



MPART Citizens Advisory Workgroup

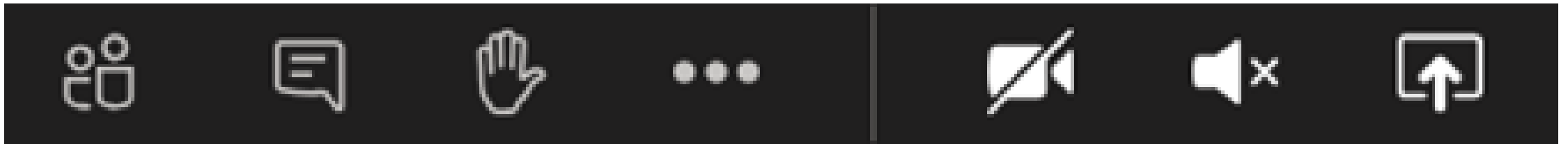
January 12, 2021

MPART

Housekeeping



- Please keep your mic/phone muted unless speaking
- Only use the “raise hand” and/or “chat” function for questions or to request to speak
- Cameras are optional
- This meeting is being recorded



Agenda

- Welcome and housekeeping – 5 min
- Recap – 5 min
- Ecorse and Rouge Watersheds – 20 min
 - Content
 - Feedback
- Kalamazoo County Pilot Demo – 15 min
 - Feedback on expanding
- Foam Study – 10 min
- Sub-Committee Updates – 10 min
- Community Sharing Round Robin – 15 min
- MPART Agency Updates – 5 min
- February 9th Meeting Preview – 5 min

Membership Update

New Members

- Charlie Schlinger, Traverse City
- Bob Delaney, Charlotte
- Brad Venman, Lansing

Registrations in Process

- Stacy Taylor, Holly
- Mary Blanchard, Holly
- Justine Ptak, Wyandotte

Unofficial Member

- Dave Kempisty

Prior Meeting Recap

- Subcommittee Work
 - Communications Tool-Kit
 - Web site investigation write-ups
 - Intended audience
 - Desired content
 - How does current template stack up?
- Meeting Summary Help?
 - Presentation slides and recordings are posted on web

Ecorse & Rouge River Watersheds Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) – State Response

Anne Tavalire, Emerging Pollutant Section
Michigan Department of Environment,
Great Lakes, and Energy (EGLE)

Topics

- Wyandotte Municipal Services Drinking Water Plant
- Rouge & Ecorse Watersheds:
 - Overview
 - Surface water and fish sampling
 - Status on potential sources
- Discuss planned next steps

Wyandotte Municipal Services Drinking Water Plant

- Monthly sampling for PFAS in raw & finished water in 2019
 - August: 5th of 6 monthly sample collected
 - Abnormally elevated levels of PFOS and PFHxS in raw water & treated water
- Weekly sampling instituted for 6 weeks
 - Results non-detect for all tested PFAS
- Compliance sampling for 7 PFAS compounds with Maximum Contaminant Levels began in 2020

EGLE Water Quality Criteria for PFAS

- Michigan developed Rule 57 Human Noncancer Values (HNV) for PFOA (2011) and PFOS (2014) in surface waters

PFAS	HNV (nondrinking)	HNV (drinking)	FCV, ppt	FAV, ppt	AMV, ppt
PFOS	12	11	140,000	1,600,000	780,000
PFOA	12,000	420	880,000	15,000,000	7,700,000

Human Noncancer Values (HNVs); Aquatic Life Final Chronic Value (FCV), Final Acute Value (FAV), and Aquatic Maximum Value (AMV)

- PFOS builds up in fish tissue to a higher degree than PFOA



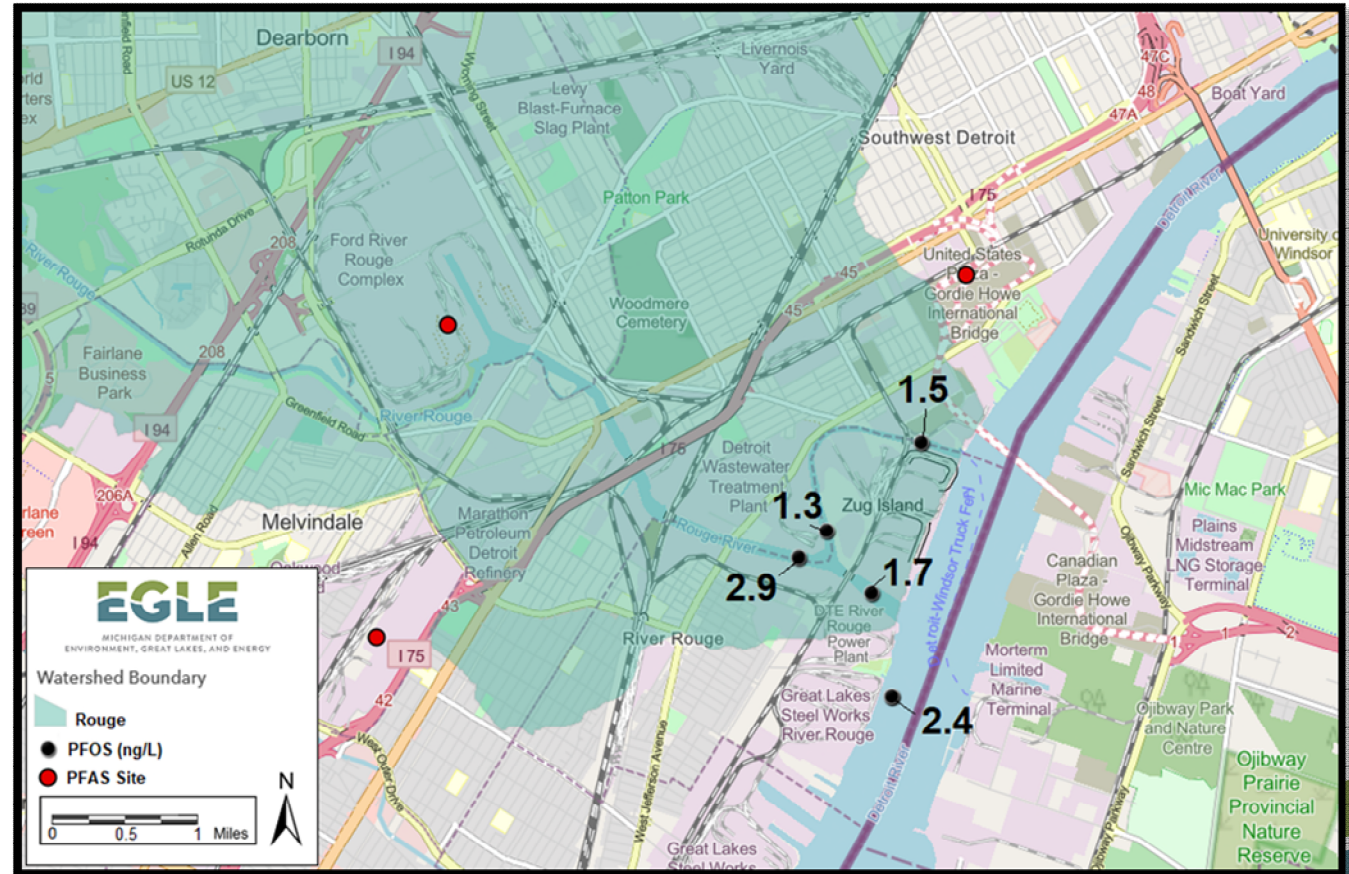
Rouge River Watershed

- Drains ~466 sq. miles of SE MI
- 4 main branches: Main, Upper, Middle, Lower
- Rouge River sampled for PFOS & PFOA in 2001
 - Levels did NOT exceed current WQS for PFOS & PFOA



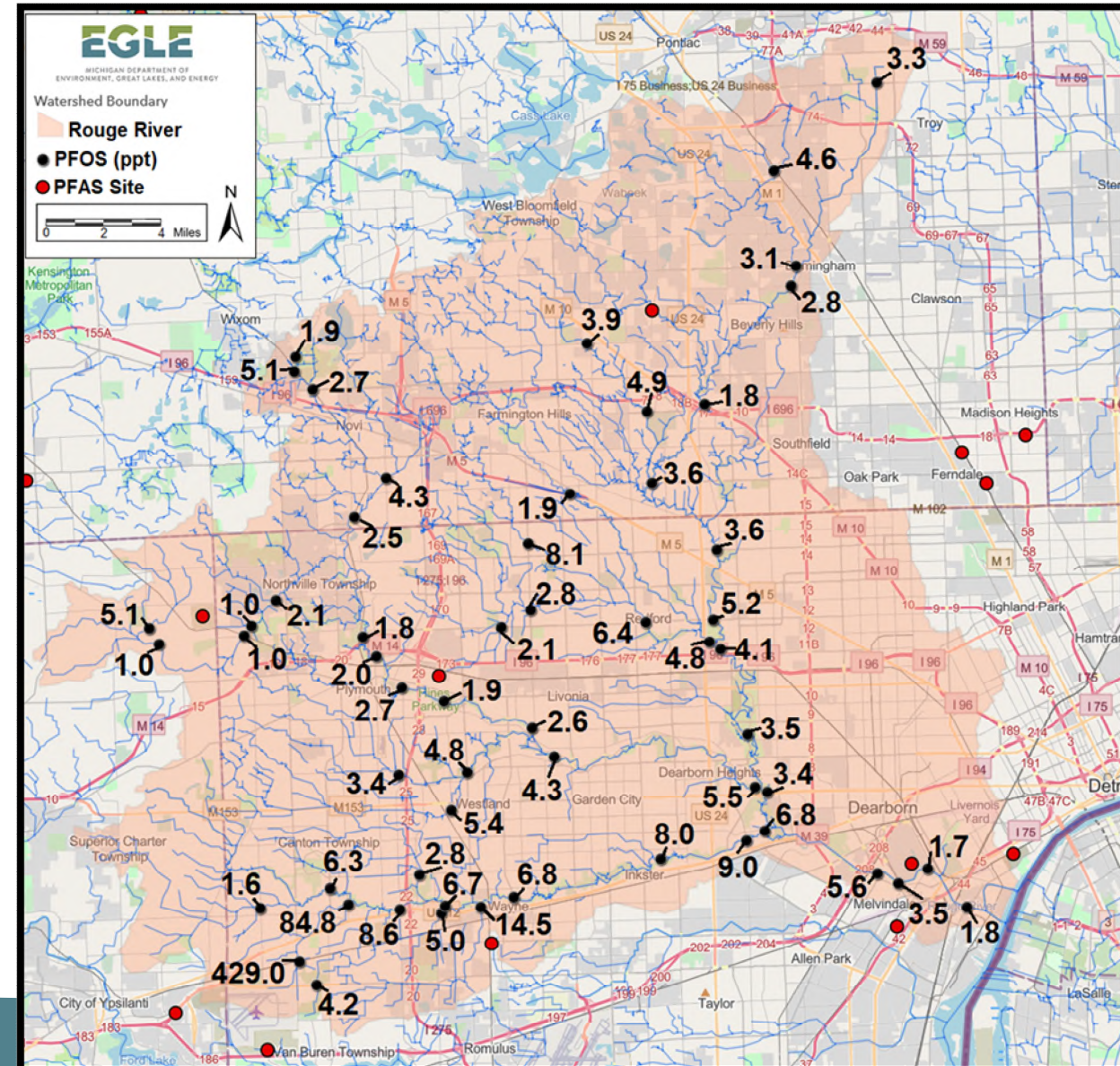
Rouge River Watershed – 2019

- August 2019: elevated detections at Wyandotte Municipal Services Drinking Water Plant
- November 2019: samples collected near confluence with Detroit River

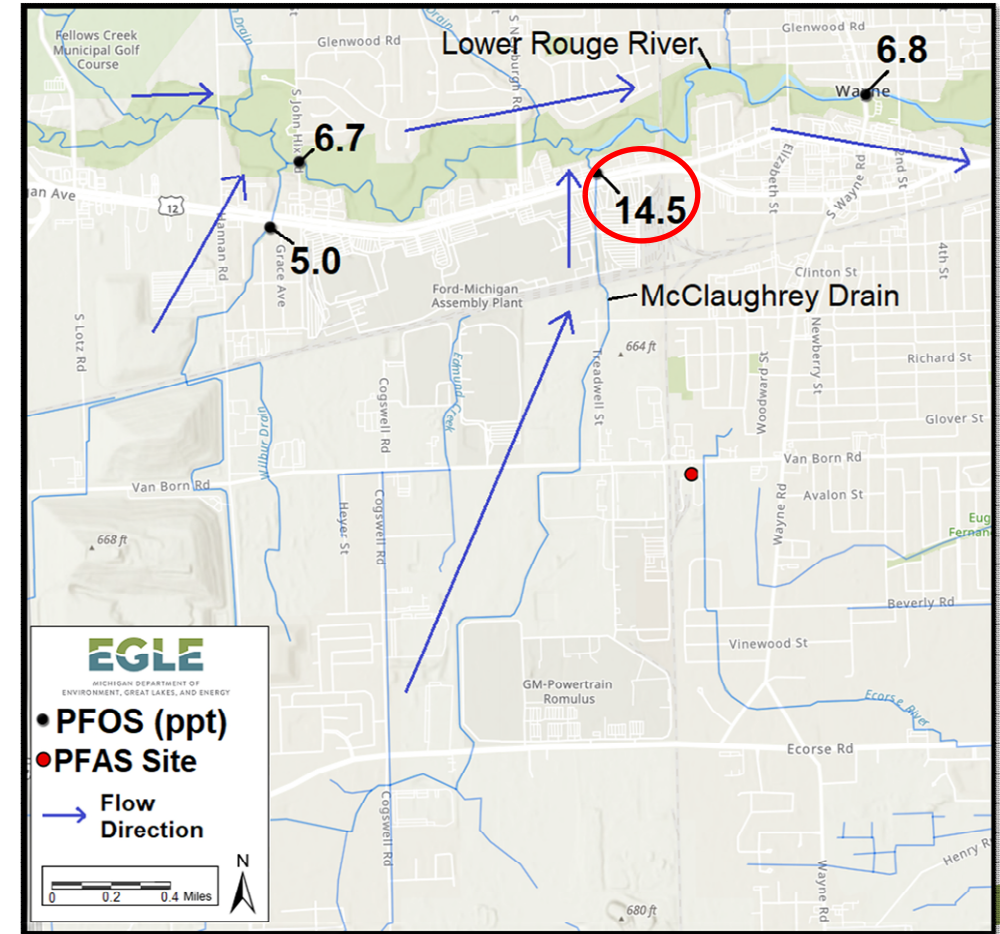
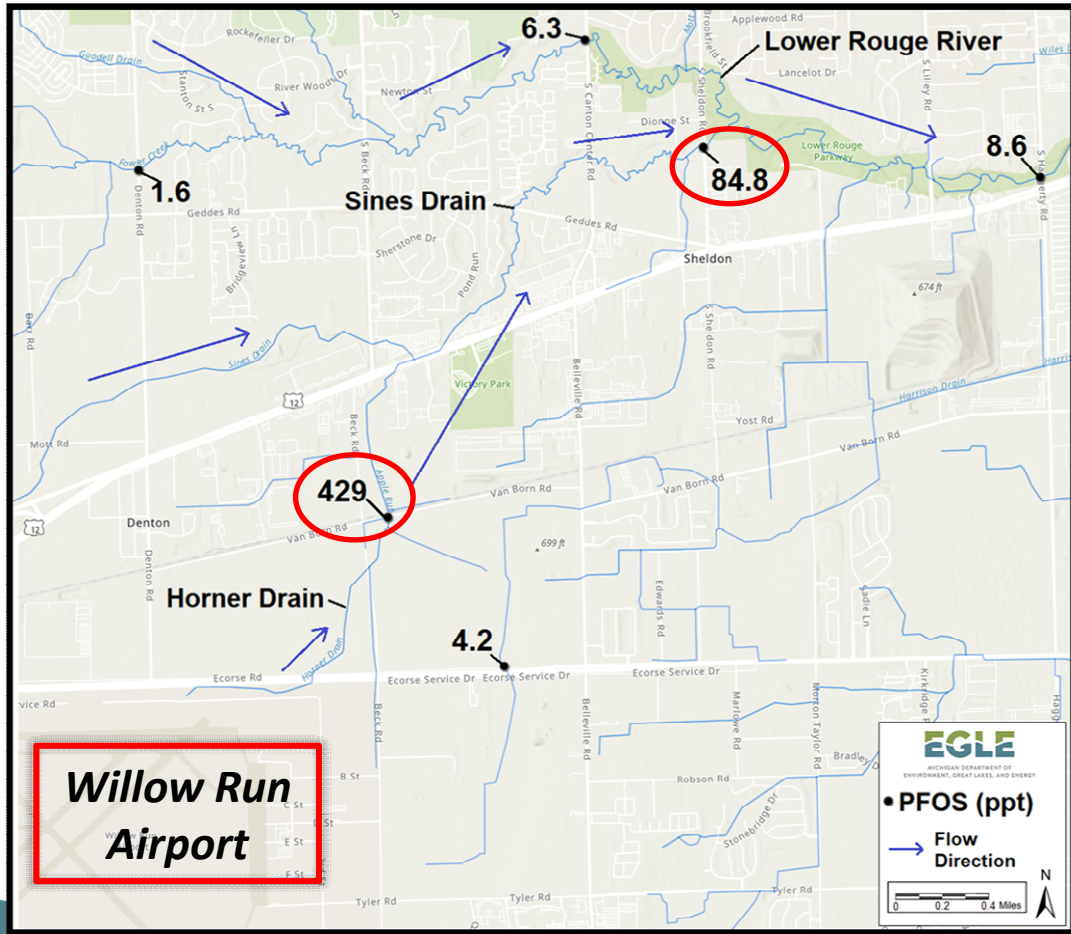


Rouge River Watershed – 2020

- October 2020: EGLE conducted a study to investigate potential sources of PFAS in the watershed
 - 57 surface water samples
 - Bracket potential sources based on historical & industrial land uses
- Detailed report expected in 2021

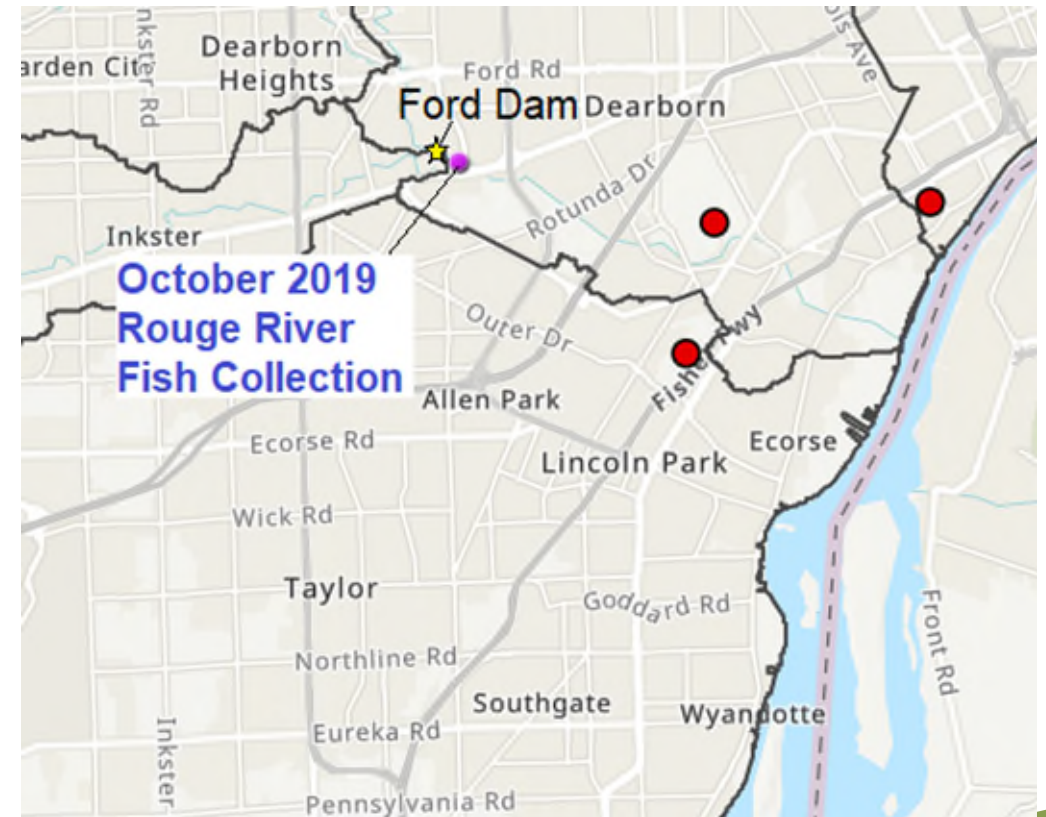


Rouge River Watershed – 2020



PFAS fish data for Lower Rouge

- Fish consumption guidance for rivers is typically broken into sections based on barriers to fish movement (i.e dams)
- Red dots represent PFAS sites



Fish Contaminant Monitoring

Fillet PFOS data Part per Billion (ppb)

Water Body	Location	Species	Year	PFOS Range (ppb)	95 % UCL
Rouge River, Main Branch	d/s Lower Rouge River Confluence	Yellow Perch	2019	7.1 – 20.3	9.6
	d/s Lower Rouge River Confluence	Rock Bass	2019	5.3 – 11.1	14.3
Rouge River, Middle Branch	Newburgh Lake	Largemouth Bass	2019		104
	Newburgh Lake	Bluegill/Pumpkinseed	2019		29

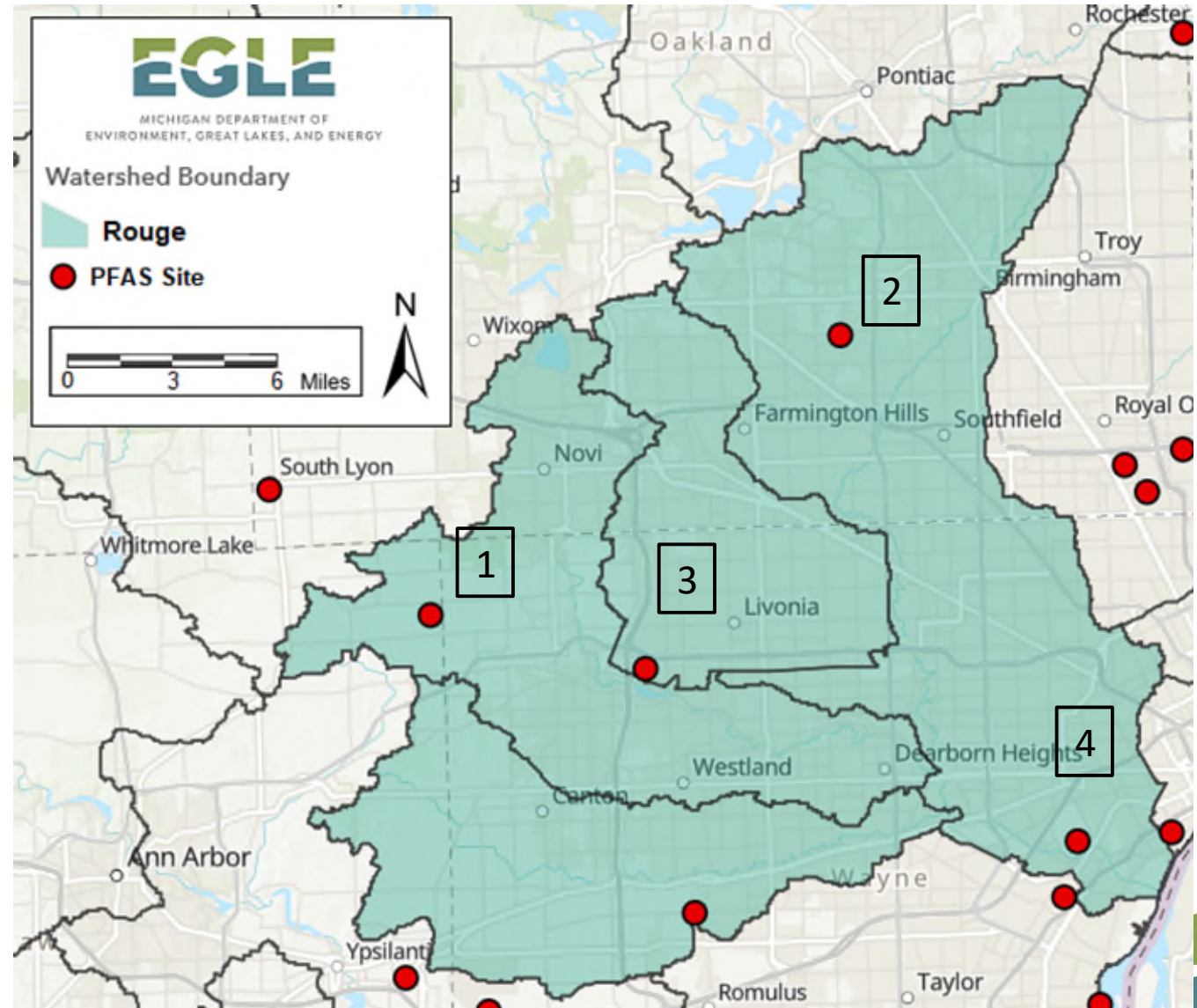
Fish collection in 2021: All 3 branches of the Rouge River

Groundwater Used As Drinking Water PFAS Criteria

- Criteria in 2018
 - 70 ppt of PFOS and PFOA, individually or combined
- August 3, 2020
 - PFOA = 8 ppt
 - PFOS = 16 ppt
- December 21, 2020
 - PFOA = 8 ppt
 - PFOS = 16 ppt
 - PFNA = 6 ppt
 - PFHxS = 51 ppt
 - PFHxA = 400,000 ppt
 - PFBS = 420 ppt
 - HFPO-DA = 370 ppt

Rouge Watershed PFAS Sites

1. Advanced Disposal Arbor Hills Landfill
2. Franklin Village Area
3. RACER Eckles Road
4. Rouge Manufacturing Complex



Other On-going PFAS Site Investigations in the Rouge Watershed

Advanced Disposal Arbor Hills Landfill:

- [MPART PFAS Site](#)
- April 2019: EGLE requests PFAS sampling
- June 2019: Arbor Hills collects groundwater and leachate samples
- February 2020: 7 res wells sampled & 1 Type II water supply sampled
- February 2020: Arbor Hills submits work plan to define the potential source & extent of the PFAS
- April 2020: additional sampling of groundwater, sediment & surface water
- 2021: conduct additional recommended activities



Other On-going PFAS Site Investigations in the Rouge Watershed



Franklin Village Area:

- [MPART PFAS Site](#)
- February 2019: EGLE collected PFAS samples from 4 monitoring wells & 3 drinking water wells. All were below MCLs and/or current Part 201 criteria.
- March 2020: EGLE collected PFAS samples from 15 monitoring wells.
- July 2020: EGLE re-sampled March well & 4 Type III residential wells
- The PFAS source causing the monitoring well sample exceedance of criteria may be due to historic rinsing of fire-fighting foam from trucks at the Franklin Fire Department, or a fire that burned down the original Firehouse around 1960.

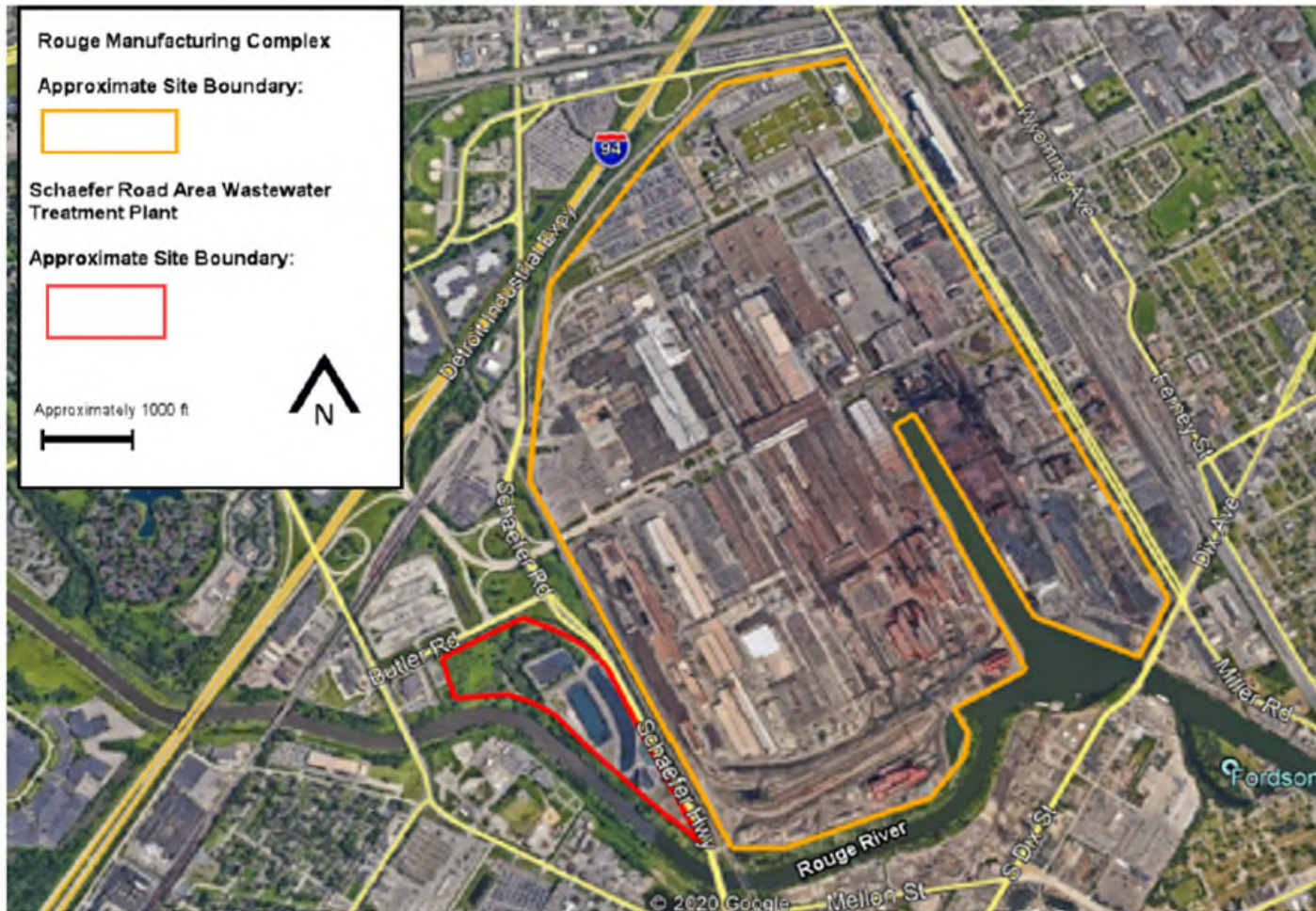
Other On-going PFAS Site Investigations in the Rouge Watershed



RACER Eckles Road:

- [MPART PFAS Site](#)
- EPA is the lead
- July 2018: monitoring well samples collected by RACER above 70 ppt PFOS+PFOA
- 2019: additional monitoring wells installed as part of PFAS Characterization activities
- May 2020: GAC system installed to treat groundwater before discharge to Detroit WWTP
- Potential remedial alternatives to address PFAS-impacted groundwater continue to be evaluated.

Other On-going PFAS Site Investigations in the Rouge Watershed



Rouge Manufacturing Complex:

- [MPART PFAS Site](#)
- Corrective Action Consent Order (CACO) issued by EGLE to Ford Motor Company & AK Steel Dearborn Works
- June/July 2019: groundwater & stormwater PFAS sampling at RMC and Schaefer Road Area
- Ford & AK Steel working to develop corrective measures study to address potential off-site movement & discharge to the Rouge River

Ecorse River Watershed

- Drains ~43 sq. miles of Wayne County
- Tributary to Detroit River
- 3 subwatersheds:
 - Main Branch of Ecorse River
 - LeBlanc Drain
 - South Branch of Ecorse River
- No fish data; 2021 sampling



EGLE Water Quality Criteria for PFAS

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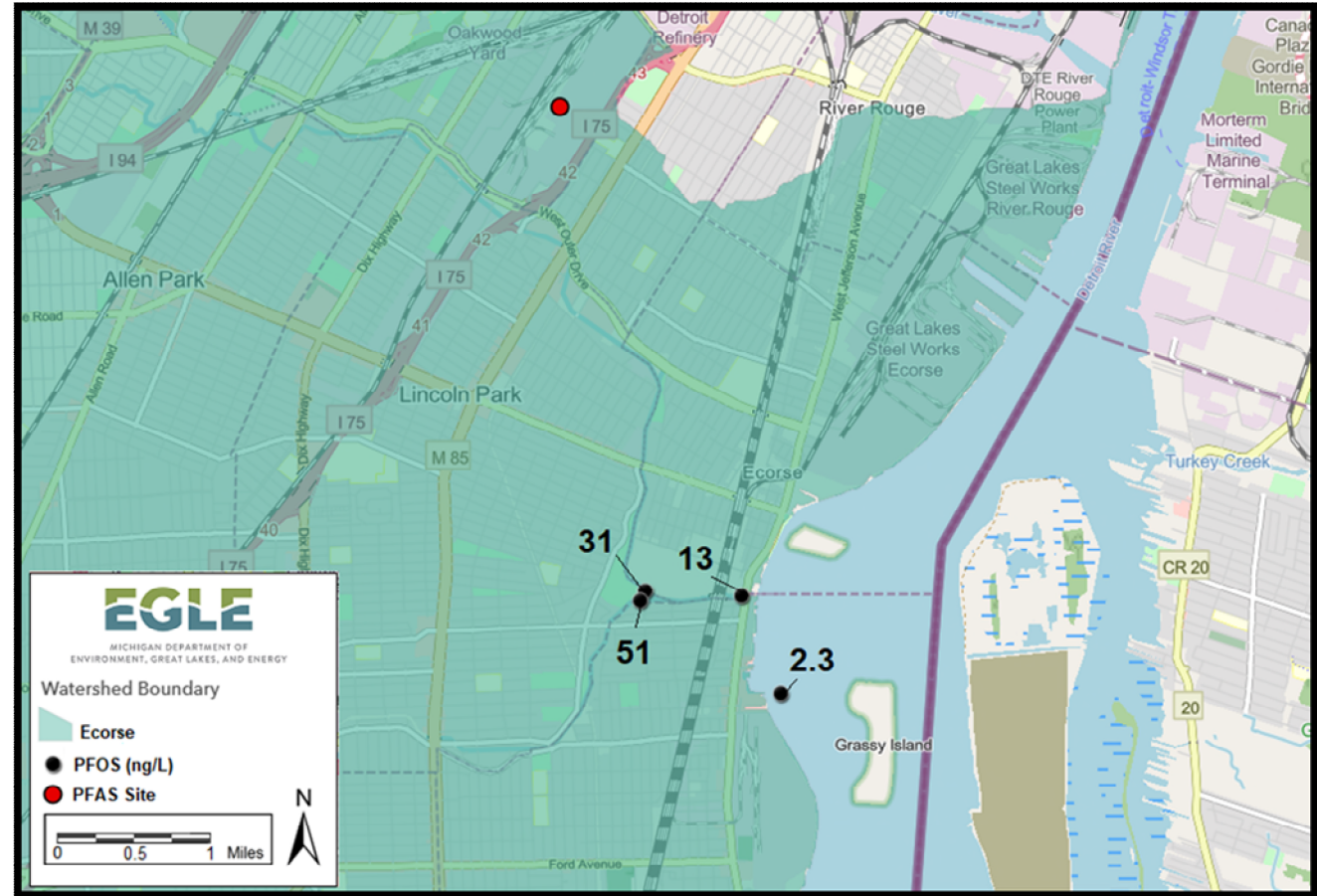
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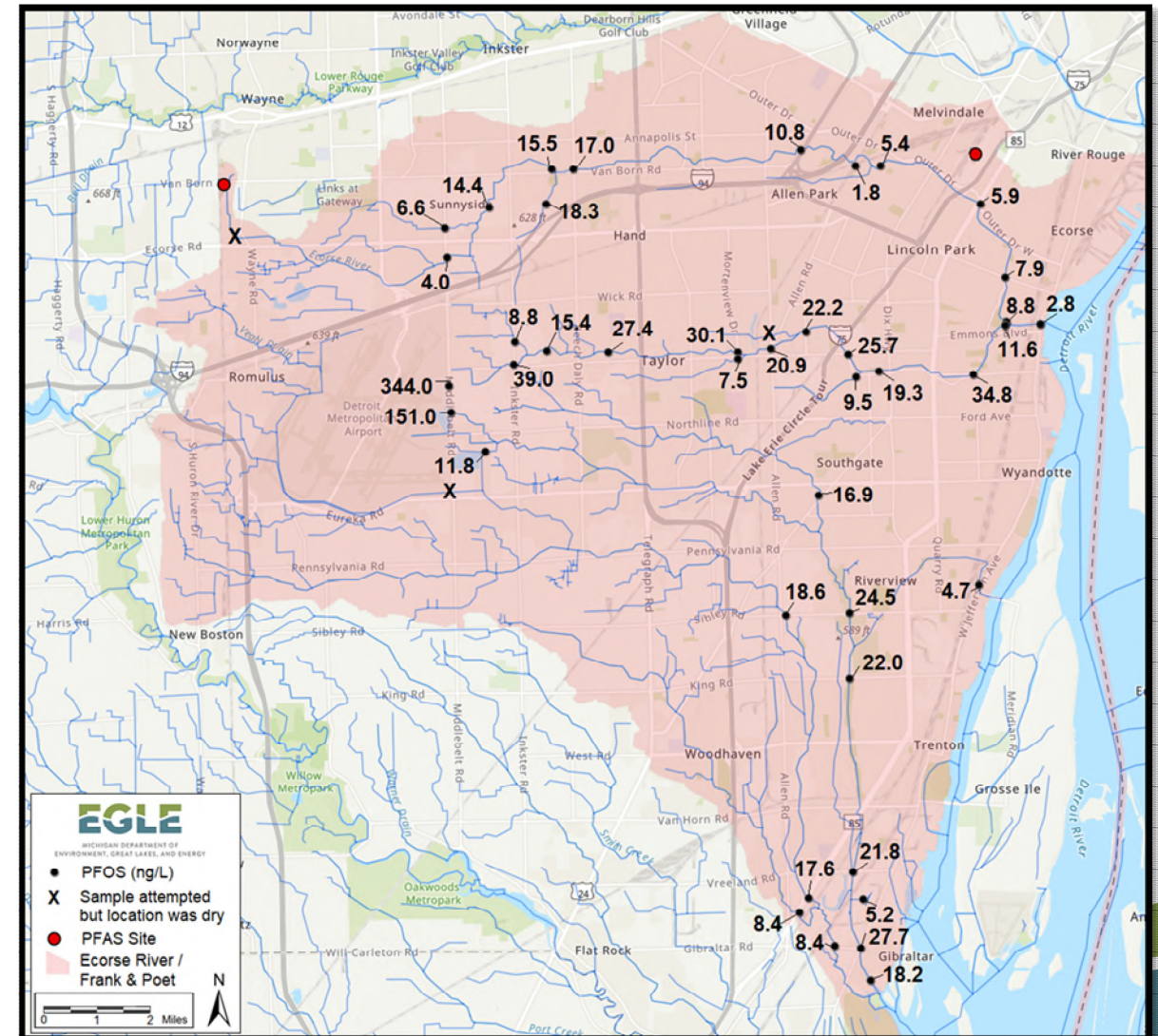
Ecorse River Watershed - 2019

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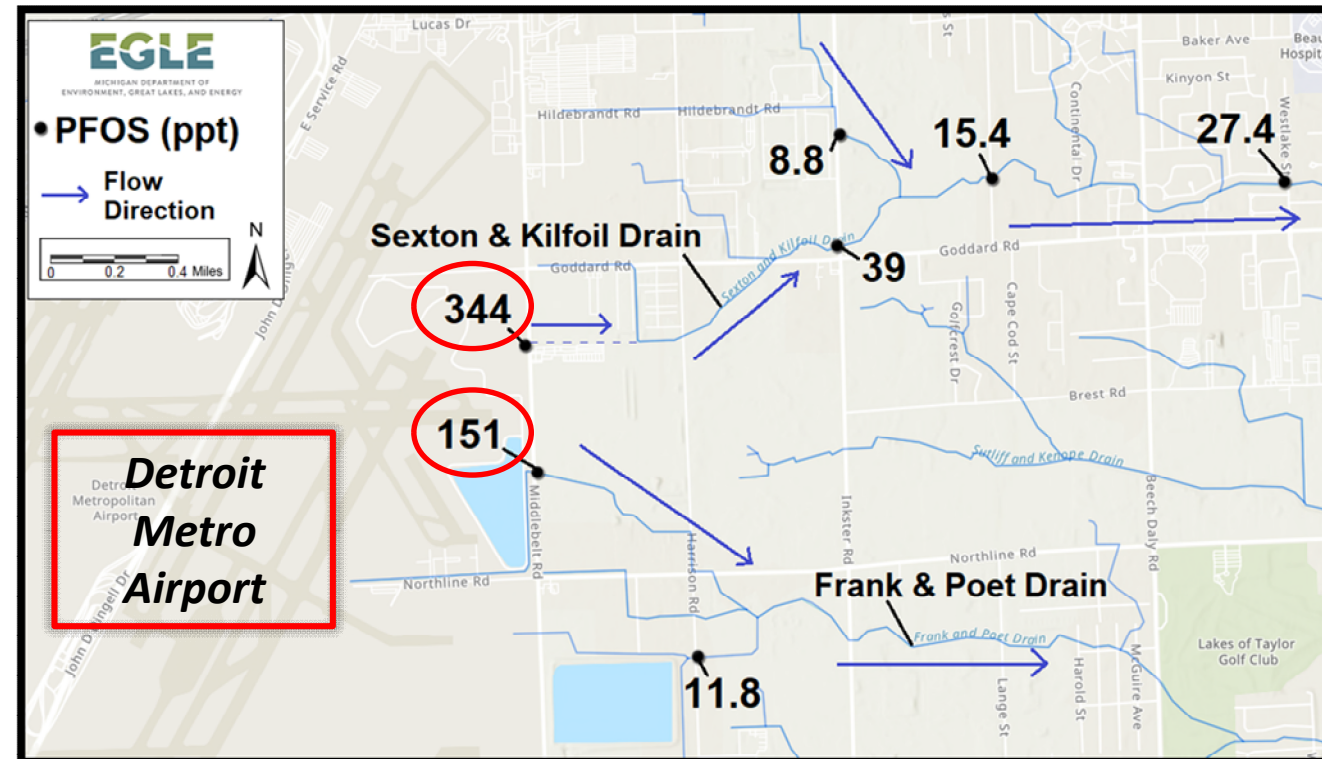
Ecorse River Watershed - 2020

- Due to the November 2019 sampling, watershed added to PFAS sampling strategy for 2020
- August 2020: watershed sampling along with Frank & Poet drain watershed
 - 45 surface water samples
 - Bracket potential sources based on historical & industrial land uses
- Detailed report expected in 2021



Ecorse River Watershed - 2020

- Highest PFOS found in 2 drains coming from Detroit Metro Wayne Co Airport
- Due to routine compliance sampling by EGLE; Detroit Metro began PFAS investigation in August 2019 of storm water discharges

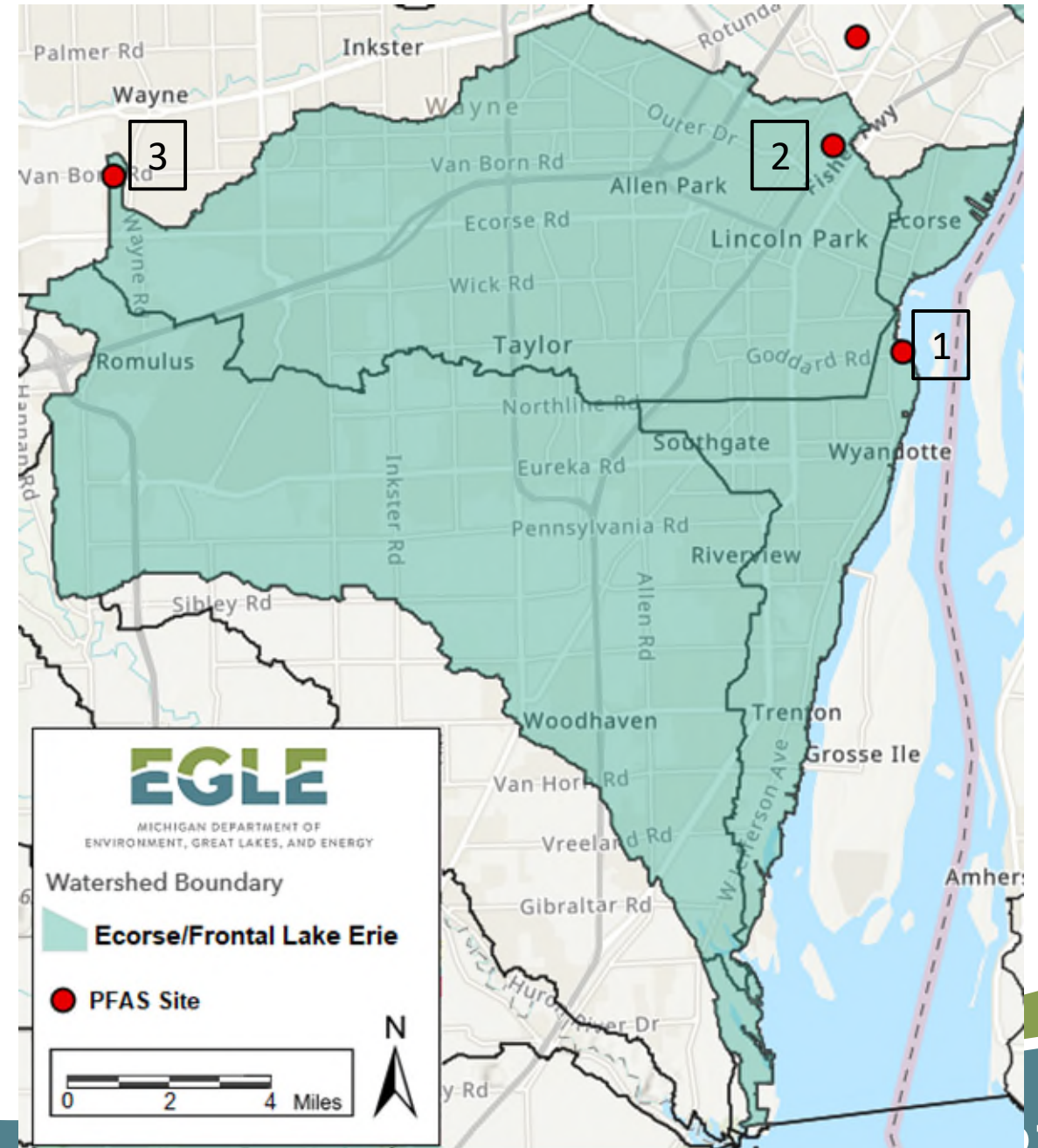


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Ecorse Watershed PFAS Sites

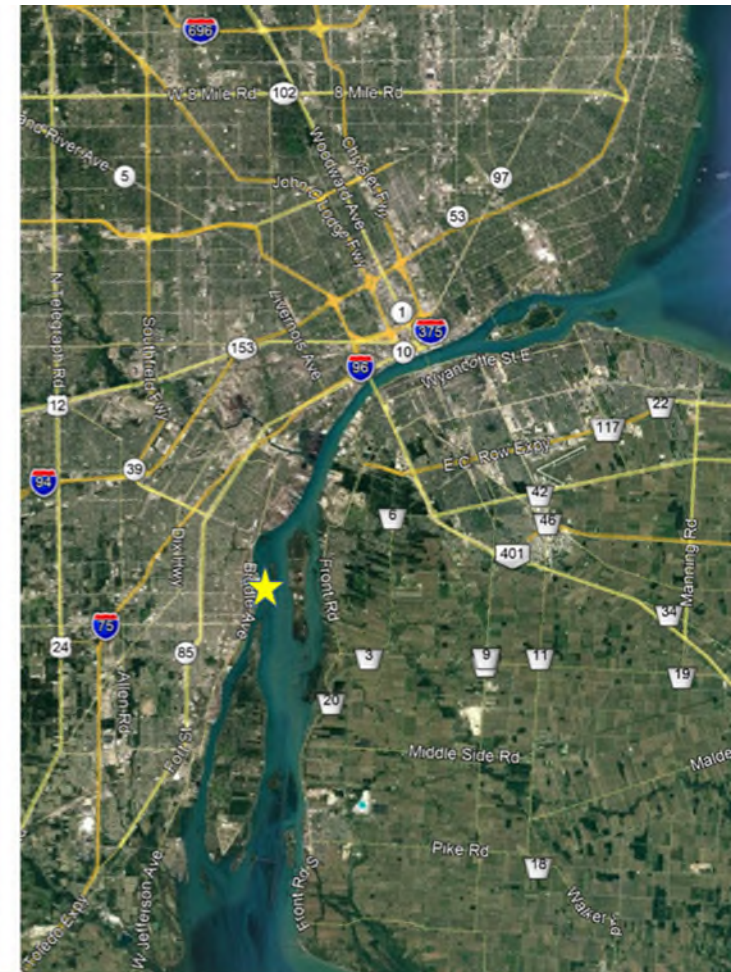
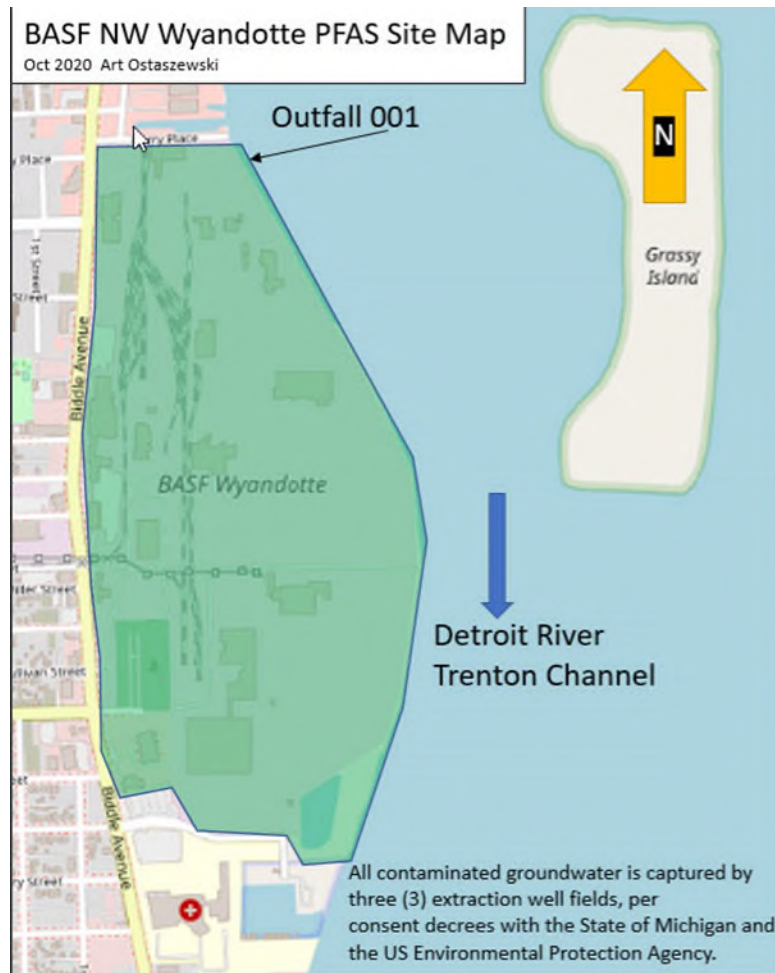
- BASF – Northworks Wyandotte
- Marathon Petroleum Company
- US Ecology Romulus



Other On-going PFAS Site Investigations in the Ecorse Watershed

BASF – Northworks Wyandotte:

- [MPART PFAS Site](#)
- PFAS compounds detected from BASF NW discharges to the publicly owned treatment works (POTW) and to the Detroit River
- July 2020: BASF & EGLE sampled interior groundwater well fields
- December 2020: EGLE requests perimeter monitoring for PFAS



Other On-going PFAS Site Investigations in the Ecorse Watershed

Marathon Petroleum Company:

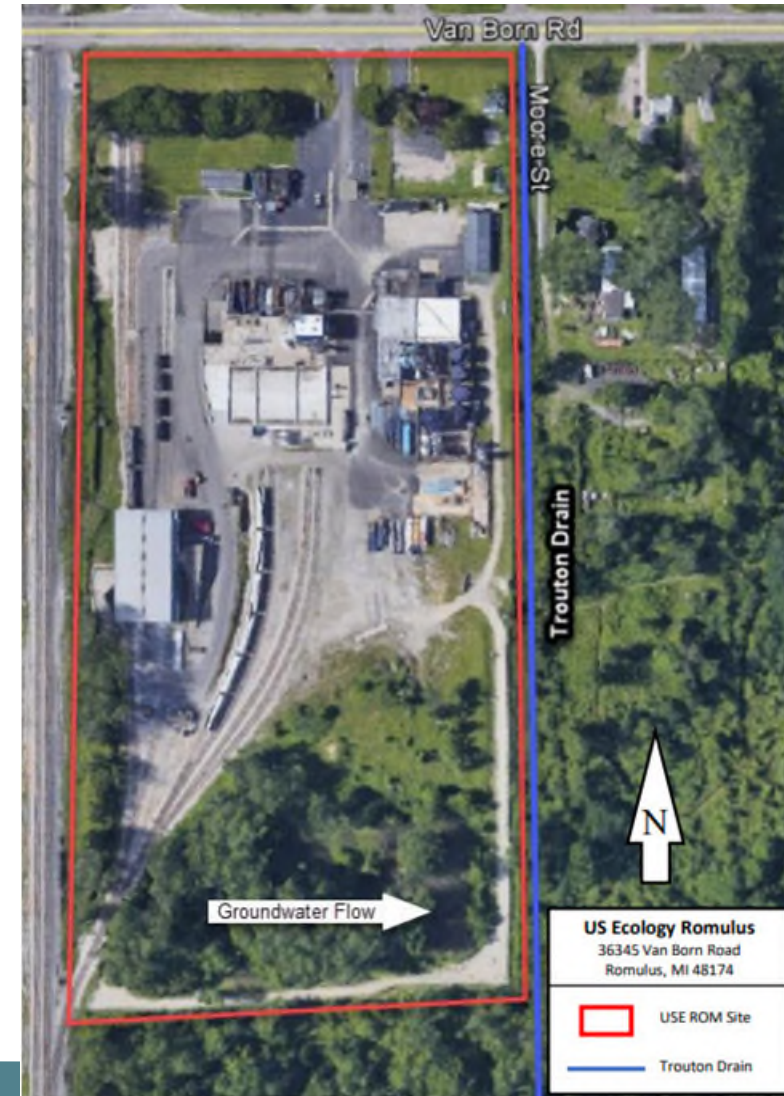
- [MPART PFAS Site](#)
- Summer 2018: white foam observed overflowing manhole next to Schafer Hwy
- December 2018: GLWA issues VN to Marathon
- 2019: Marathon collects stormwater & groundwater samples
- September 2019: EGLE requests PFAS investigation due to elevated PFOS levels in drainage ditch
- January 2020: Marathon begins 1st phase of soil & groundwater investigation on-site & off-site



Other On-going PFAS Site Investigations in the Ecorse Watershed

US Ecology Romulus:

- [MPART PFAS Site](#)
- November 2018: EGLE requests PFAS sampling
- April 2019: 1 monitoring well sampled & 2 Trouton Drain surface water samples collected
- October 2019: EGLE requests workplan to address PFAS contamination
- August 2020: workplan submitted to EGLE to address PFAS contamination
- December 2020: implementation of workplan



Next Steps to address PFAS in the Watershed

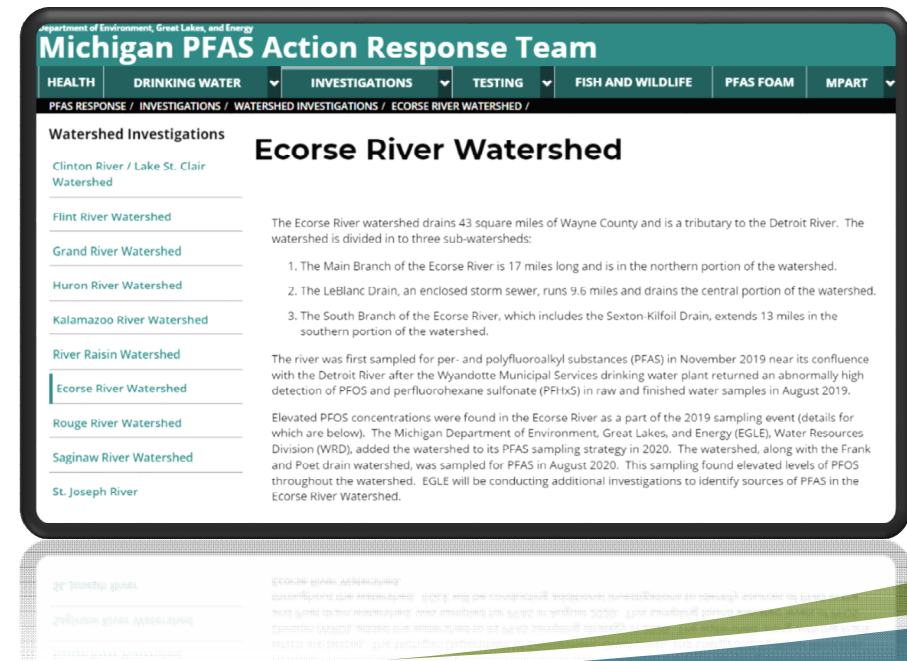
- Additional fish & surface water sampling within the watershed
- Continue to work with the known sources on reduction/elimination
- Conduct source investigations on potential sources as new information arises
- Catalog foam complaints to help inform future surface water sampling efforts

Watershed PFAS Timelines

- A detailed timeline and updated next steps of the State's response to the PFAS issue within the Ecorse & Rouge Watersheds can be found on our PFAS Response Website:

www.Michigan.gov/pfasresponse

- Click on Investigations
- Click on Watershed Investigations



Contact Information & Questions

Brandon Armstrong, Ph.D.: 517-256-1853; ArmstrongB5@Michigan.gov – questions related to surface water & fish sampling

Stephanie Kammer: 517-897-1597; KammerS@Michigan.gov – questions related to overall efforts to address PFAS in the Ecorse & Rouge River Watersheds

Melinda Steffler: 586-208-5075; StefflerM@Michigan.gov – questions related to the Industrial Storm Water Program in SEMI

Ian Smith: 517-256-2472; SmithI@Michigan.gov – questions related to drinking water sampling

Brandon Reid, MPH: 517-897-3552; ReidB1@Michigan.gov – questions related to PFAS and its public health consequences

Anne Tavalire: 248-508-1102; TavalireA@Michigan.gov – questions related to the Industrial Pretreatment Program (IPP) PFAS Initiative & efforts to address PFAS in the Ecorse & Rouge River Watersheds

Contact Information & Questions

Jacob Runge: 517-242-8496; RungeJ@Michigan.gov – questions related to RACER Eckles Road PFAS site

Joseph DeGrazia: 586-291-0476; DeGraziaJ@Michigan.gov – questions related to Marathon Petroleum Company PFAS site

Kimberly Ethridge: 586-324-0183; EthridgeK@Michigan.gov – questions related Franklin Village Area PFAS site

Joseph Rogers: 517-599-5312; RogersJ5@michigan.gov – questions related to Rouge Manufacturing Complex PFAS site

Nicole Sanabria: 517-281-7726; SanabriaN@Michigan.gov – questions related to US Ecology Romulus PFAS site

Arthur Ostaszewski: 517-936-7991; OstaszewskiA@Michigan.gov – questions related to BASF Northworks Wyandotte PFAS site

Brett Coulter: 517-614-7714; CoulterB1@michigan.gov – questions related to Arbor Hills Landfill PFAS site

Potential Residential Well Impacts Demonstration – Kalamazoo County Pilot

John Esch, EGLE

517-388-3655

EschJ@Michigan.gov

Surface Water Foam Study Results (2019-2020) State-Wide Study

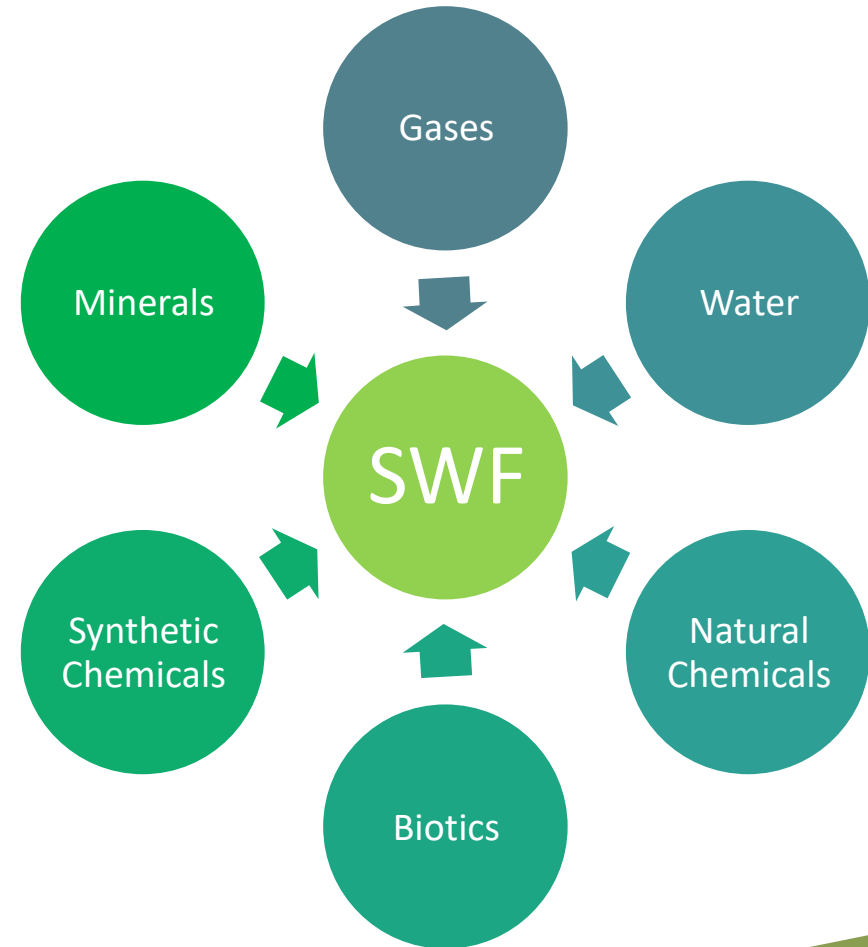
Mike Jury, EGLE

517-242-9578

JuryM1@Michigan.gov

Surface Water Foams

- Can be natural or of human origin
- Globally widespread and form in marine, brackish and freshwater habitats
- Compositionally are made of air and gases, water, and mineral fractions, with traces of natural and synthetic chemicals, and biotics (bacteria, viruses, and fungi)



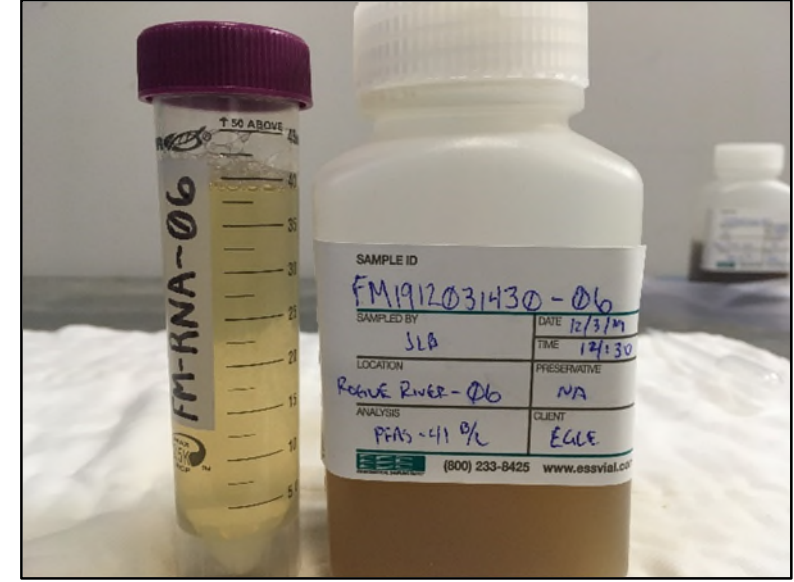
Purpose of Study

- Establish cost-effective means to sample SWFs
- Refine SWF sampling protocols
- Evaluate behavior and PFAS concentrations in SWFs and surface water
- Develop conceptual models for SWF transport in surface waters



Foam accumulation on Van Etten Lake Beach [3/31/20].

SWF Sampling Approach



- Entire column of SWF collected with pool skimmer net.
- SWF transferred into 2-gal Ziploc® bags.
- SWF refrigerated and allowed to condense for 24hrs.
- Slowly poured through cheese cloth into sample bottles to strain out large debris.
- 20mL condensed SWF preserved for genetic analysis.
- ≥20mL condensed foam prepared for 41 PFAS analysis.

Key Points

- Hand-held dipper (pool skimmer) method is the best method.
- PFAS profiles suggest that there is a site-specific nature of SWF chemical composition.
- PFAS concentrations detected in SWF and surface water indicates an enrichment process is occurring during the development of SWF.

Key Points (Continued)

- On inland lakes, SWF are apt to accumulate down-wind near and along the shorelines. Windspeed and wind direction have been identified as driving factors for foam transport and accumulation.
- In rivers, SWF transport is largely driven by movement of water downstream.
- SWF generation is difficult to predict and persistence is short and measured in terms of hours.

CAWG Subcommittee Updates

Engaging the Public Subcommittee
Web Review Subcommittee

Community Round Robin

- Recent lessons learned
- Noteworthy news
- Outreach events



**Especially related to engaging, empowering, and educating residents*

MPART Agency Updates



February 9th Meeting Preview

- MPART Site Information
for Web, Abigail
Hendershott, EGLE
- Guest Speaker - Laurene
Allen, Milford, New
Hampshire



MICHIGAN PFAS ACTION RESPONSE TEAM (MPART)

www.Michigan.gov/PfasResponse



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

