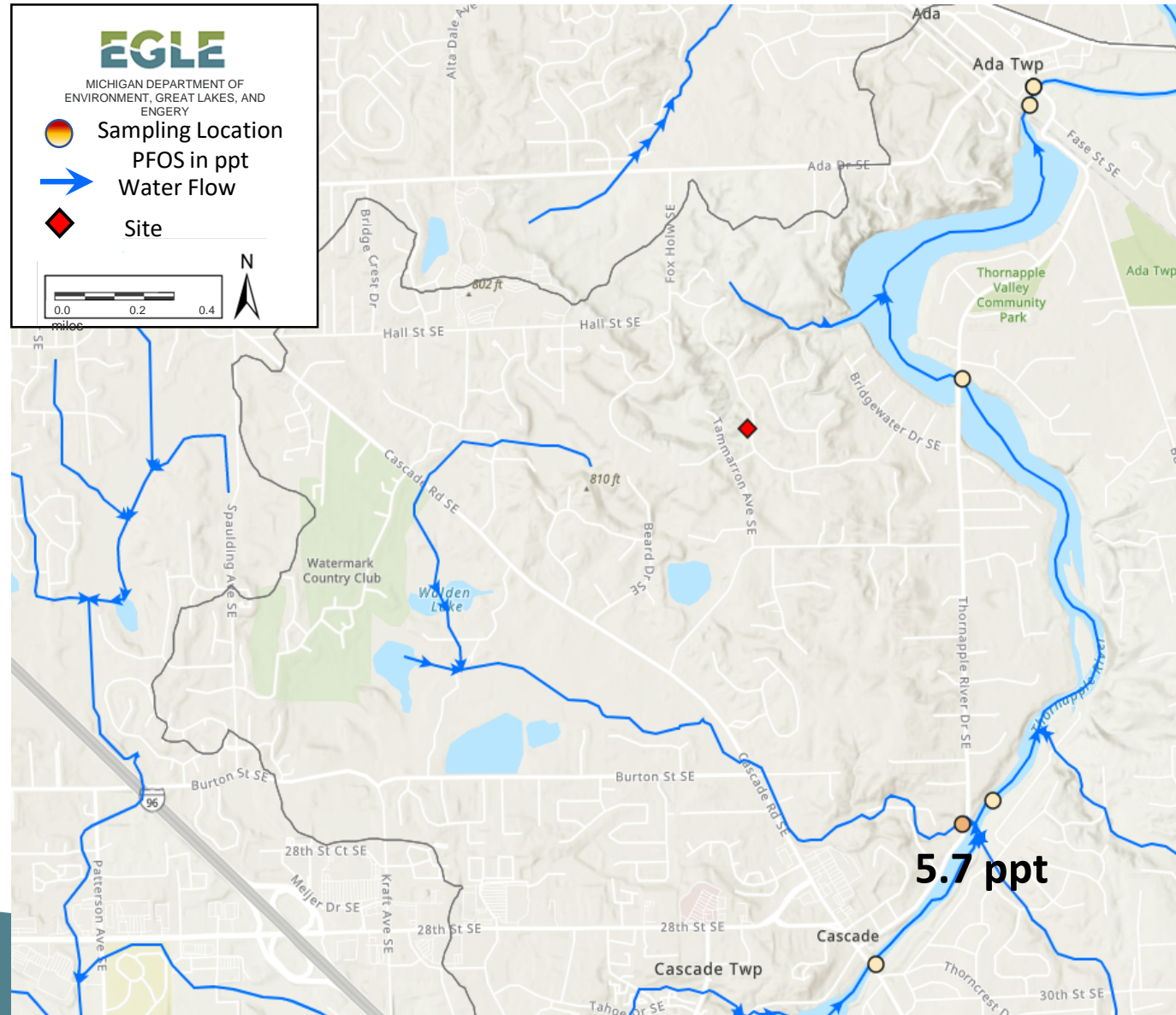
Compound	Michigan Standards
PFNA	6 ppt
PFOA	8 ppt
PFOS	16 ppt
PFHxS	51 ppt
GenX (HFPO-DA)	370 ppt
PFBS	420 ppt
PFHxA	400,000 ppt

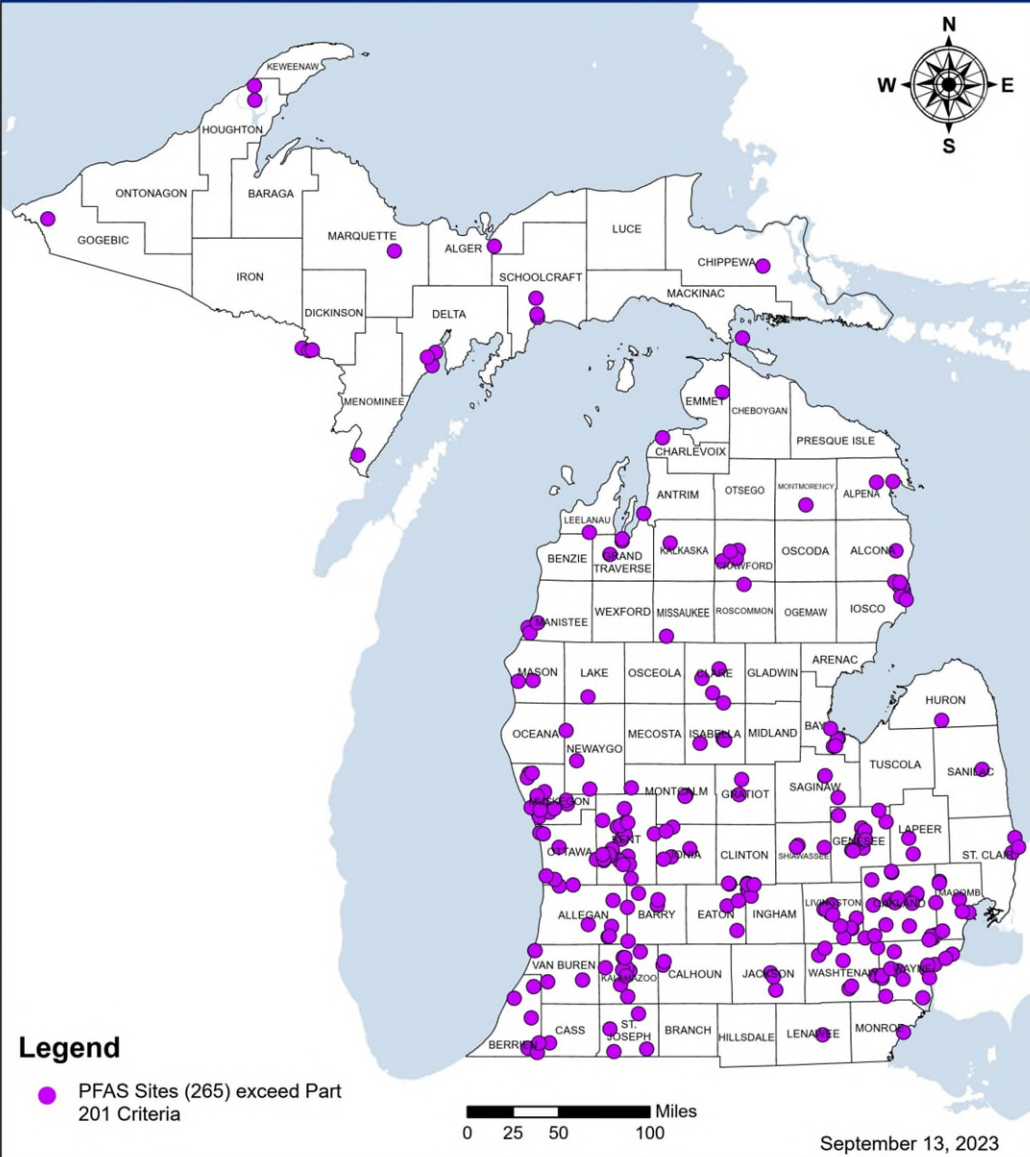


## Lakes and Streams Investigations

- Collecting water and fish samples

# Surface Water Data





## 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

[Michigan.gov/MPARTCAWG](https://Michigan.gov/MPARTCAWG)

- Residents From Impacted Communities
- Key Charges:
  - Recommend How to Engage and Empower Communities
  - Recommend How to Educate the General Public
- Residents interested in becoming a CAWG Member:
  - Read the [CAWG Charter](#)
  - Submit a [Membership Registration Form](#)



# PFAS and Health

---

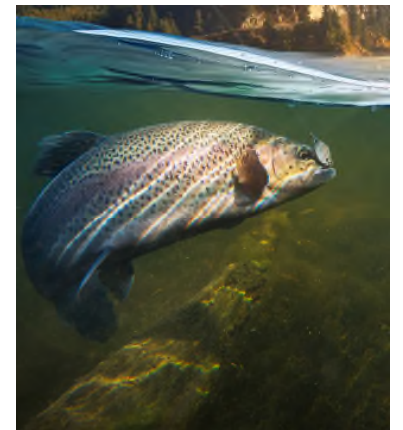
Rosa Jaiman, Toxicologist  
Michigan Department of Health and Human Services  
517-331-1049  
[JaimanR@Michigan.gov](mailto:JaimanR@Michigan.gov)

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

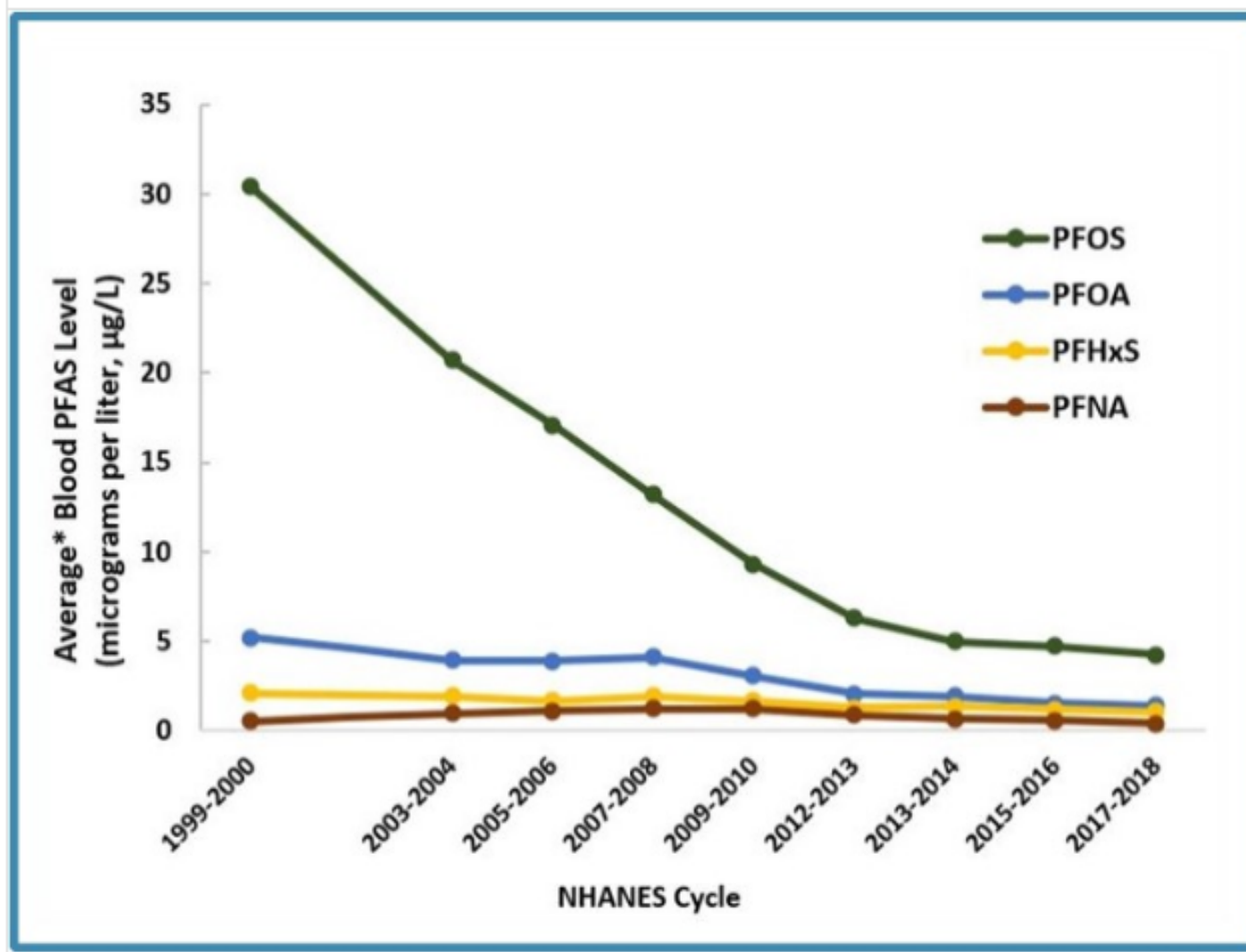
- Understand the health concerns facing your community
- Develop a plan to investigate and address health risks
  - EGLE leads the site investigation
  - MDHHS and the Local Health Department lead the public health planning and response
- Evaluate PFAS exposures to residents in the community
  - Recommend 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 2000-2018



# 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

# Multiple Lines of Consideration for Determining Public Health Response Actions

- MDHHS Comparison Values
- Residential Well Results (individually and collectively)
- Site-specific information (e.g., known source, geology, etc.)

# MDHHS Comparison Values

- MDHHS Comparison Values are the lowest of:
  - MDHHS Public Health Drinking Water Screening Level
  - MPART Health-Based Value or Maximum Contaminant Level (MCL)
- Both the MDHHS screening levels and the MCL were set to protect everyone
  - including those most at risk of harm to their health: fetuses and breastfed babies

# MDHHS Comparison Values




PFAS	Comparison Values
PFOS	8 ppt <sup>A</sup>
PFOA	8 ppt <sup>B</sup>
PFNA	6 ppt <sup>B</sup>
PFHxS	51 ppt <sup>B</sup>
PFBS	420 ppt <sup>B</sup>
PFHxA	400,000 ppt <sup>B</sup>
GenX	370 ppt <sup>B</sup>

A. MDHHS Public Health Drinking Water Screening Level

B. MPART Health-Based Value or Maximum Contaminant Level (MCL)

# Residential Well Results (individually and collectively)



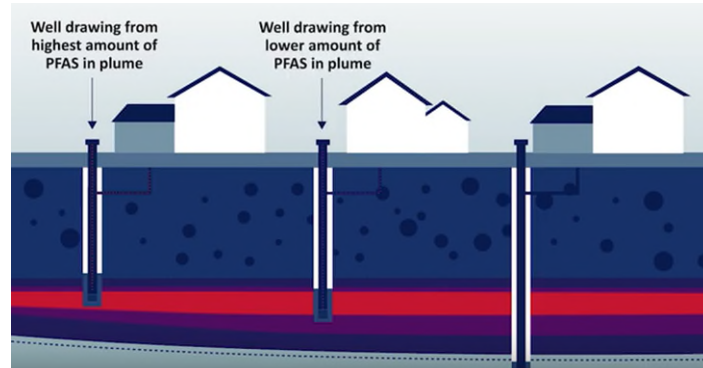
-  No Detection
-  Detected but less than the comparison value
-  Exceedance

# Site-Specific Information

## Known Source



## Geology



## Plume



# MDHHS/LHD

## Public Health Response Actions

- No public health actions necessary
- Recommend filter or use of alternate water
  - Need time to conduct investigation
  - Provides residents with protection from potential fluctuations in PFAS levels, if any, while investigation is ongoing
- Education
  - Provide information on PFAS in drinking water

# What to Look for When Selecting a Filter

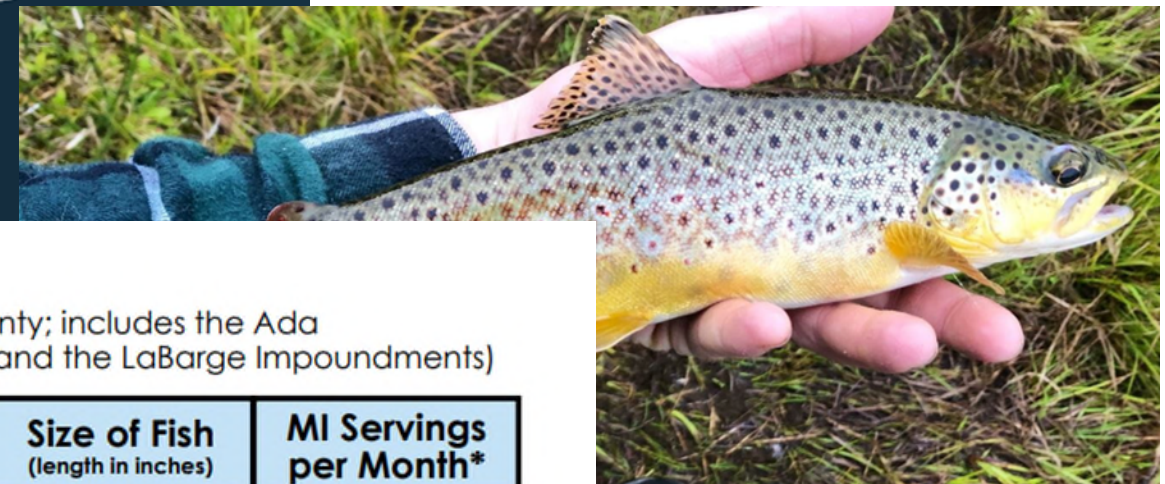


<http://bit.ly/PFASHomeFilter>

- Make sure the filter has a NSF/ANSI Standard 53 for PFOA and PFOS reduction.
- Follow all manufacturing instructions to make sure it is reducing the PFAS as expected.

# Eating Fish from Michigan's Lakes & Rivers

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



## Thornapple River

(downstream of Middleville Dam in Barry County; includes the Ada Impoundment, the Cascade Impoundment, and the LaBarge Impoundments)

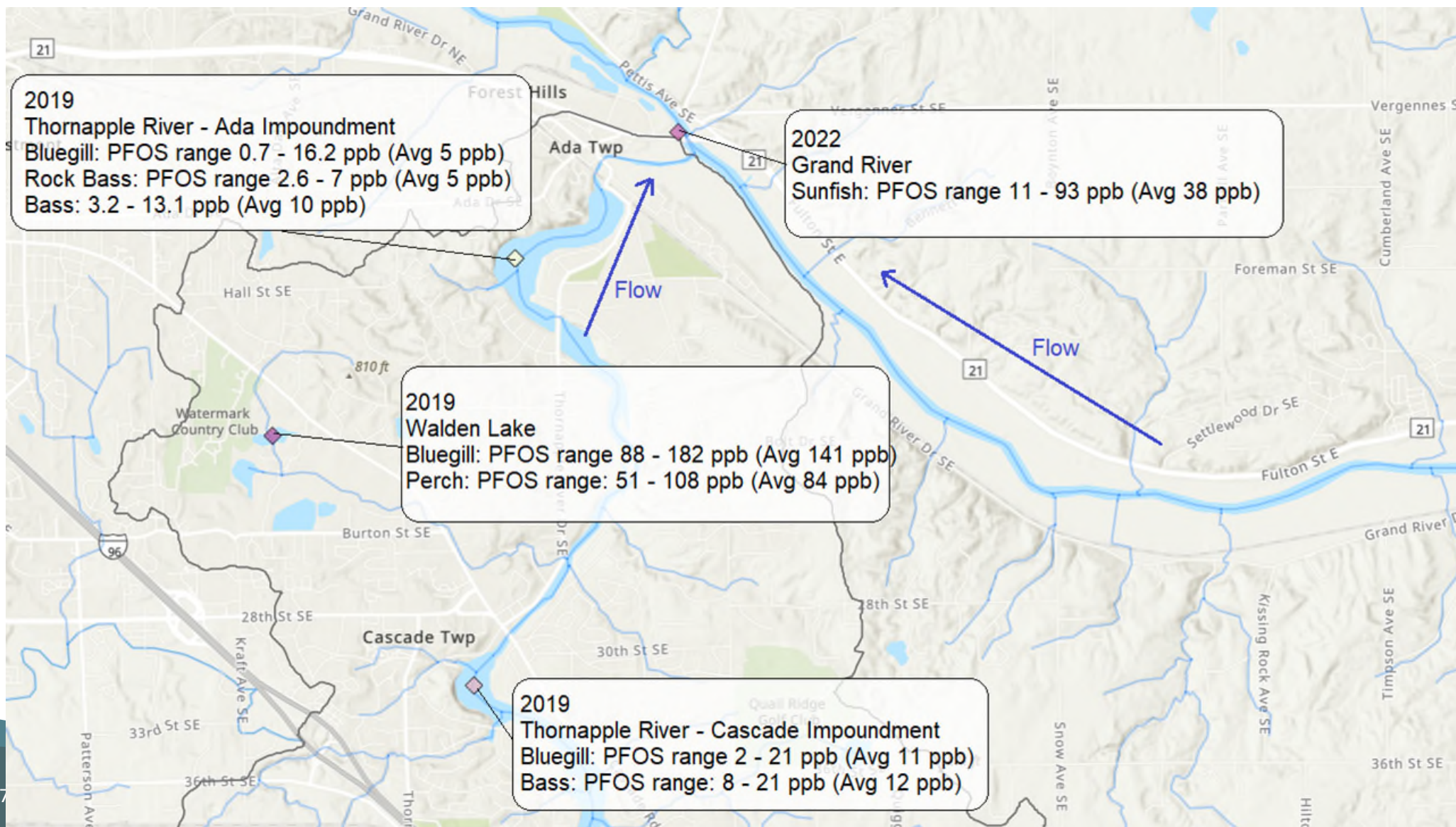


Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Bluegill	Mercury & PFOS	Under 6"	12
	Mercury	Over 6"	4
Carp	PCBs & Mercury	Any	2
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Rock Bass	Mercury	Any	4
Smallmouth Bass	Mercury	Under 18"	2
		Over 18"	1
Sunfish	Mercury & PFOS	Under 6"	12
	Mercury	Over 6"	4



PFOS can't be reduced by trimming and cooking. Do not double MI Servings.

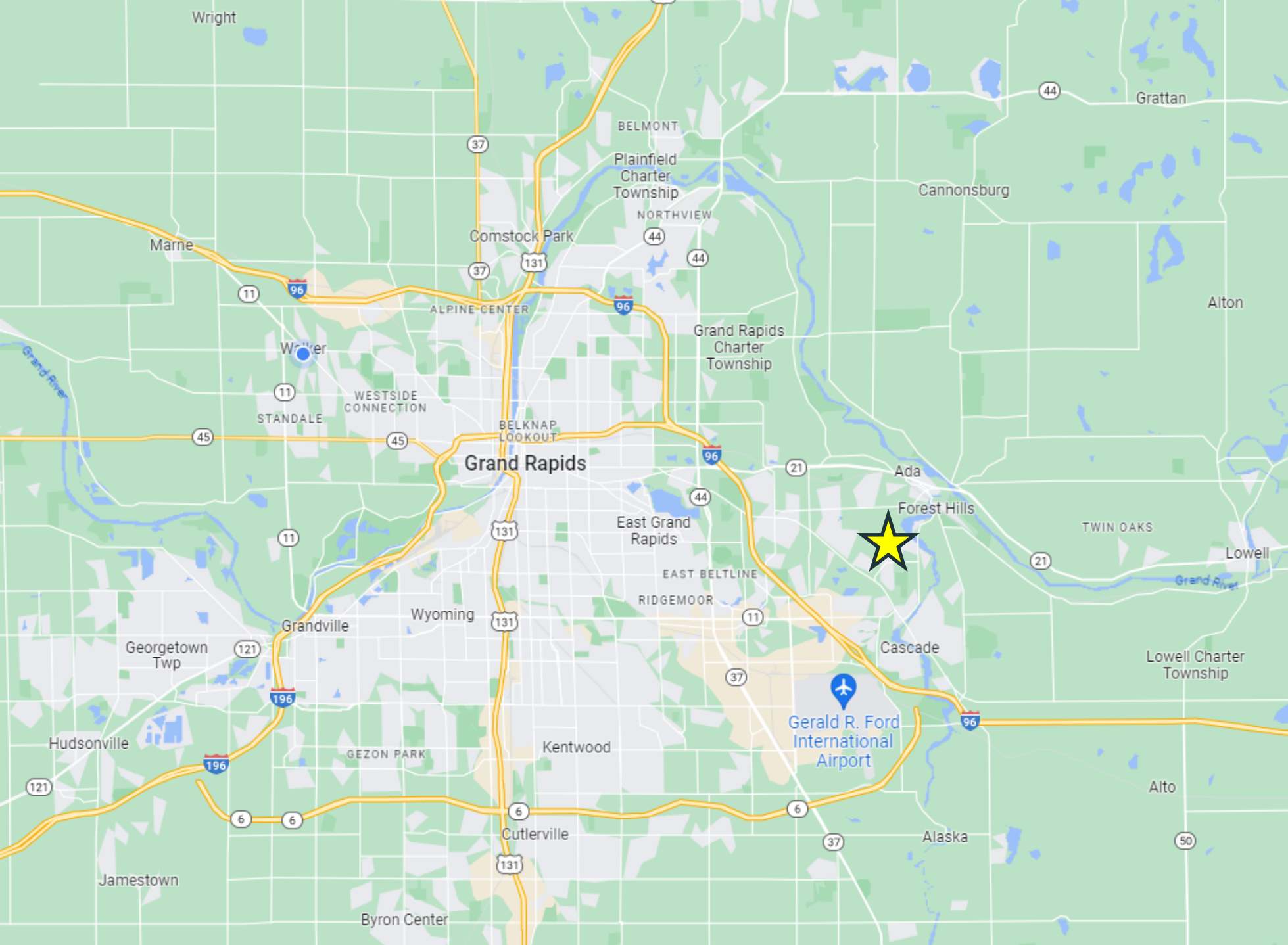
# Fish Sampling



# Hillsboro Area of Interest (AOI) PFAS Investigation

---

Brent Ritchie, PFAS Site Lead  
Michigan Department Environment, Great Lakes, and Energy  
616-581-1782  
[RitchieB1@Michigan.gov](mailto:RitchieB1@Michigan.gov)

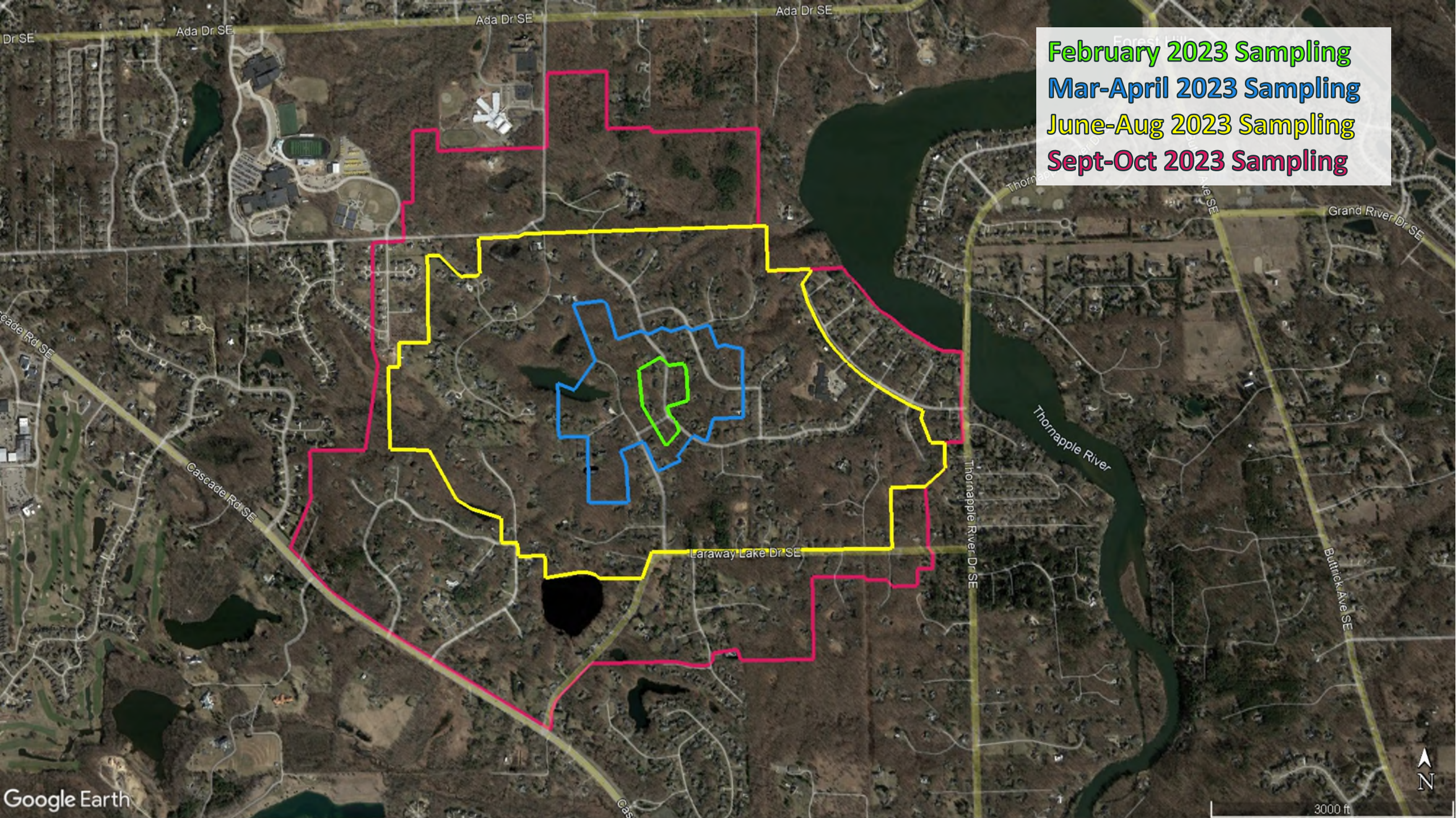


# Hillsboro Avenue AOI

# Why are we sampling?

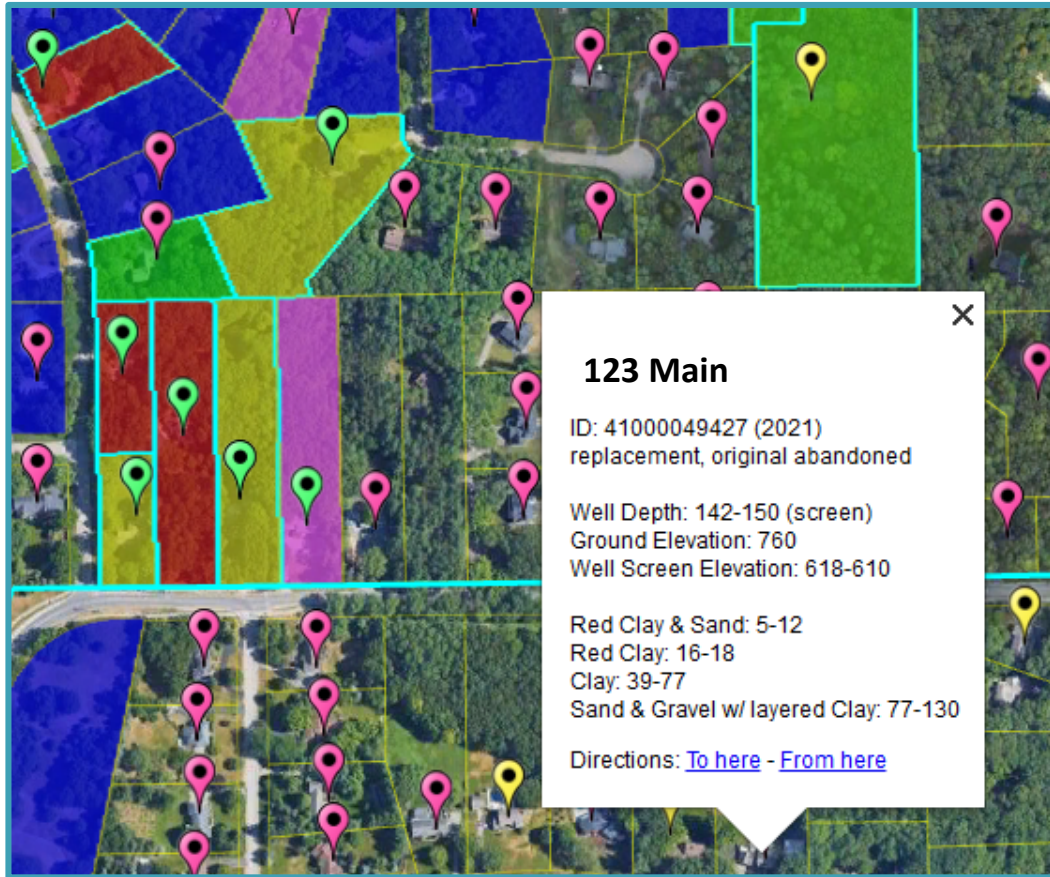
- A homeowner on Hillsboro Avenue SE tested their drinking water well independently and results showed PFAS levels exceeded criteria for PFOA (9.1 compared to 8 ppt).
- EGLE sampled drinking water wells from nearby homes in Feb 2023; March-April 2023; June-Aug 2023; and additional wells are being targeted for sampling in Sept-Oct 2023.
- EGLE does not know the source of the PFAS but is attempting to understand the extent of the PFAS impacted area.

February 2023 Sampling  
Mar-April 2023 Sampling  
June-Aug 2023 Sampling  
Sept-Oct 2023 Sampling



# HOW ARE SAMPLING LOCATIONS TARGETED?

- Proximity to previous sampling results



**DEQ** **Water Well And Pump Record** **Wellogic**  
 Completion is required under authority of Part 127 Act 368 PA 1978.  
 Failure to comply is a misdemeanor.

Import ID: \_\_\_\_\_ Permit No: \_\_\_\_\_ County: Kent Township: Cascade  
 Tax No: \_\_\_\_\_ Well ID: 41000001722 Town/Range: 09N 10W Section: 4 Well Status: Active WSSN: \_\_\_\_\_ Source ID/Well No: \_\_\_\_\_

Elevation: 770 ft.  
 Latitude: 42.930542  
 Longitude: -85.50428  
 Method of Collection: Interpolation-Map

Well Owner: \_\_\_\_\_ Owner Address: \_\_\_\_\_  
 Well Address: \_\_\_\_\_

Drilling Method: Rotary Well Use: Household  
 Well Depth: 180.00 ft. Date Completed: 7/28/1986  
 Well Type: New Casing Type: PVC plastic Height: \_\_\_\_\_  
 Casing Joint: Threaded & coupled  
 Casing Fitting: None  
 Diameter: 5.00 in. to 175.00 ft. depth

Borehole: \_\_\_\_\_

Static Water Level: 136.00 ft. Below Grade  
 Well Yield Test: \_\_\_\_\_ Yield Test Method: Unknown  
 Pumping level 0.00 ft. after 4.00 hrs. at 25 GPM

Screen Installed: Yes Filter Packed: No  
 Screen Diameter: 4.00 in. Blank: 0.00 ft. Above  
 Screen Material Type: Stainless steel-wire wrapped  
 Screen Installation Type: Unknown  
 Slot Length Set Between  
 15.00 5.00 ft. 175.00 ft. and 180.00 ft.

Fittings: Other

Well Grouted: Yes Grouting Method: Unknown  
 Grouting Material Bags Additives Depth  
 Bentonite slurry 0.00 None

Wellhead Completion: Pitless adapter

Nearest Source of Possible Contamination:  
 Type Distance Direction  
 Septic tank 100 ft. Northwest

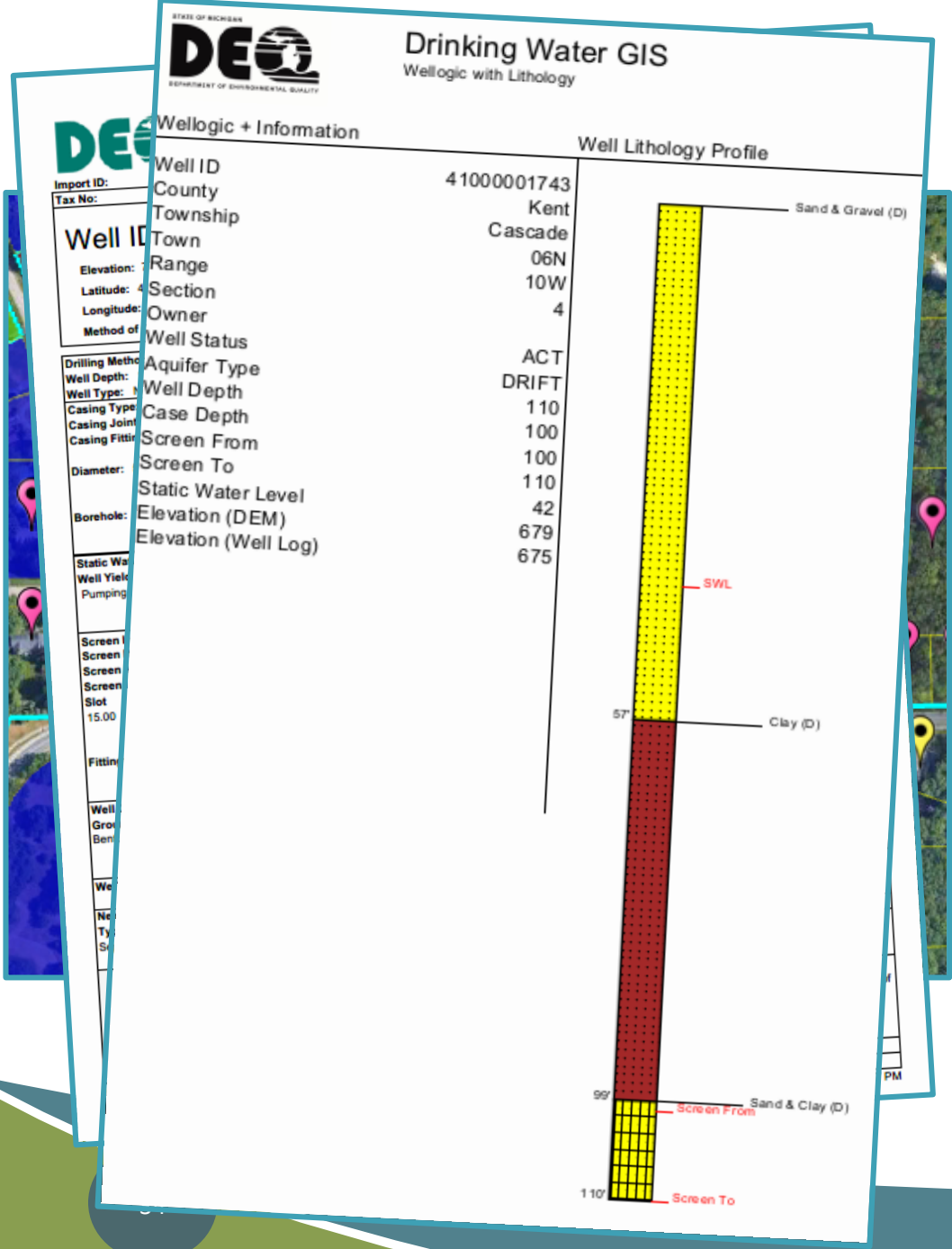
Drilling Machine Operator Name:  
 Employment: Unknown

Contractor Type: Water Well Drilling Contractor Reg No: 41-0384  
 Business Name:  
 Business Address:  
**Water Well Contractor's Certification**  
 This well was drilled under my supervision and this report is true to the best of my knowledge and belief.  
 Signature of Registered Contractor \_\_\_\_\_ Date \_\_\_\_\_

General Remarks: BOTTOM OF WELL IS HARDPAN AND CLAY  
 Other Remarks: Screen Fittings:Type Unknown  
 EQP-2017 (4/2010) Page 1 of 1 LHD 2/17/2000 3:57 PM

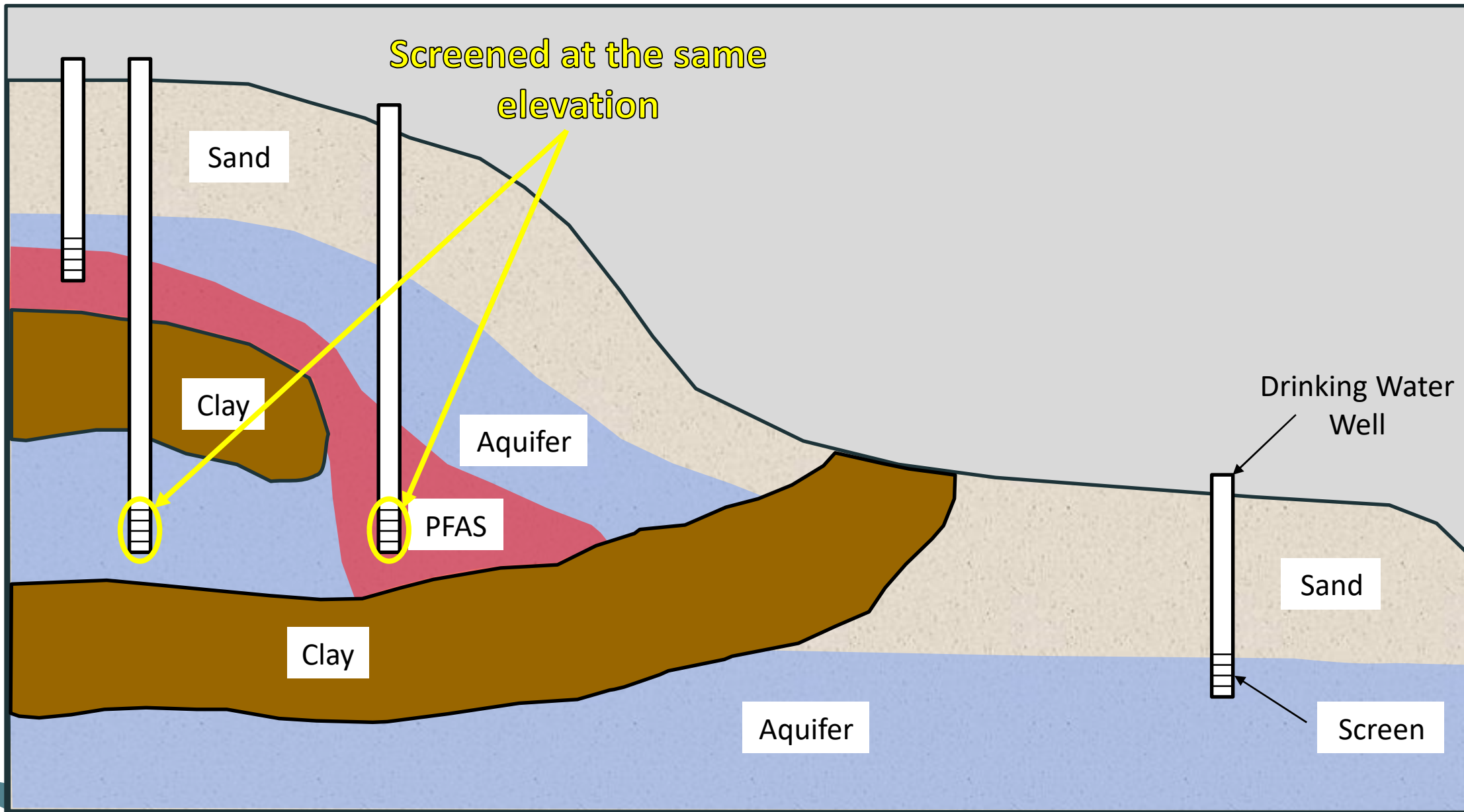
# HOW ARE SAMPLING LOCATIONS TARGETED?

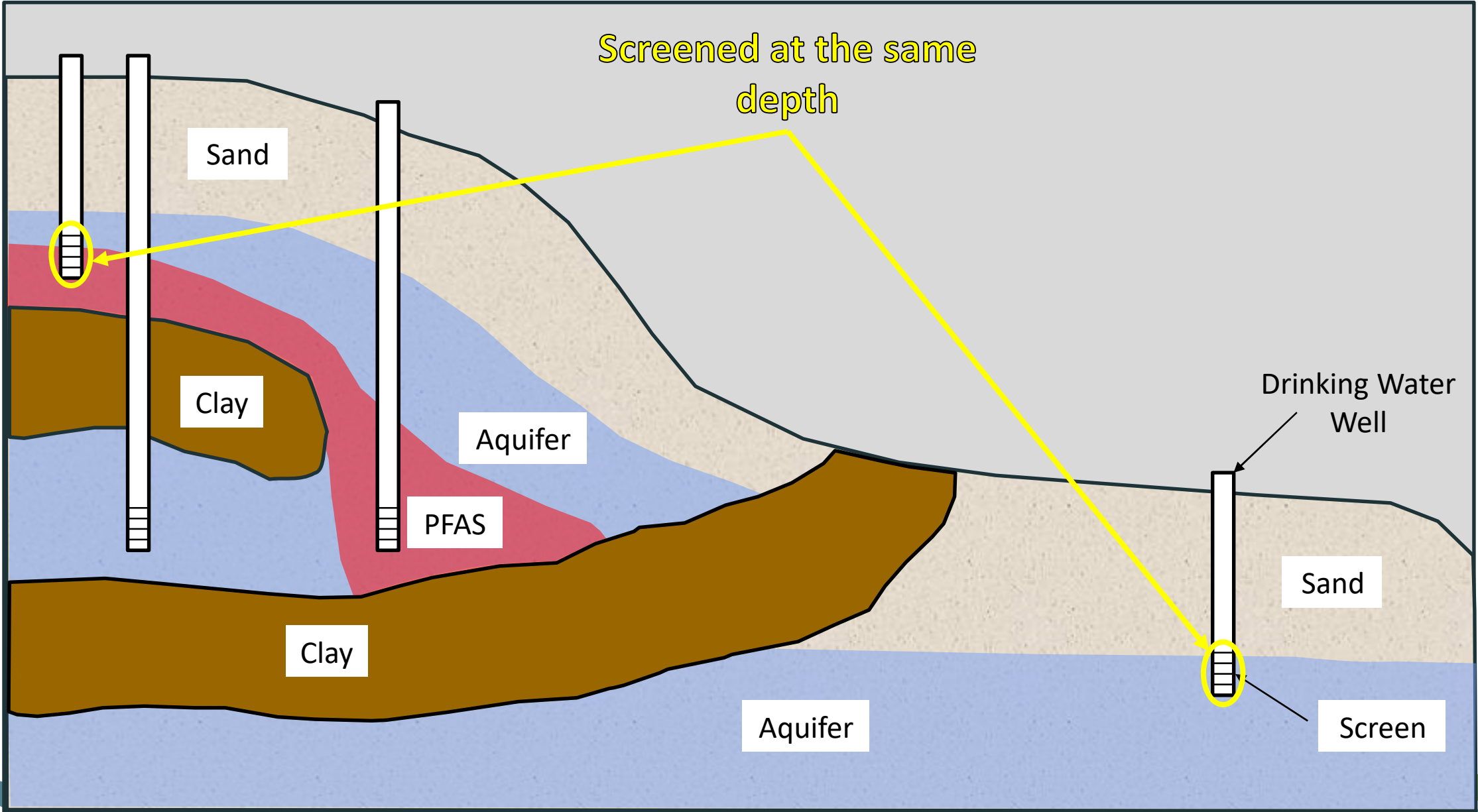
- Proximity to previous sampling results
- Review of water well logs
- Elevation, well depth, and soil lithology are all considered



## HOW ARE SAMPLING LOCATIONS TARGETED?

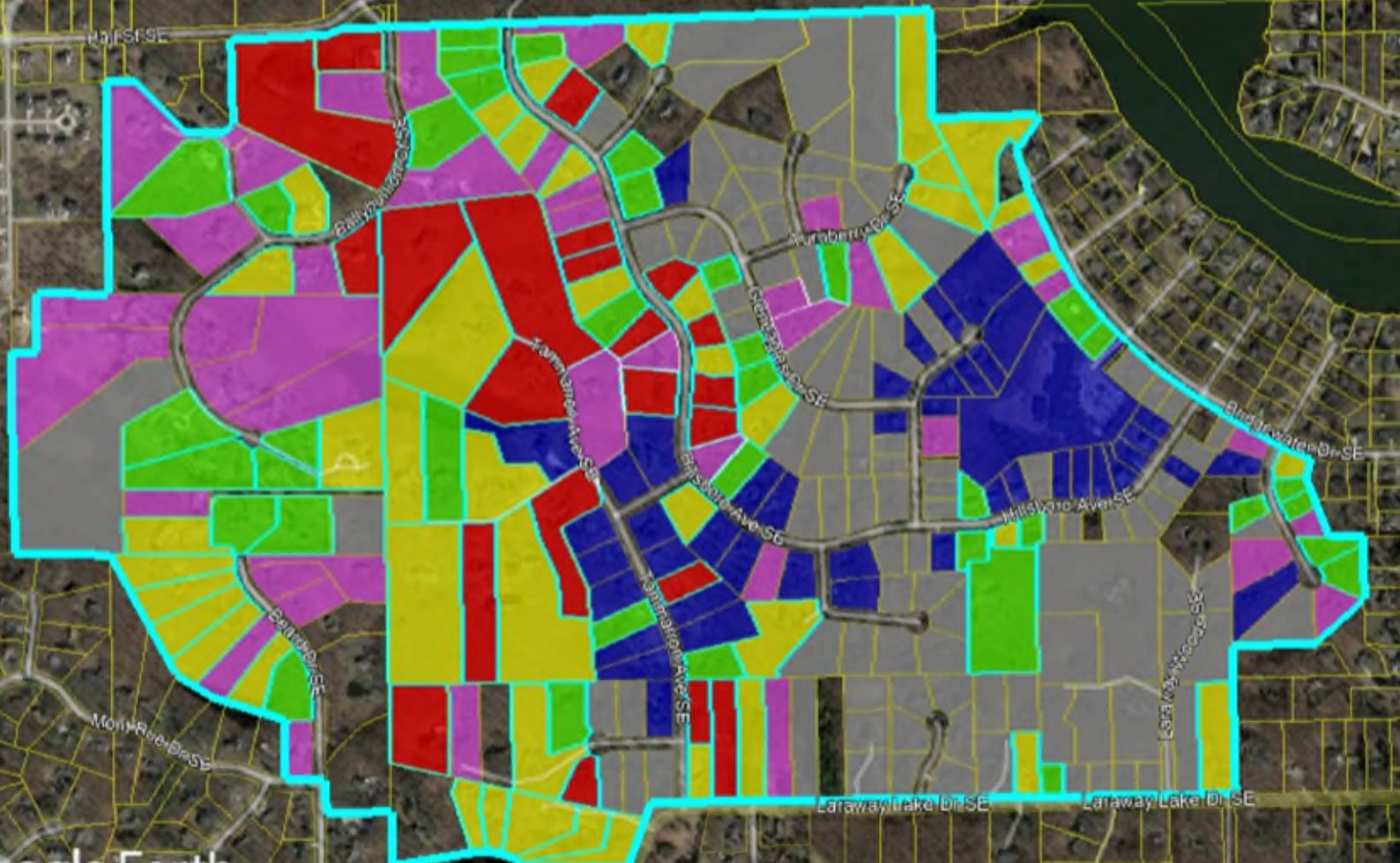
- Proximity to previous sampling results
- Review of water well logs
- Elevation, well depth, and soil lithology are all considered
- “Deep” wells have all been non-detect **(verified with sampling throughout area)**
  - Wells screened less than ~640 ft elev.
  - Presence of substantial (> ~20 ft thick) clay and/or silt unit(s)
- Any questions, err on the side of sampling





## Legend

- Attempted Access
- Drinking Water - Detected Below Criteria
- Drinking Water - Exceedance of Criteria
- Drinking Water - Not Detected
- Not Targeted
- On Municipal Water



## PFAS RESULTS TO DATE

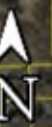
- 105 wells sampled to date:
  - 22 Exceedances
  - 45 detected below criteria
  - 38 Non-detect
- Maximum Concentrations:
  - PFOA = 27 ppt (compared to 8 ppt)
  - PFOS = 34 ppt (compared to 16 ppt)

## Legend

- Attempted Access
- Drinking Water - Detected Below Criteria
- Drinking Water - Exceedance of Criteria
- Drinking Water - Not Detected
- Not Targeted
- On Municipal Water
- Targeted for Sampling

## NEXT STEPS

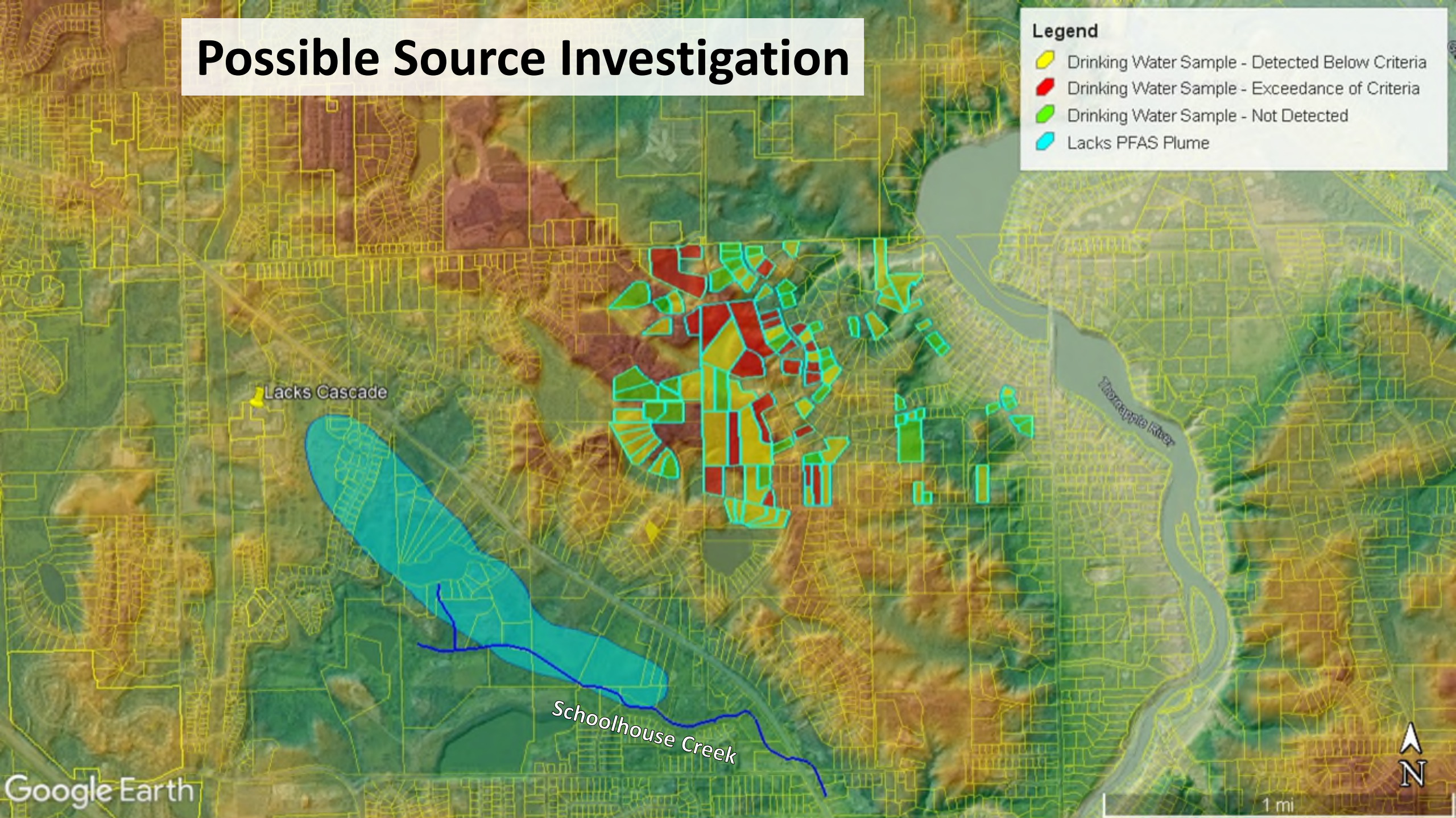
- Health Departments offer point-of-use carbon filters to any wells with detections
- Continue to expand sampling area
  - If you live within the targeted sampling area and have not received access request communication, contact me (616-581-1782) if you have concerns



# Possible Source Investigation

**Legend**

- Yellow: Drinking Water Sample - Detected Below Criteria
- Red: Drinking Water Sample - Exceedance of Criteria
- Green: Drinking Water Sample - Not Detected
- Cyan: Lacks PFAS Plume



# Next Steps

- This is an ongoing investigation and we learn a little bit more about the nature and extent of the PFAS impact in this area with each round of sampling.
- As such, our focus is on determining where exposure is occurring and offering filters in a timely manner.
- Longer-term solutions employed at other sites:
  - Provide Municipal Water
  - Replace Wells
  - Source Removal/Remediation

# Public Water Supply

- The vicinity of Hillsboro Avenue SE and Birkdale Drive SE in Grand Rapids, Michigan is served by the City of Grand Rapids community water supply:
  - Currently on annual sampling for PFAS compliance.
  - Compliance results for this supply have not exceeded corresponding MCLs or have been non-detect for all tested PFAS.

# MICHIGAN PFAS ACTION RESPONSE TEAM (MPART)

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



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY



# Questions

---

Brent Ritchie, PFAS Site Lead  
Michigan Department Environment, Great Lakes, and Energy  
616-581-1782  
[RitchieB1@Michigan.gov](mailto:RitchieB1@Michigan.gov)