PFAS Contamination

Marinette, Peshtigo, and Surrounding Communities

Listening Session 7

April 15, 2020

WISCONSIN DEPT. OF NATURAL RESOURCES

1

1

What to Expect from this Listening Session

- Safer-at-Home
- New Challenges – all DNR staff are working from home
- First remote meeting – we are learning, too
- This meeting format is new to us

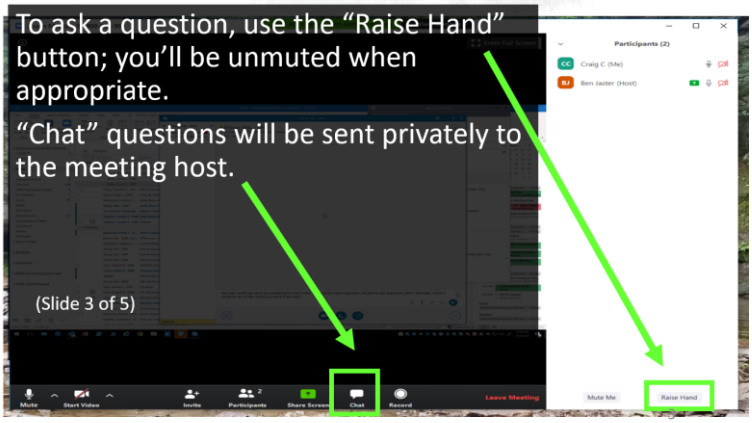
2

2

What to Expect from this Listening Session

'Zoom' Technology

- All attendees are automatically muted when they join the call
- If you are joining by web:
  - **During the presentation** – use **'chat'** feature to type questions
  - **After presentation** – use the **'chat'** feature *or* **'raise hand'** feature to request to be unmuted to ask a call
- If you are joining by phone:
  - Write questions down and contact us later (next slide)



3

What is a Listening Session?

Ongoing and open communication regarding the details of the PFAS contamination in these communities

- **7th in a series of sessions**
  - Next meeting in May, then every other month after that
- **First 'remote' meeting**
  - Other options for contacting DNR
  - Call (888-626-3244) or
  - email DNRJCIPFAS@wisconsin.gov
- **Also – check out website and FAQs**
  https://dnr.wi.gov/topic/Contaminants/Marinette.html

WISCONSIN DEPT. OF NATURAL RESOURCES

4

4

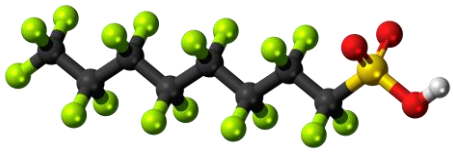
Welcome and Agenda

Presentation:

- DNR and Safer-at-Home Order
- Overview: PFAS Chemicals
- Overview: Addressing PFAS Contamination
- Update on Site Investigations
- Upcoming Important Dates

Listening Session:

- Question + Answer Session



WISCONSIN DEPT. OF NATURAL RESOURCES

5

5

COVID-19

- Responsible parties must maintain compliance with laws
- Department-wide process for requesting variance of regulatory deadlines

6

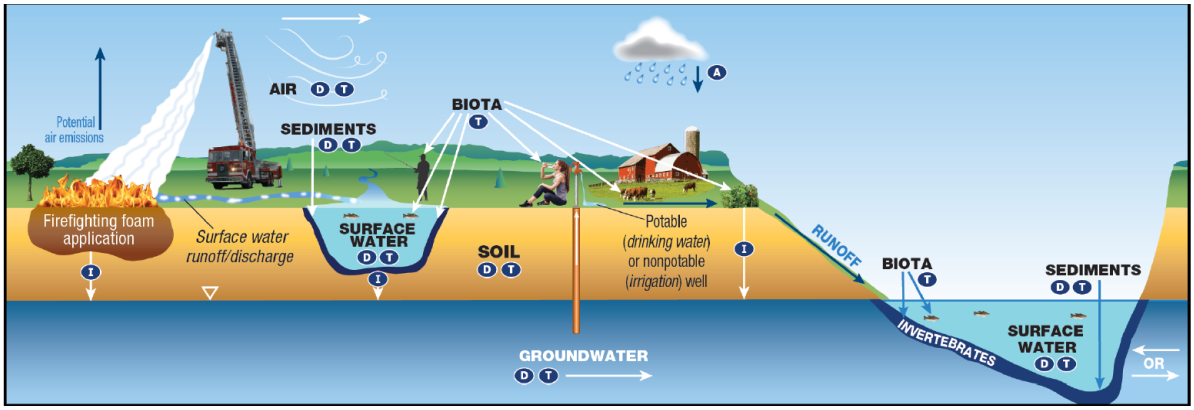
6

What are PFAS?

per- and polyfluoroalkyl substances (PFAS)

7

7



KEY A Atmospheric Deposition D Diffusion/Dispersion/Advection I Infiltration T Transformation of precursors (abiotic/biotic)

PFAS in The Environment

- Groundwater
- Stormwater runoff
- Surface water
- Air
- Biosolids
- Others (construction and waste)

8

8

High levels of PFAS may

Increase cholesterol

Reduce antibody response

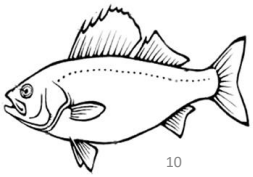
Decrease fertility in women

9

9

Major Exposure Pathways to PFAS

- Drinking contaminated water.
- Eating fish caught from contaminated water (PFOS, in particular).
- Accidentally swallowing contaminated soil or dust.
- Eating food that was packaged in material that contains PFAS.



10

10

Interrupting PFAS exposure will reduce PFAS levels in our body.

11

11

If your private well water has combined PFOA and PFOS above 20 ng/L*

- Use an alternative water source for drinking, cooking, or preparing infant formula.
- You can use water for showering, bathing, and washing hands.
  - PFAS do not easily enter the body through skin

* DHS's recommended groundwater standard for PFOA and PFOS

12

12

During Recreational Activities in Waterways (creeks, ponds, and rivers):

- Do not drink water or swallow foam.
- Do not allow pets to drink water or swallow foam.
- After touching water, wash hands, pets, or other items to avoid accidently swallowing PFAS.
- Follow DNR fish consumption advisories:
  - https://dnr.wi.gov/FCSExternalAdvQry/FishAdvisorySrch.aspx

13

DHS' Work

- Evaluating literature to determine safe levels in water
- Identify exposure pathways at specific sites

- Make recommendations to prevent or reduce exposure

- Educate affected communities and local health professionals about site contamination and potential health effects

14

14

DHS' Updates

- Public Health Assessment - Open House
- PFAS Information Session for Clinicians
- Send health-related questions to: DHSEnvHealth@dhs.wisconsin.gov
- Health-related PFAS information: www.dhs.Wisconsin.gov/chemicals/pfas.htm

15

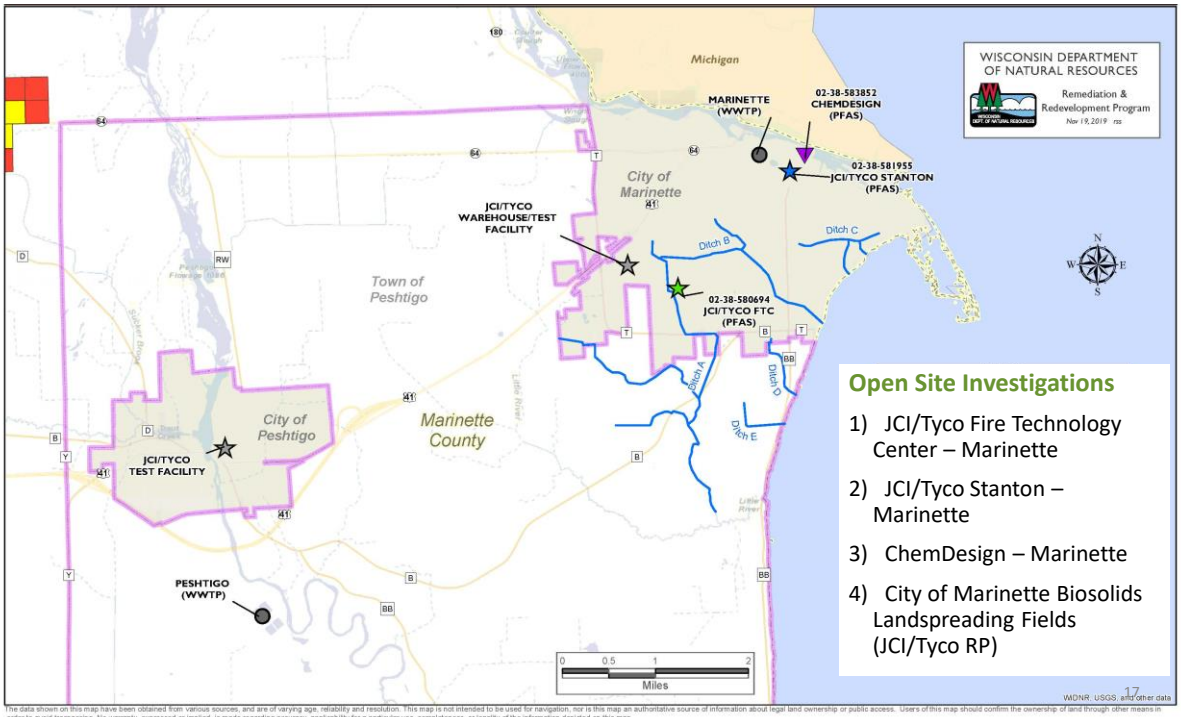
15

PFAS in Marinette, Peshtigo, & Surrounding Communities – What is a Site Investigation?

- Responsible parties must follow the process laid out in state law
- Each Case is at a different stage in their investigation (x 4 cases)
- Iterative Process

16

16



17

Roles and Responsibilities

State Law	DNR's Role	JCI/Tyco & ChemDesign
• Immediate Reporting	• Ensures compliance with the law	• Report contamination
• Restore the environment	• Technical Reviews	• Site investigation • Multiple Iterations
• Road Map	• Public Participation and Notification	• Immediate, interim, and remedial actions

• 'Self-Implementing'	• Work with –
	  • Health agencies
	  • Local govts
	  • Other stakeholders
		• Long term solutions
		• Long term obligations

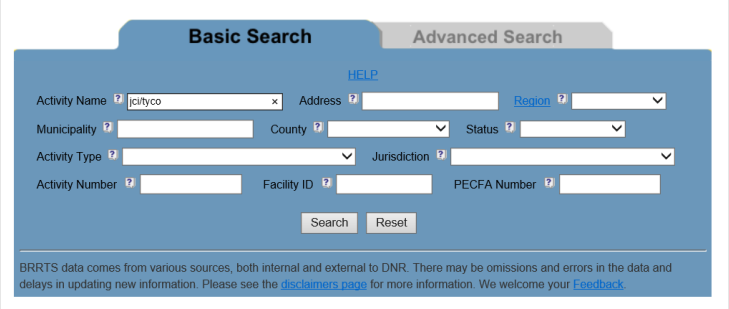
18

18

1) Biosolids Landspreading Fields (City of Marinette)
2) JCI/Tyco Fire Technology Center (FTC)

Site Investigation Updates

BRRTs On The Web (BOTW)



https://dnr.wi.gov/botw/SetUpBasicSearchForm.do

19

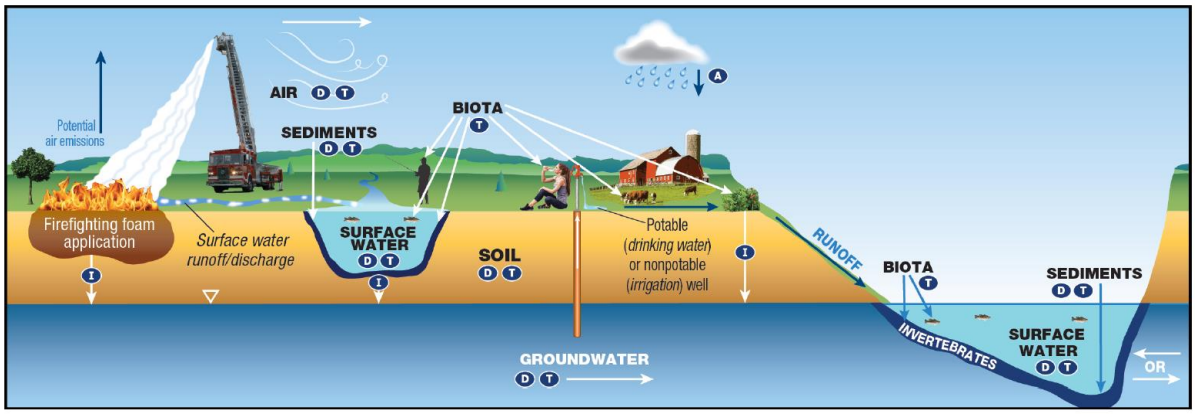
19

Biosolids Landspreading Fields

- What are biosolids?
- Why were they landspread?
- How is JCI the responsible party?
- How much of the investigation has been conducted to date?
- What's next?

20

20



Sources of PFAS to the Environment: Fire Training Areas

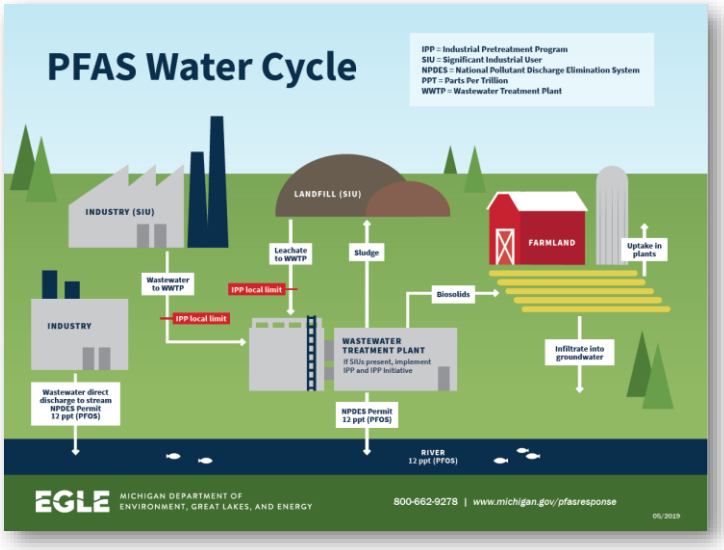
- Groundwater
- Stormwater runoff
- Surface water
- Air
- Biosolids
- Others (construction and waste)

21

21

Fate and Transport

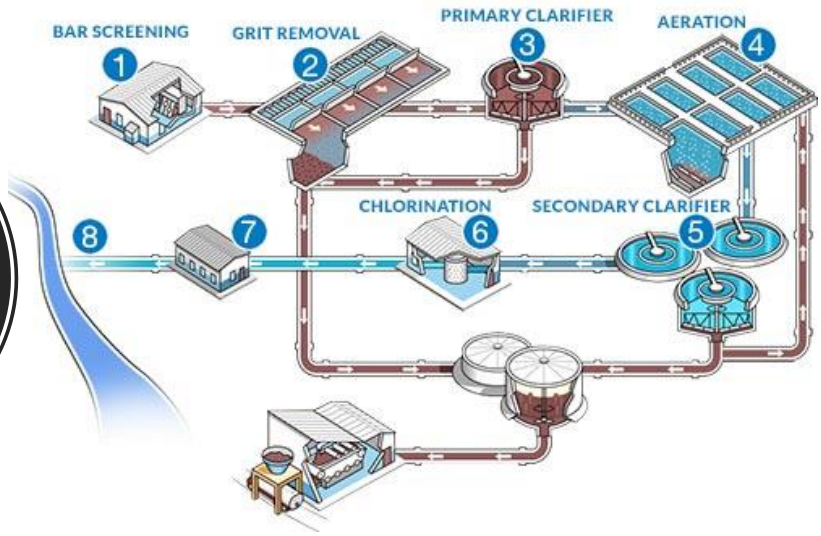
- Wastewater treatment plants are <u>not sources</u> of PFAS
- PFAS accumulate in sludge/biosolids during the treatment process
- Management of biosolids activity regulated by DNR



https://www.michigan.gov/documents/pfasresponse/PFAS_Water_Cycle_631266_7.pdf

22

Wastewater Treatment Process



- General treatment process: blue = liquids, brown = solids
  - PFAS is found in both liquids and solids

https://www.coleparmer.com/tech-article/eight-stages-of-wastewater-treatment-process

23

23

Disposal Options

- Landfill
- Land application

24

24

Biosolids in Marinette Area

Currently no PFAS concentration standards for land application of biosolids

- Marinette
  - Currently holding biosolids
  - JCI/Tyco no longer sends foam to sewer
- Peshtigo
  - Currently holding biosolids

25

25

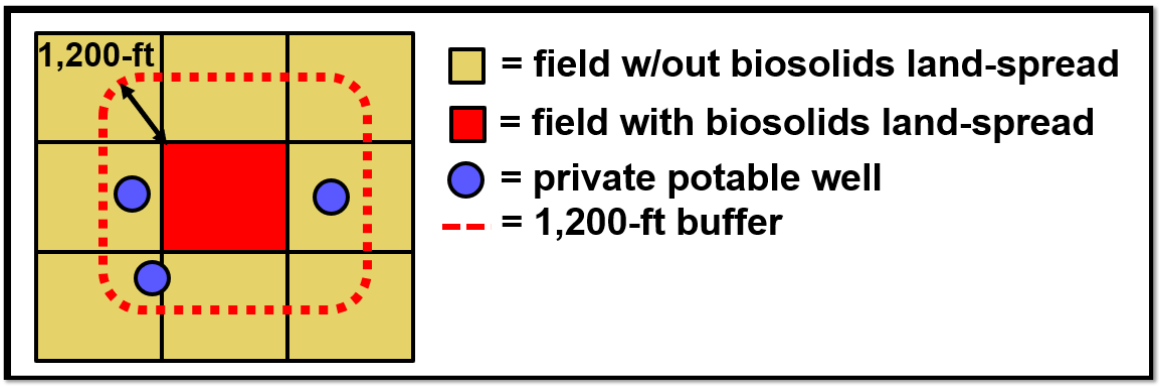
Biosolids Landspreading Fields – The Basics

- Point of Clarity….
- Open site investigation is due to biosolids landspread on fields
- City of Marinette biosolids contained PFAS
- Initial focus on private well sampling
- Soil, groundwater, and surface water will be tested as part of this investigation

26

Biosolids Land spreading Fields

- DNR determined JCI/Tyco to be responsible party in July 2019
- Site investigation initiated March 2020
- Private well sampling within 1,200-ft of 61 fields

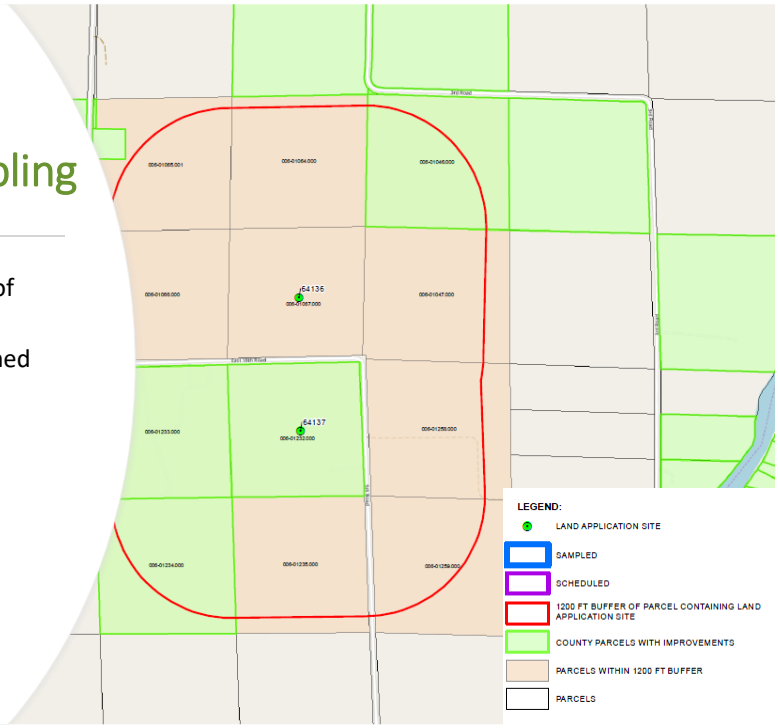


27

27

Biosolids Landspreading Fields – Private Well Sampling

- 577 total parcels within 1,200-ft buffer of fields
- 174 private drinking water wells confirmed
- Owners contacted for sampling
  - 170 yes
  - 4 declined
- 200+ parcels to be reviewed for wells



28

Biosolids Landspreading Fields –Private Well Sample Data Results

Wells	Results Category
74	Not detected
10	Below reporting limit
7	Between reporting limit and 20 PPT
3	Between 20 and 70 PPT
4	Above 70 PPT

Of those >70 ppt, 1 well > 1,100 ppt PFOS + PFOA

29

29

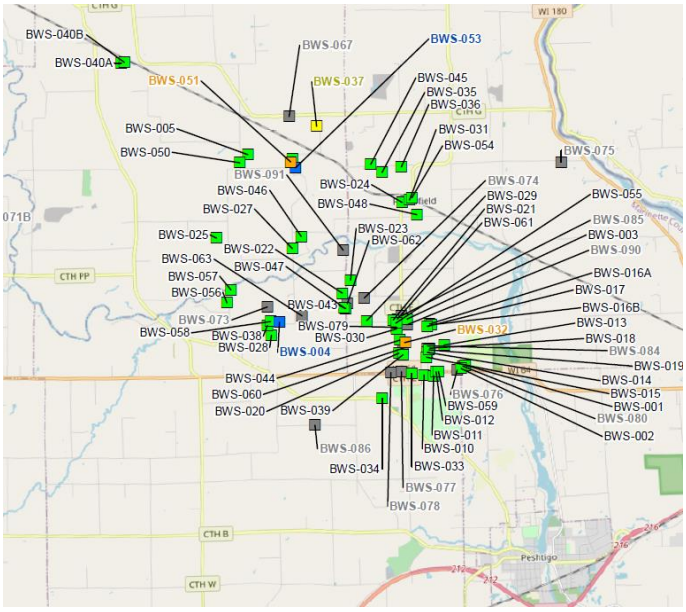
Biosolids Landspreading Fields – "Patchwork Quilt"

LEGEND:

Drinking Water Results

- Results Not Available
- PFOA and/or PFOS below reporting limit (RL)
- PFOA and/or PFOS detection – RL < 20 ppt
- PFOA and/or PFOS detection – 20 – 70 ppt
- PFOA and/or PFOS detection above HAL

Wells	Results Category
74	Not detected
10	Below reporting limit
7	Between reporting limit and 20 PPT
3	Between 20 and 70 PPT
4	Above 70 PPT



30

30

Biosolids Landspreading Fields – Results to Date

- More data forthcoming
- Continue to provide updates as we receive information
- DNR directed JCI/Tyco to provide bottled water to anyone with sample results > 20ppt

How Do I Get Bottled Water?

If you have sample results > 20 ppt PFOS/PFOA, you may request bottled water from JCI/Tyco by:

Calling 1-800-314-1381

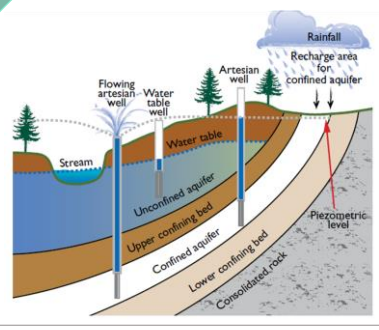
Email: James.comx@jci.com

31

31

Biosolids Land spreading Fields – Next Steps

- JCI/Tyco will report additional sample results to DNR and well owners within 10-days of receipt
- DNR and JCI/Tyco will meet in May 2020 to discuss sample results
- JCI/Tyco must submit work plan for soil, groundwater, and surface water investigation of area surrounding fields



32

32

Biosolids Land spreading Fields – Next Steps

- JCI/Tyco has suspended sampling due to COVID-19
- JCI/Tyco applied for 'variance' in regulatory timelines
- DNR has not approved variance – still under review
- Questions about private well sampling timeline – contact JCI/Tyco

tyco

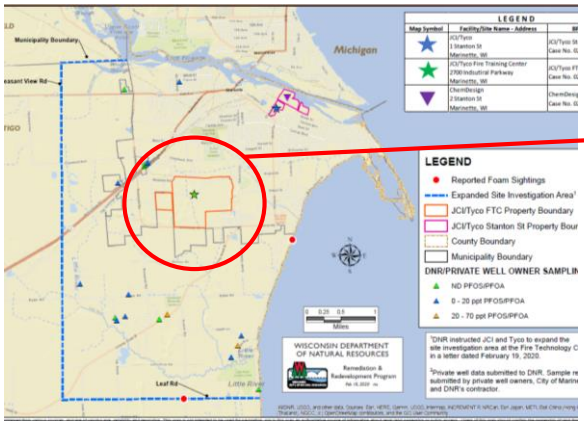
https://tycomarinette.com

Contact Us
If you have any questions, please call our dedicated phone line at 715-582-7100 or send an email to Jim Cox at Tyco in Marinette: James.Cox@jci.com.

33

33

JCI/Tyco Fire Technology Center (FTC), Marinette, WI

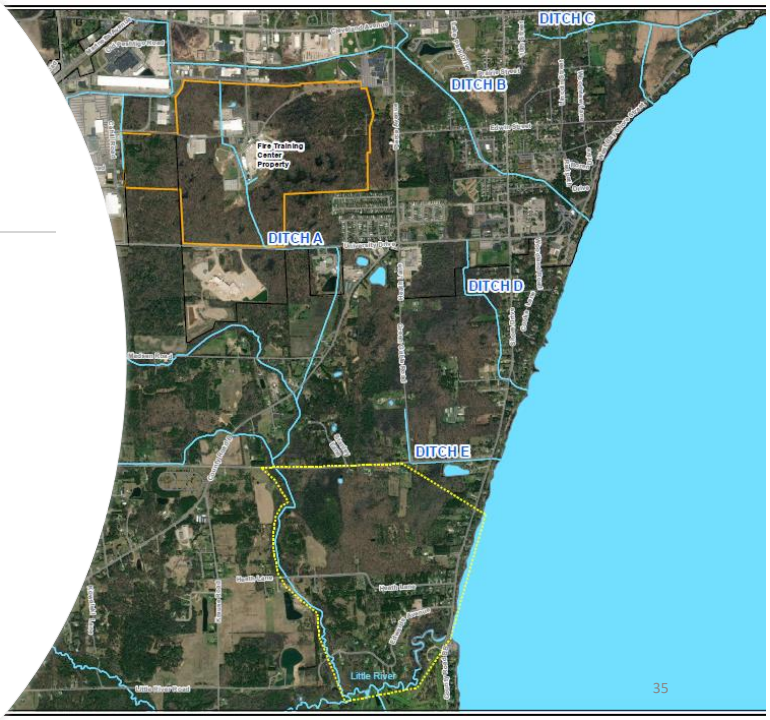


34

34

JCI/Tyco Fire Technology Center

- JCI/Tyco submitted 'Southern Area' site investigation report – for sampling conducted in 2019 → *Heath Lane Report*
- Report discusses groundwater sampling in area identified by **yellow-dotted-line**
- Report only addresses groundwater transport of PFAS
- DNR directed JCI/Tyco to evaluate other pathways including surface water and air
- Report is under review by DNR with technical comments expected in May 2020



35

JCI/Tyco Fire Technology Center

- JCI/Tyco reported to DNR that they are contacting well owners via telephone regarding quarterly sampling – may experience delays due to COVID-19
- JCI/Tyco applied for 'variance' in regulatory timelines
- DNR has not approved variance – still under review
- Questions about private well sampling timeline – contact JCI/Tyco

tyco

https://tycomarinette.com

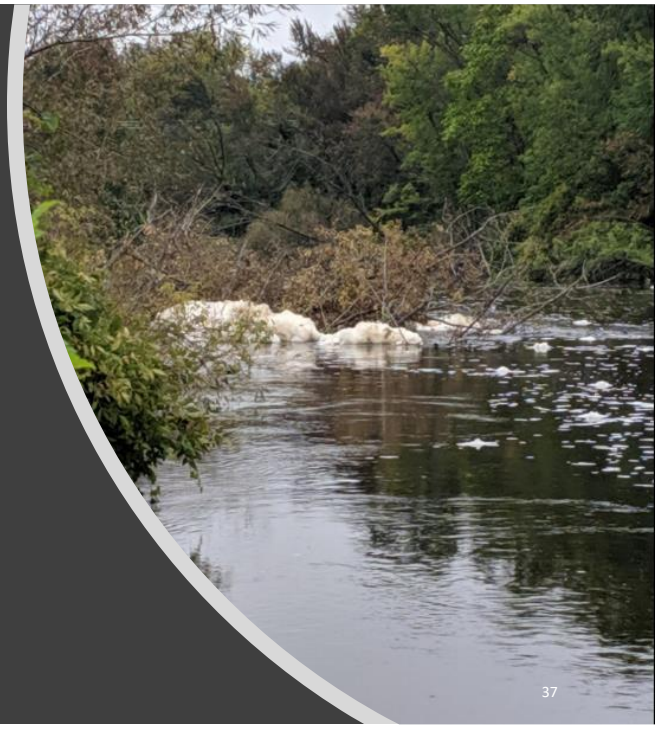
Contact Us
If you have any questions, please call our dedicated phone line at 715-582-7100 or send an email to Jim Cox at Tyco in Marinette: James.Cox@jci.com.

36

36

Foam on Waterways

- Lots of reports of foam on waterways with heavier spring rains
- We're logging reports in database
- Tested foam in summer 2019 – >80,000ppt (PFOS + PFOA)
- All foam on waterways – natural or from to human activities – is potentially dangerous to health when ingested



37

37

Sampling Updates

- **DNR Deer Study**
  - 20 deer collected and sent to State Lab of Hygiene
  - Sample results likely summer 2020
- **JCI/Tyco Fish Sampling**
  - 3 private ponds where fish will be collected
  - Sampling to be conducted summer 2020
- **JCI/Tyco Bay of Green Bay Sampling**
  - Sampling to be conducted summer 2020

38

38

Upcoming Important Dates

May

- DNR provides technical comments on FTC 'Southern Area' Investigation Report (Health Lane Area)
- May 20th – Next Listening Session

July

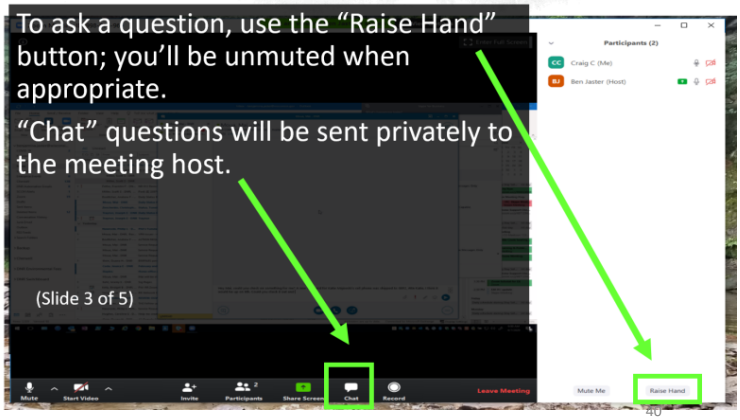
- July 15th – Next Listening Session

39

39

Ground Rules – Listening Session

- Use the **'chat'** feature *or* **'raise hand'** feature to request to be unmuted to ask a call
- 3-mins per person → everyone has the opportunity to voice concerns
- Keep comments constructive
- Attack the problem not the person



40

40