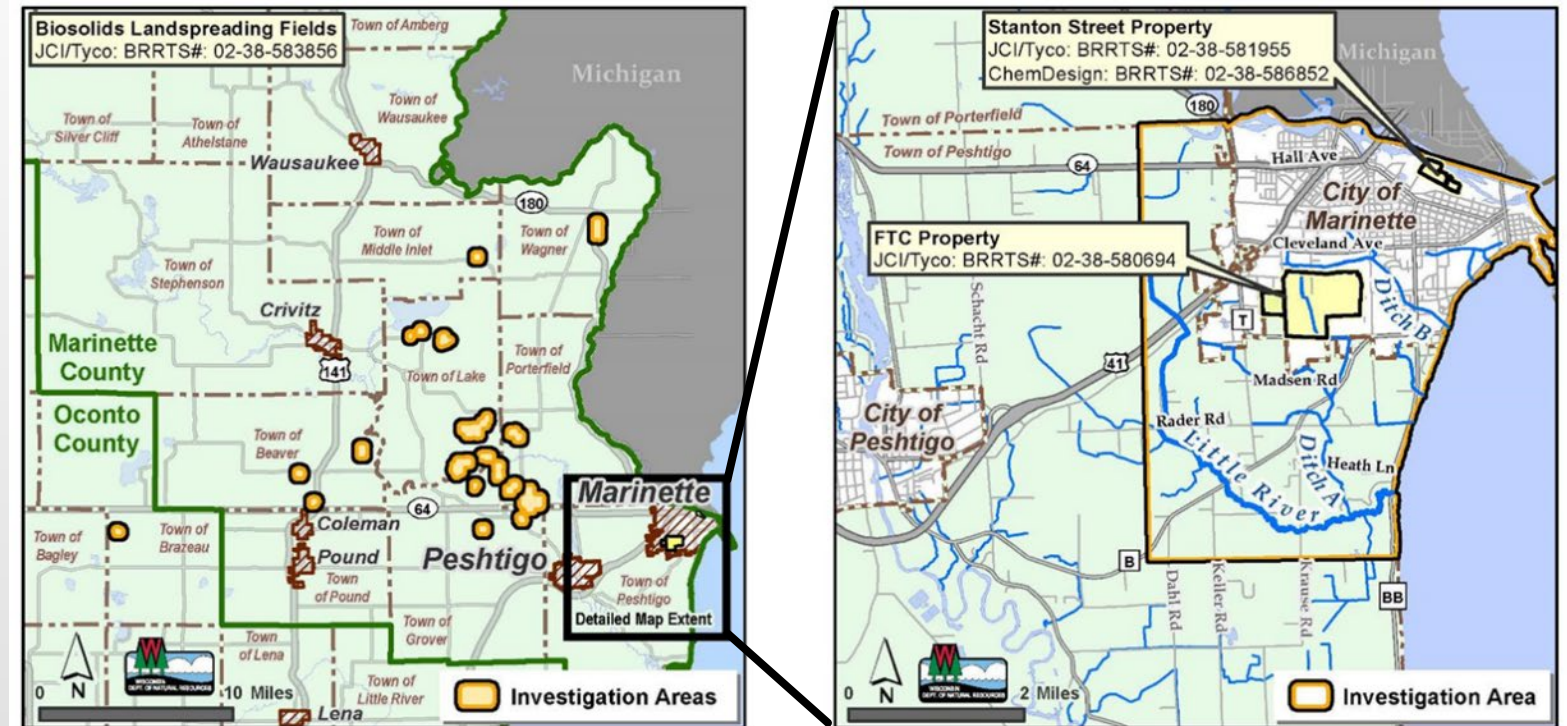


ADDRESSING PFAS: MARINETTE, PESHTIGO & SURROUNDING COMMUNITIES

Listening Session 18

October 26, 2022



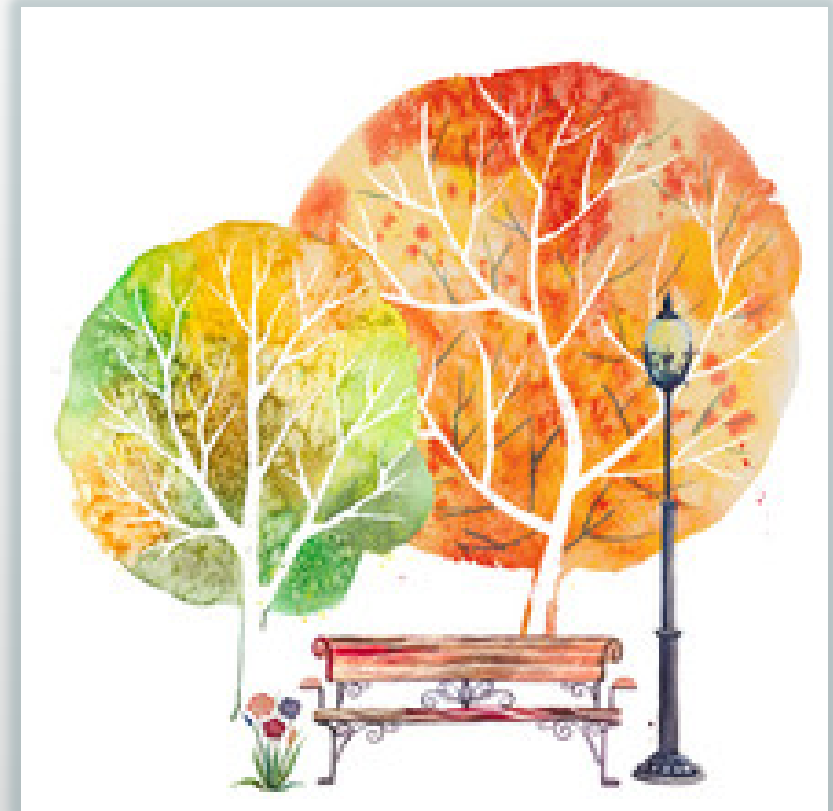
MEETING LOGISTICS

PART 1: DNR & DHS Share Updates

- Muted / Zoom “Chat”
- Notecards in Room

PART 2: Public Questions and Comments

- Notecards to DNR
- Zoom “Chat” (goes to DNR Host)
- Raise hand to speak



DNR & DHS STAFF IN ATTENDANCE



Department of Natural Resources (DNR)

Remediation and Redevelopment

- Christine Sieger (Haag) | *Director*
- Alyssa Sellwood | *Project Manager*
- Jodie Peotter | *Brownfields, Outreach and Policy Section Chief*
- Trevor Nobile | *Field Operations Director*
- Jody Irland | *Outreach Coordinator (Zoom Host)*

Drinking Water And Groundwater

- Kyle Burton, | *Field Operations Director*

Water Quality

- Patrick Gorski | *Research Scientist*
- Heidi Schmitt-Marquez | *Supervisor*
- Laura Gerold | *Wastewater Engineer (virtual)*

Department of Health Services (DHS)

- Nathan Kloczko | *Health Assessor*
- Curtis Hedman | *Toxicologist*
- Amanda Koch | *Health Educator (virtual)*

AGENDA

1. DNR & DHS UPDATES

- Menominee Warehouse Fire
- Site Investigation Updates
- DHS Updates
- Interim Action Updates

2. PUBLIC COMMENTS AND QUESTIONS

MENOMINEE, MI WAREHOUSE FIRE

OCT. 6, 2022

Who's Involved

- **USEPA:** Lead Unified Command (Oct. 6 – 23)
Support Role (Oct. 24 →)
- **MI EGLE:** Lead Site Cleanup, Water Management & Treatment (Oct. 24 →)
- **Other Support and Coordination:** DNR, Local and State Health Departments, County and Municipal governments and more...
- **Warehouse Industrial Tenants**

Monitoring

- Municipal water
- Surface water
- Air Quality

More Information

<https://response.epa.gov/menomineewarehousefire>



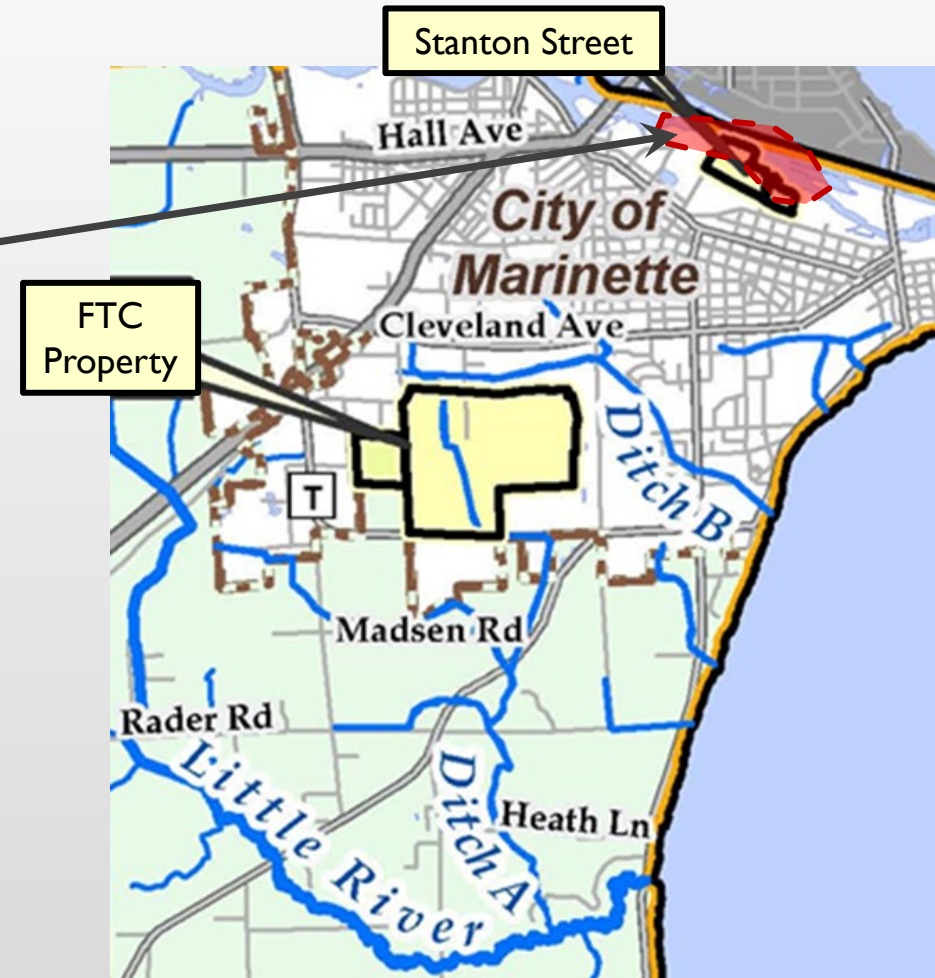
SITE INVESTIGATION UPDATES

SITE INVESTIGATION

PROGRESS AT FTC & STANTON SITES

Menominee River (July 2022)

- 8 locations, multiple depths
- PFOA & PFOS < 2 ppt



Area covered by recent SURFACE WATER monitoring (approximate).

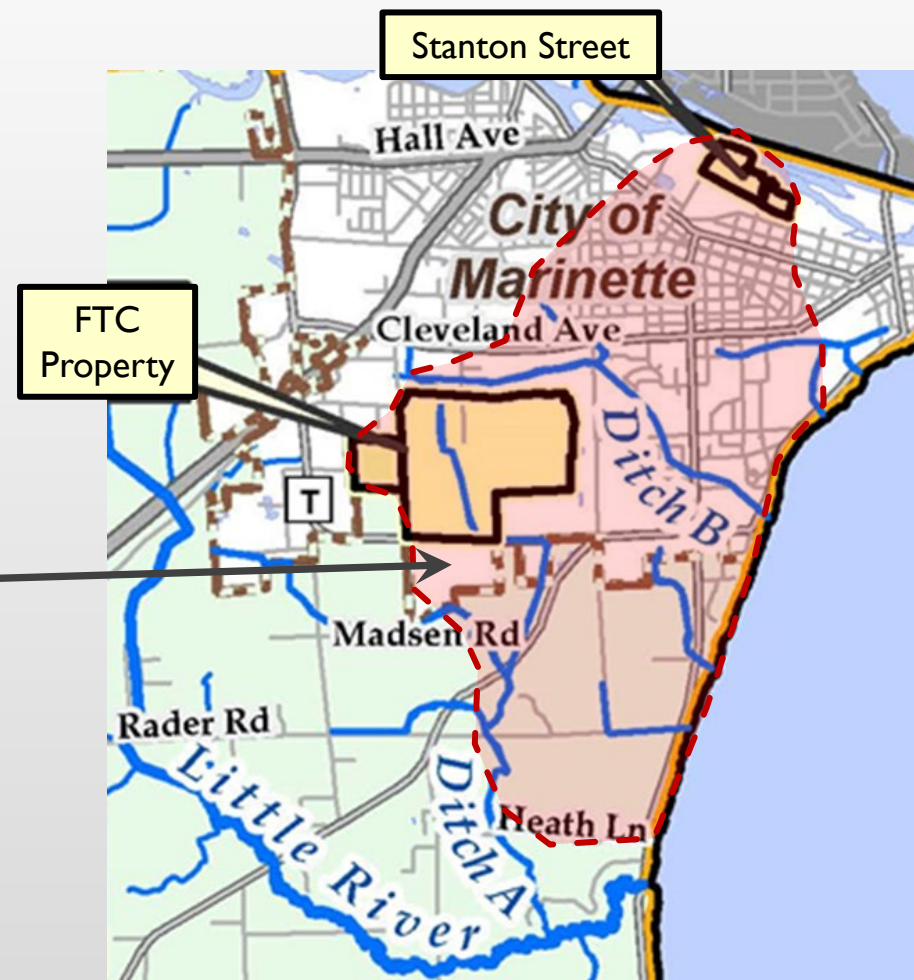
PROGRESS AT FTC & STANTON SITES

Menominee River (July 2022)

- 8 locations, multiple depths
- PFOA & PFOS < 2 ppt

Groundwater (April – Fall 2022)

- 70+ Wells Sampled
- Various depths (some into bedrock)



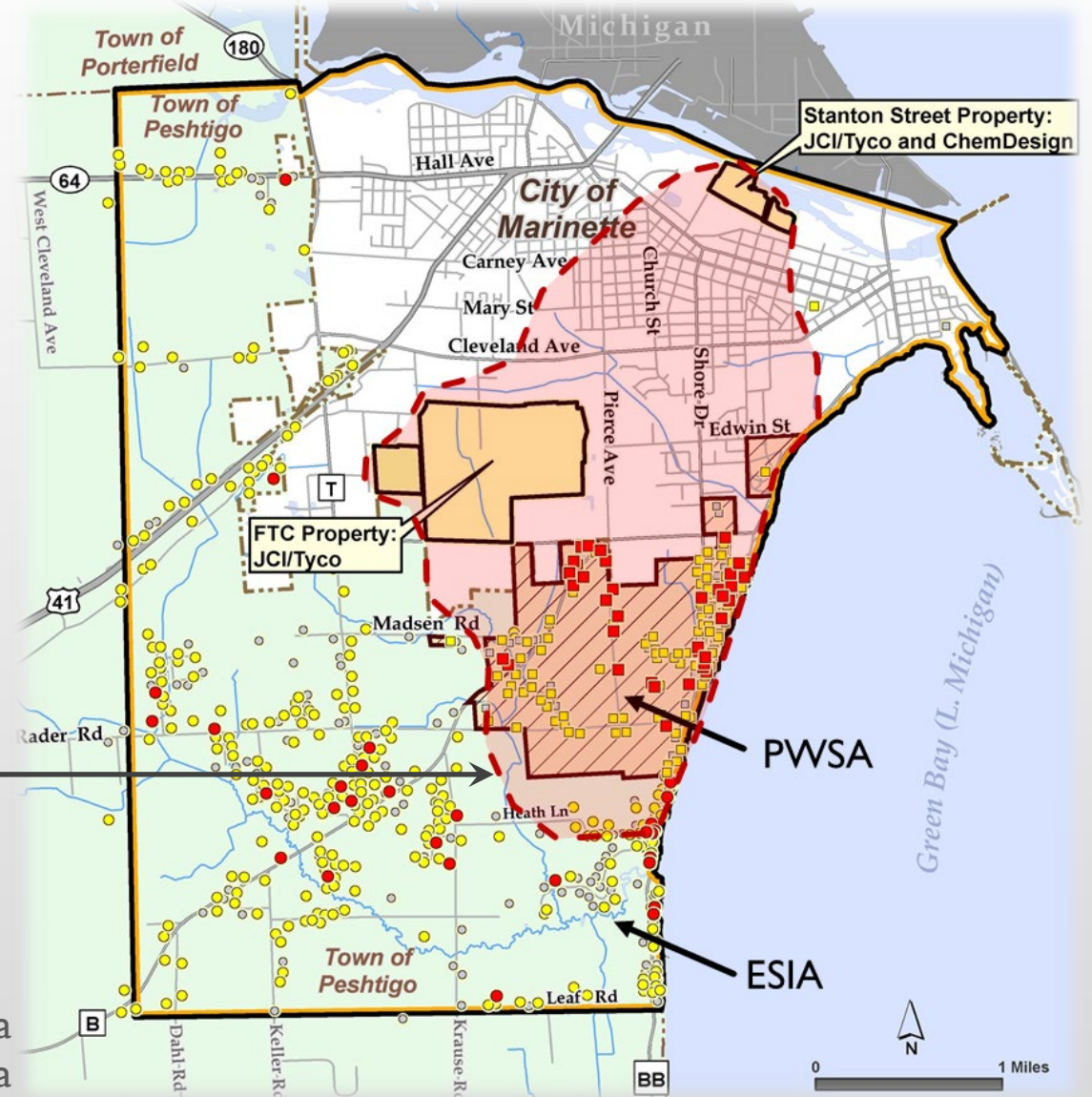
Area covered by current GROUNDWATER monitoring (approximate).

PROGRESS AT FTC & STANTON SITES

Mapping PFAS in Groundwater

- Bedrock surface
- Western portion of FTC property
- Flow Paths in PWSA and City
- Fringes of ESIA

PWSA = potable well sampling area
ESIA = expanded site investigation area



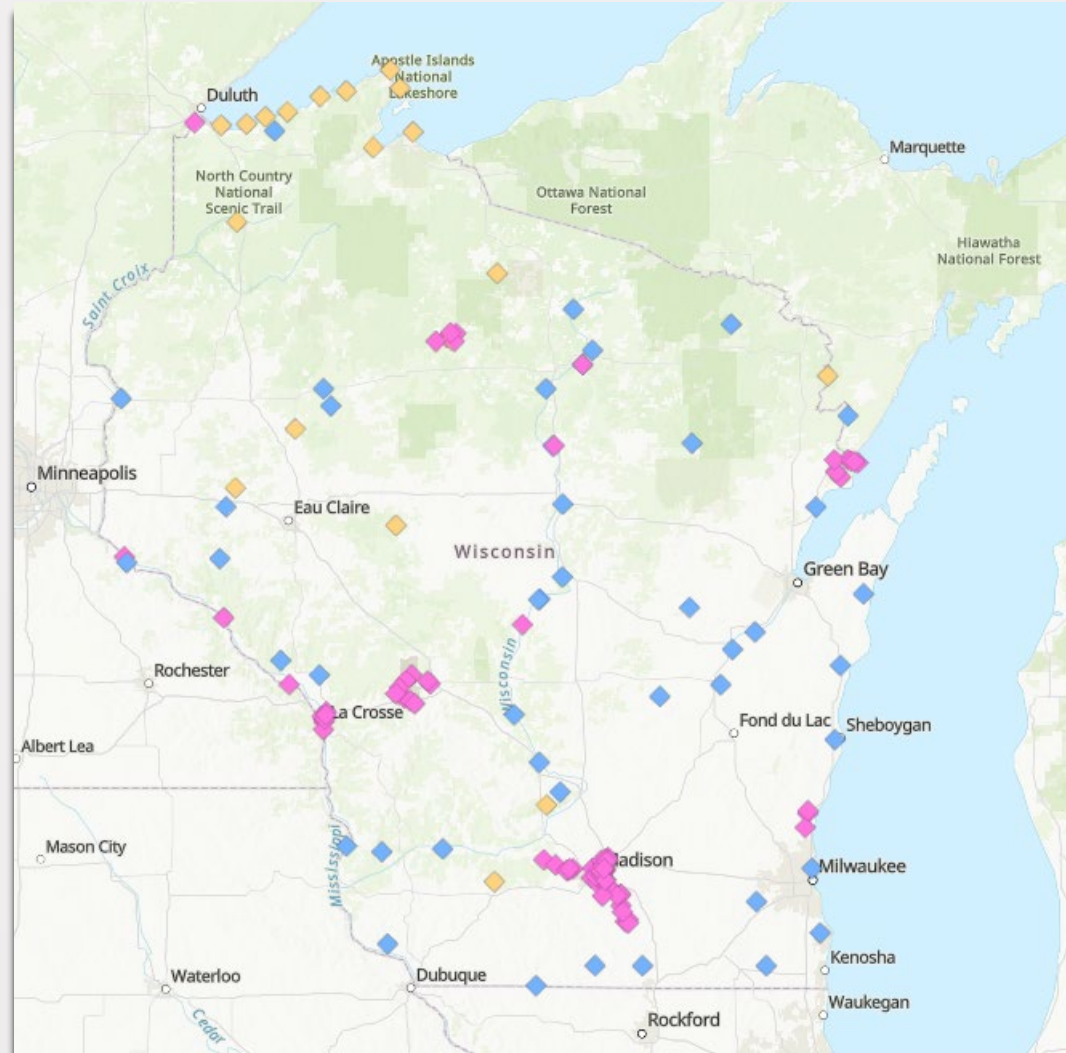
SITE INVESTIGATION

BIOSOLIDS LANDSPREADING FIELDS



- JCI/Tyco's Preliminary Investigation Work Plan
 - Test soil and groundwater
 - Six initial sites
- DNR to test **Lake Noquebay** Nov. 2022
- **Patrick Gorski, PhD** | DNR Research Scientist in Water Quality Program

DNR PFAS INTERACTIVE MAP, SURFACE WATER

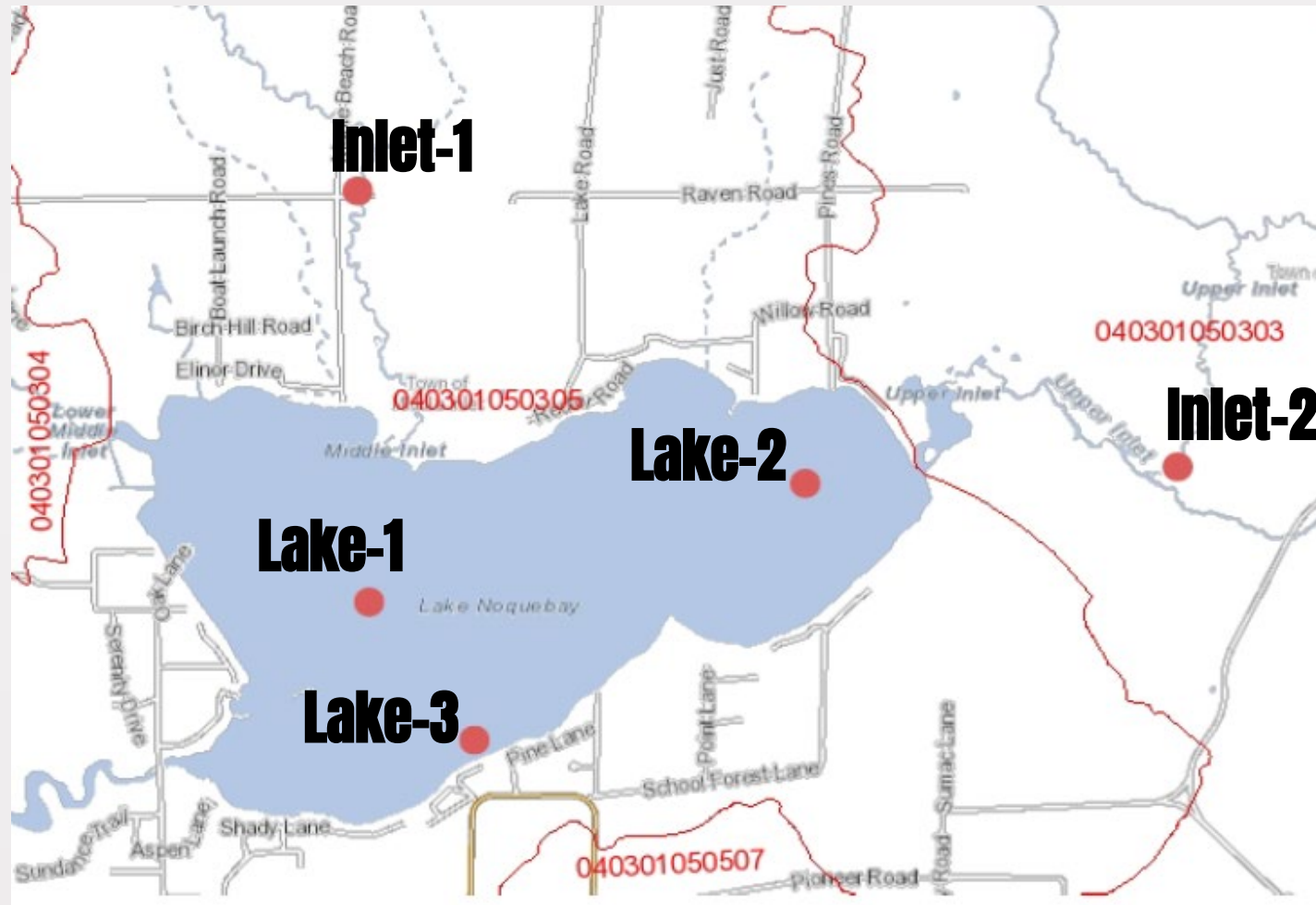


2019 - PRESENT
155 SITES

- Orange Diamond Background Monitoring - Lakes
- Blue Diamond Background Monitoring - Major Rivers
- Pink Diamond Targeted Monitoring

<https://dnr.wisconsin.gov/topic/PFAS/SWFish.html>

LAKE NOQUEBAY SURFACE WATER SAMPLING: 5 PLANNED LOCATIONS



SURFACE WATER FOAM



Lake Noquebay Beach, South Shore
Sept. 27, 2022

Samples submitted to UW-Madison
Prof. Christy Remucal's lab for analysis



[Understanding freshwater foam may help in fight against PFAS “forever chemicals” – YouTube \(2.5 min video\)](#)



WISCONSIN DEPARTMENT
of **HEALTH SERVICES**

DHS PFAS UPDATES

NATHAN KLOCZKO, MPH | HEALTH ASSESSOR

CURTIS HEDMAN, PHD | TOXICOLOGIST

EPA UPDATED HEALTH ADVISORIES

Interim:

- PFOA = 0.004 parts per trillion (ppt)
- PFOS = 0.02 ppt

Final:

- GenX = 10 ppt
- PFBS = 2,000 ppt

<https://www.epa.gov/sdwa/drinking-water-health-advisories-pfoa-and-pfos>

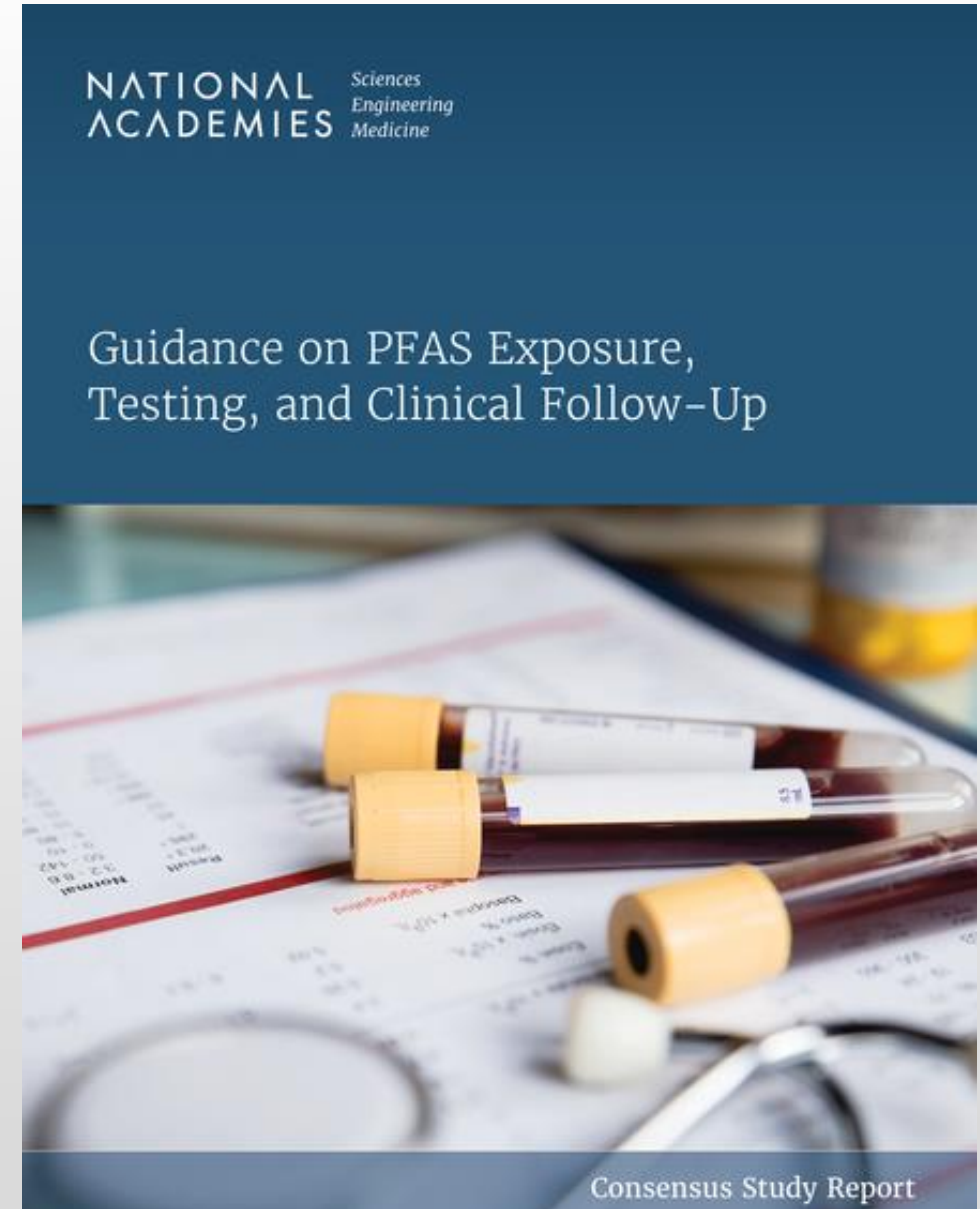
EPA INTERIM HEALTH ADVISORY

- DHS is reviewing technical information for PFOS and PFOA
- Draft PFOS and PFOA MCLs expected Fall 2022,
Final rule Fall 2023
- Continuing to operate under DHS recommended groundwater standards (20 ppt for PFOS+PFOA)

NATIONAL ACADEMIES CLINICAL GUIDANCE

- Recommendations about clinical testing and follow-up
- Recommend ATSDR/CDC reviews recommendations and updates their clinical guidance
- Still cannot infer personal health risk from serum levels—primary guidance is to reduce exposure

<https://nap.nationalacademies.org/catalog/26156/guidance-on-pfas-exposure-testing-and-clinical-follow-up>





CONTACT INFORMATION

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608.287.4152

nathan.kloczko@dhs.wisconsin.gov

608.867.4448

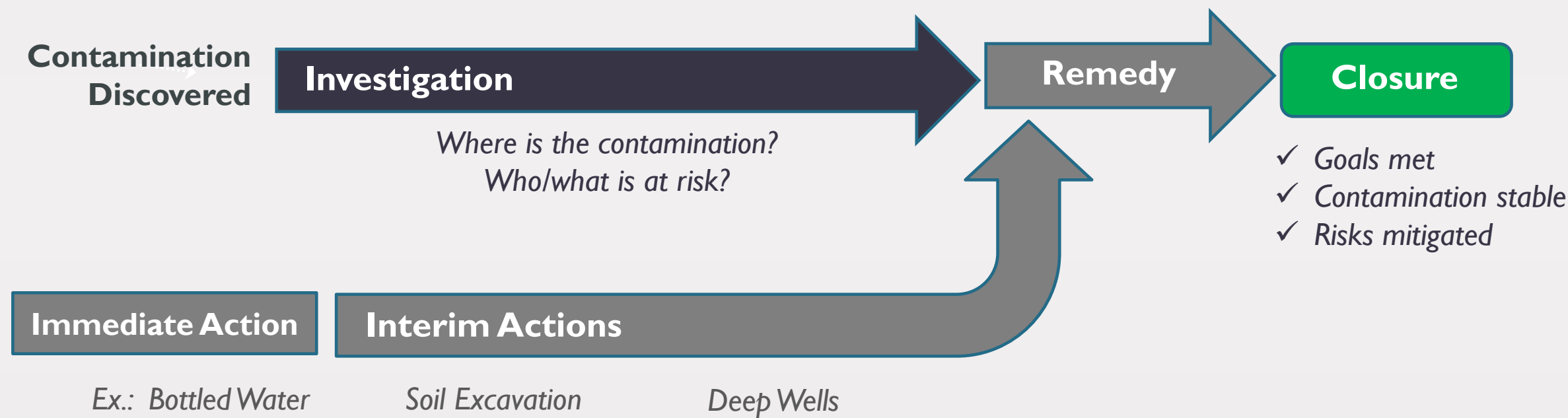
We appreciate your feedback





INTERIM ACTION UPDATES

CONTAMINATED SITE CLEAN-UP



Conceptual drawing for illustration purposes only.

JCI/TYCO'S INTERIM ACTIONS

- Bottled Water/POETS
- Treat surface water in Ditches A and B
- Collect and dispose of surface water foam
- Excavate contaminated soil
- Surface water advisory signs
- **Deep wells in PWSA**
- **Groundwater Extraction and Treatment System (GETS)**

INTERIM ACTIONS

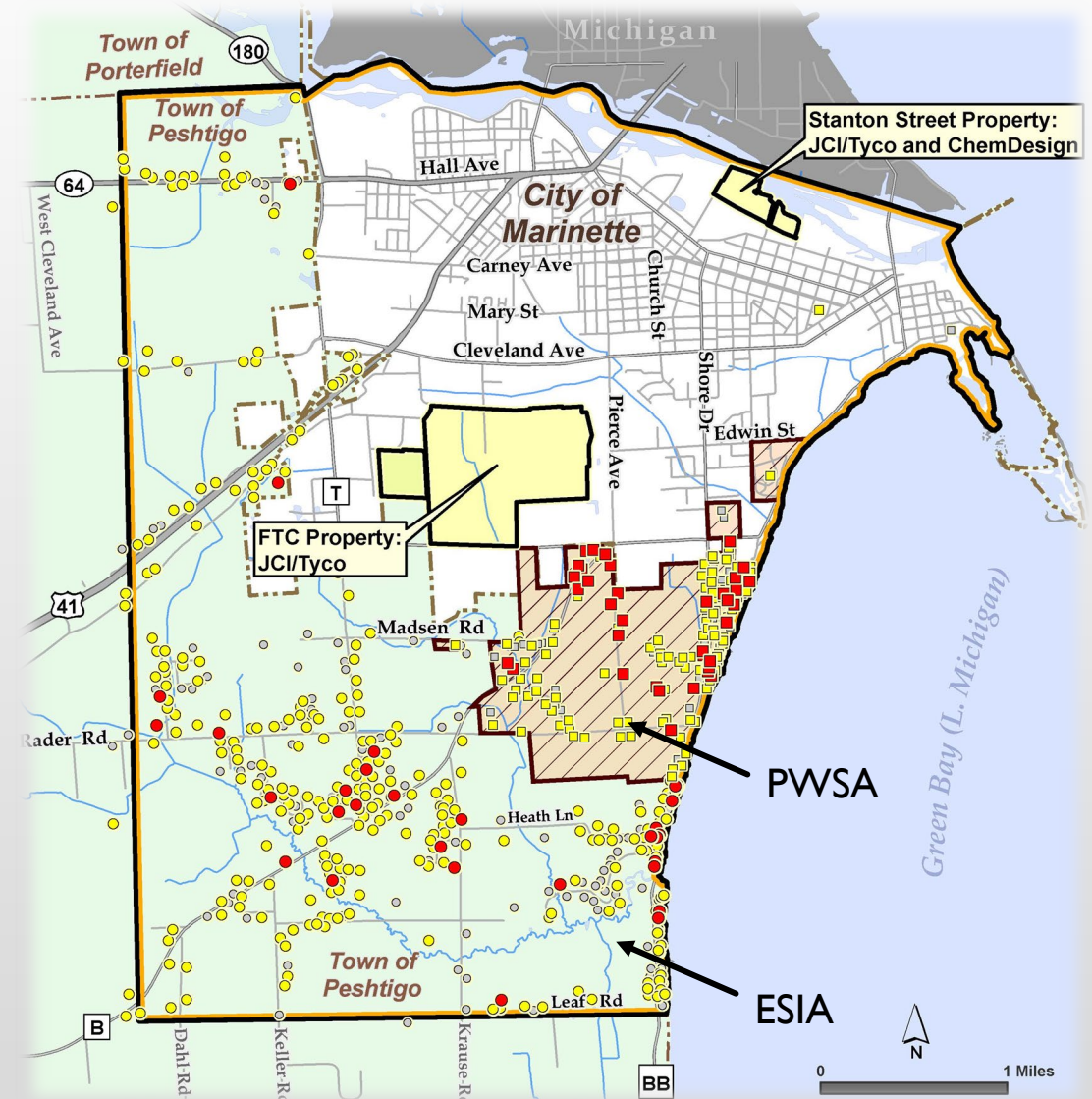
DEEP WELLS

PWSA

- JCI/Tyco offered deep wells to homeowners in Sept. 2022
- Some residents also looking into public water option(s)

ESIA and Biosolids Areas?

- More investigation work to be done
- Design/treatment needs may vary



MUNICIPAL WATER

WHEN DNR SAYS “*PREFERRED*” – WHY?

- Regulated monitoring and maintenance =
More certainty for safe drinking water
- Municipal water systems must:
 - ✓ Meet drinking water standards
 - ✓ Monitor regularly
 - ✓ Operated by licensed operators

... BUT THERE ARE OTHER FACTORS

- Personal preference
- Engineering feasibility
- Operational sustainability
- Cost
- Local rules and regulations (e.g., annexation)
- Public Service Commission (PSC) approval

DEEP WELLS

DNR Requested

1. Design for deep wells
2. Testing/treatment plan for drinking water
3. Long-term monitoring plan

Clarify Selection Timeline

- There is currently no “deadline” for homeowners in PWSA
- Give homeowners time to understand and ask questions

INTERIM ACTIONS

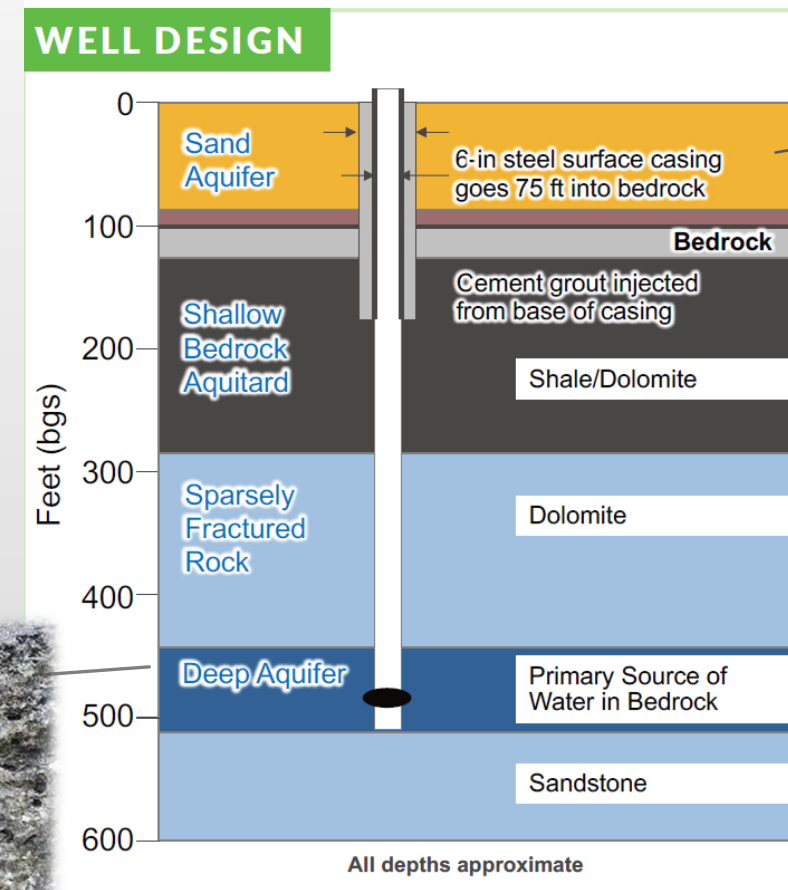
DEEP WELLS

JCI/Tyco's Proposal for PWSA

- ✓ 500-ft well with deep (~150-ft) casing
- ✓ In-home water treatment
- ✓ 1-yr monitoring deep wells
- ✓ Long-term monitoring deep *aquifer*



Well Design from JCI/Tyco's 9/15/22 Update



PFAS > DHS
Recommendations

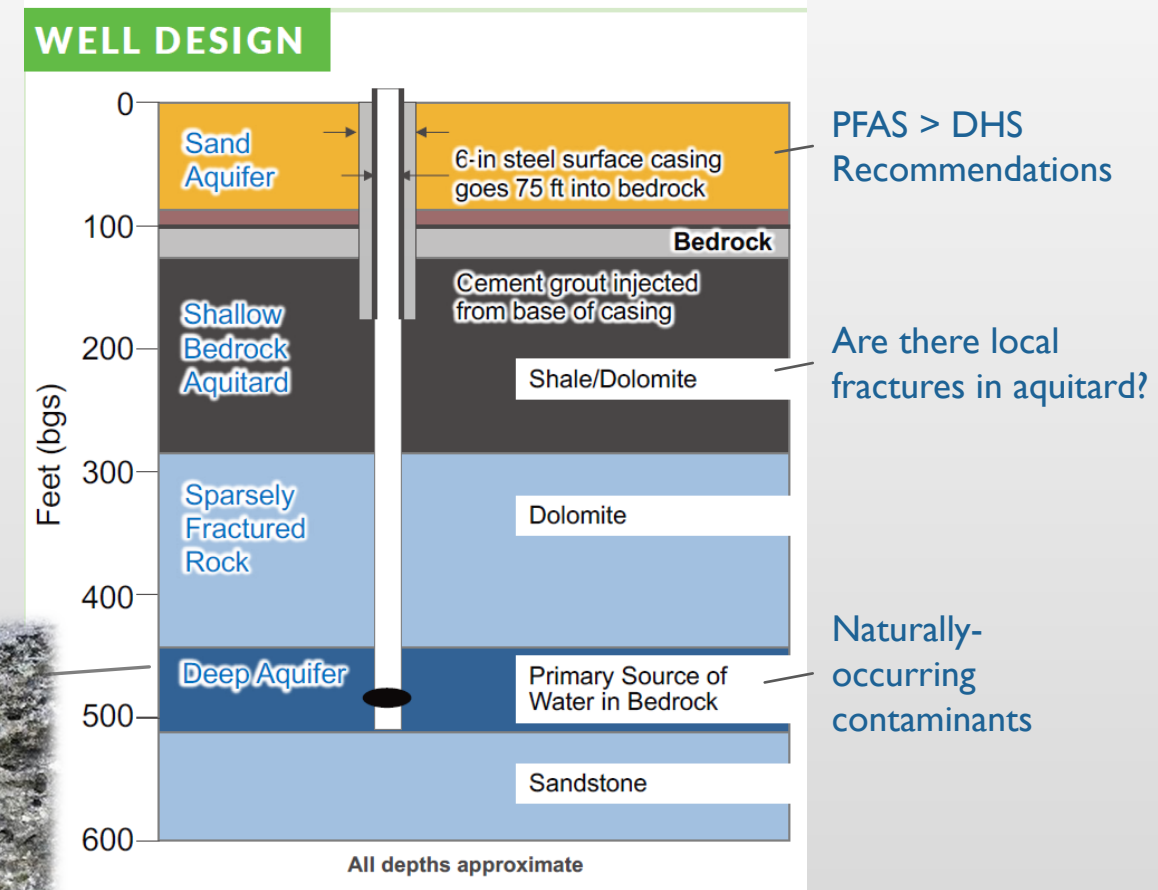
DEEP WELLS

Permanent Solution?

- Possibly, no guarantee
- Concerns with deep aquifer water quality
- Future monitoring recommended



Well Design from JCI/Tyco's 9/15/22 Update



INTERIM ACTIONS

DEEP WELLS



Whole-House Water Softener & Filter:
Address hard water and improve reverse osmosis



Under-the-Sink Reverse Osmosis:
Address naturally-occurring contaminants

Water Quality Concerns: In-Home Treatment Recommended

Naturally-occurring Contaminants in Deep Aquifer	Standard	Deep Aquifer Detected Range
Radium (pCi/L)	5 *	12 - 34
Strontium (ppm)	1.5 **	5.7 - 13
Sulfate (ppm)	250 ***	370 – 500

pCi/L = picocuries per liter

ppm = parts per million

* MCL (Maximum Contaminant Level) in drinking water

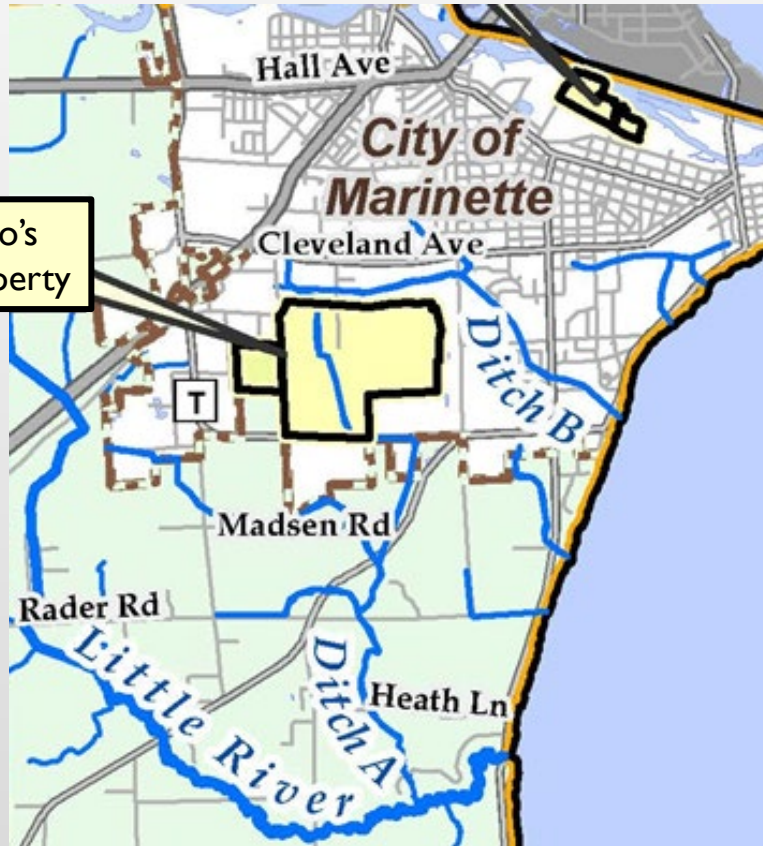
** DHS Recommendation

*** NR 140 Enforcement Standard

Photos are examples for illustration only.

INTERIM ACTION

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM (GETS)



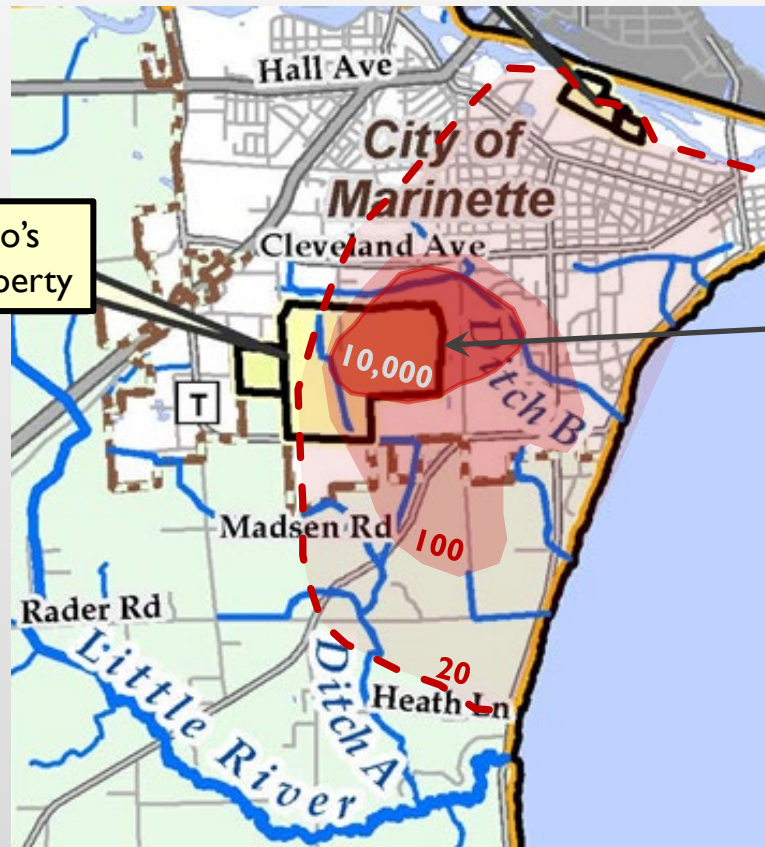
What we know today:

INTERIM ACTIONS

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM (GETS)

What we know today:

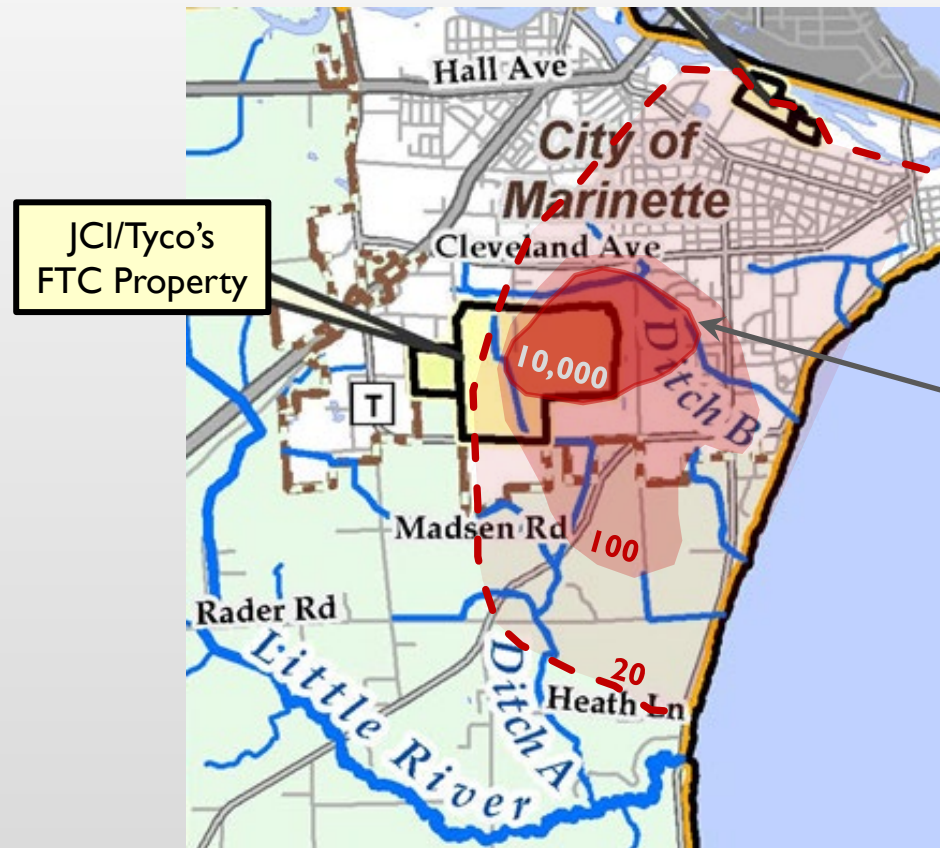
- I. Groundwater with PFAS > 10,000 ppt located here



Groundwater concentration contours approximate & subject to change as JCI/Tyco's site investigation continues.

INTERIM ACTIONS

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM (GETS)



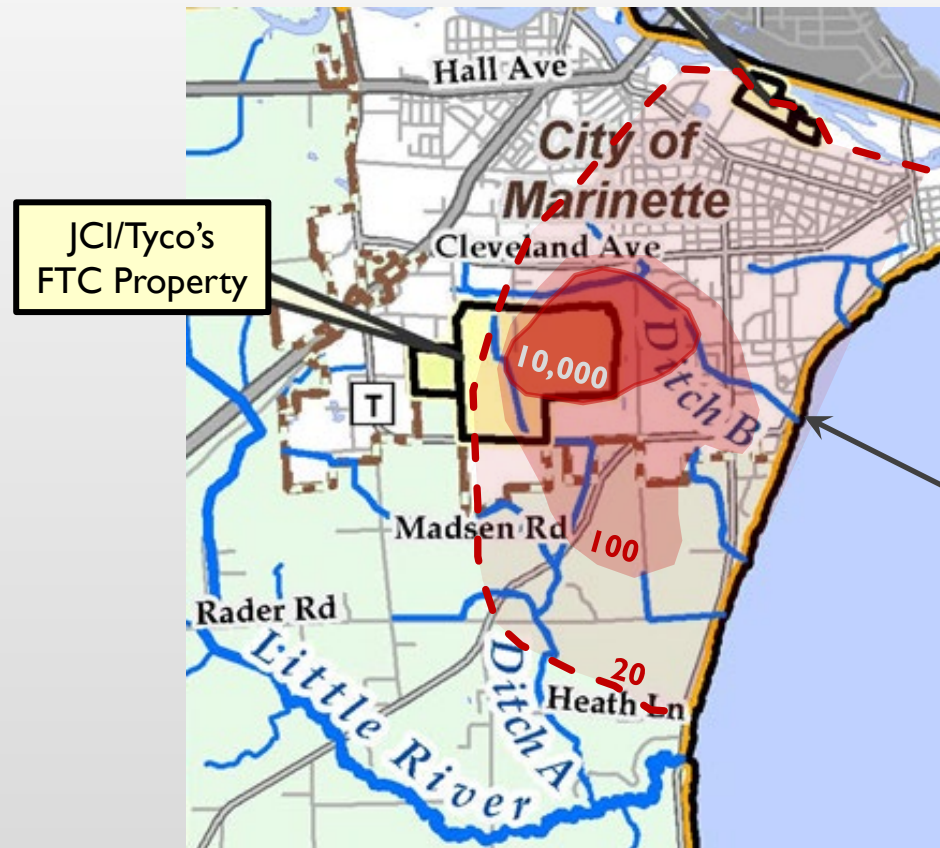
Groundwater concentration contours approximate & subject to change as JCI/Tyco's site investigation continues.

What we know today:

1. Groundwater with PFAS > 10,000 ppt located here
2. Ditch B intercepts highly impacted groundwater

INTERIM ACTIONS

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM (GETS)



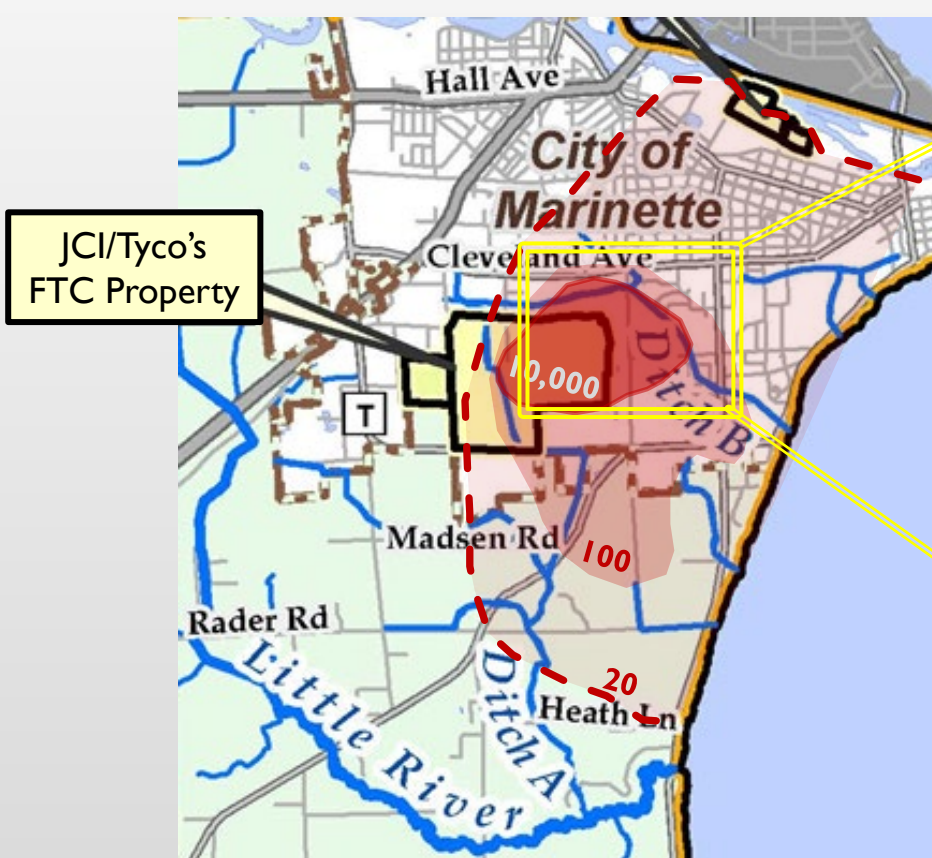
Groundwater concentration contours approximate & subject to change as JCI/Tyco's site investigation continues.

What we know today:

1. Groundwater with PFAS > 10,000 ppt located here
2. Ditch B intercepts highly impacted groundwater
3. Surface water in Ditch B has PFAS > 1,000 ppt
 - Surface water foams form
 - Flows into Green Bay

INTERIM ACTIONS

GROUNDWATER EXTRACTION AND TREATMENT SYSTEM (GETS)



Groundwater concentration contours approximate & subject to change as JCI/Tyco's site investigation continues.



- Capture groundwater with high PFAS
- Limit PFAS going into Ditch B

INTERIM ACTIONS



Extraction Well Control Box
& Monitoring Well



GETS Treatment Building
on FTC Property



Inside GETS Building
Carbon Filtration Vessels



Discharge of
Treated Water into Ditch B

GETS CONSTRUCTION COMPLETE - SEPTEMBER 2022

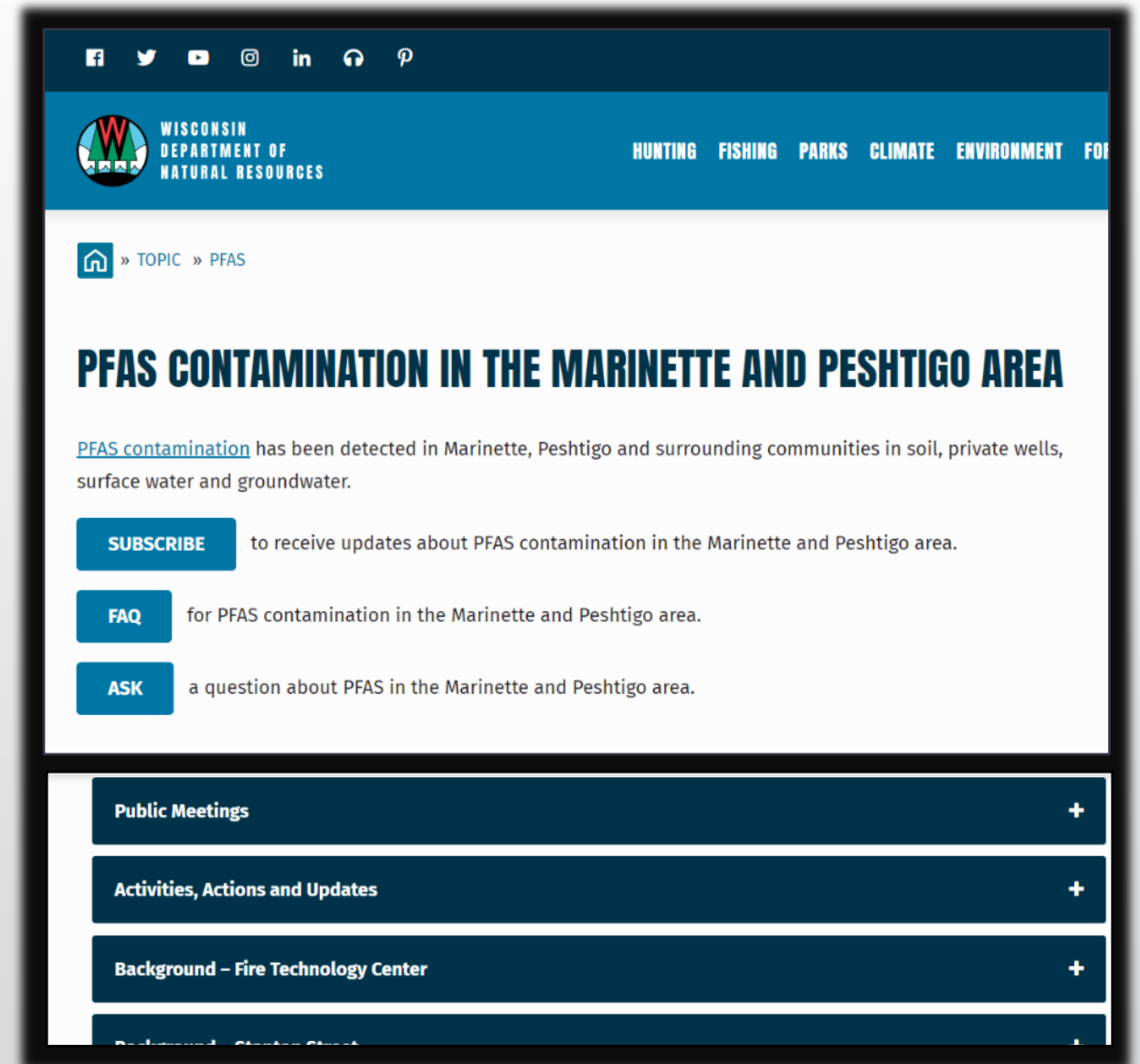
GETS STARTUP

- ✓ Baseline monitoring: July 2022
- ✓ Confirmed treatment: Aug. - Sept. 2022
- ✓ Pump tested extraction wells: Oct. 2022
- ✓ Full-scale startup & monitoring: Nov. 2022



STAYING CONNECTED

- DNR Website
 - [DNR homepage](#) → search 'PFAS Marinette'
- Receive Email Updates
 - Sign up through the “**Subscribe**” Button
- Ask a Question / Voice a Concern
 - Click on the “**Ask**” Button
 - Email us: DNRJCIPFAS@wisconsin.gov
 - Call us: 1-888-626-3244



PUBLIC QUESTIONS & COMMENTS

In Person:

- Hand notecard to DNR
- Raise hand to speak

Zoom:

- Submit question via “Chat” (goes to DNR Host)
- “Raise hand” / Unmute when prompted

Phone:

- *9 Raise Hand / * 6 Unmute when prompted



Please:

- Constructive comments
- Specific to projects
- Limit 3 min/person

STAYING CONNECTED

- DNR Website
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