

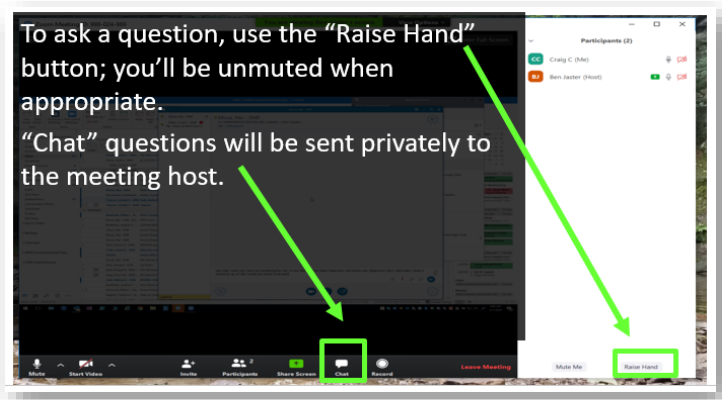


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What to Expect during this Listening Session

Zoom Meeting Logistics

- All attendees are automatically muted when they join the call
- 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
- Joining by **phone**:
 - *6 mute/unmute
 - *9 raise hand



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Team Members

DNR - Remediation and Redevelopment

- Bridget Kelly, Emerging Contaminants
- Christine Haag, Director
- Alyssa Sellwood, Project Manager
- Jodie Peotter, Brownfields, Outreach & Policy Section Chief
- Trevor Nobile, Field Operations Director
- Jenna Soyer, Program and Policy Operations Director

DNR - Drinking Water And Groundwater

- Kyle Burton, Field Operations Director

DNR - Water Quality

- Heidi Schmitt-Marquez, NER Supervisor
- Alexis Peter, Wastewater Specialist
- Laura Gerold, Wastewater Engineer
- Adrian Stocks, Director

Department of Health Services

- Brita Kilburg-Basnyat, Toxicologist
- Amanda Koch, Health Educator

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Staying Connected

Today - 14th in series of sessions

- *Previous meeting recordings available*
- Next meeting July 21st

Website and FAQs

- **DNR homepage** → search 'PFAS Marinette'
- **Sign-up for updates** →

SUBSCRIBE to Marinette and Peshtigo area PFAS contamination updates.

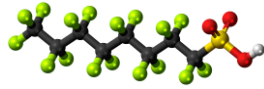
Other options for contacting DNR

- Call (888-626-3244) or
- email DNRJCIPFAS@wisconsin.gov



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Welcome and Agenda



Presentation:

- DNR Private Potable Well Sampling in Expanded Site Investigation Area
- Department of Health Services
- Interim Remedial Actions
- Other Updates
- Upcoming Important Dates

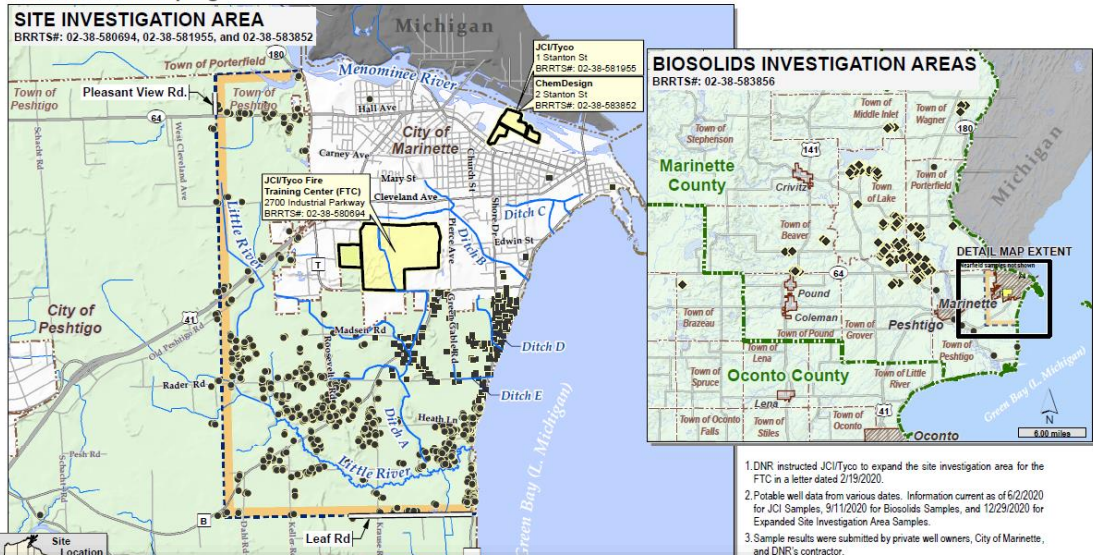
Listening Session:

- Question + Answer Session

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Marinette, Peshtigo and Surrounding Areas PFAS Investigations Potable Well Sampling



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Potable Well Sampling Update

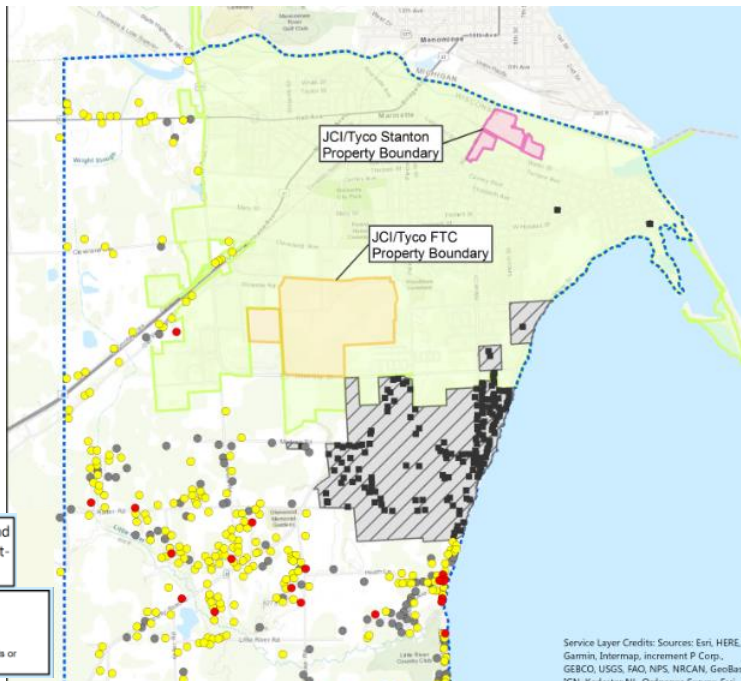


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DNR Potable Well Sampling Program

Background

- Sampling started fall 2020 - *expanded site investigation area*
- Inform residents about potential PFAS in drinking water wells



Sample results colored in accordance with Dept. of Health Services Cycle 10 and Cycle 11 recommended groundwater standards, including the sum of FOSA, NET-FOSE, NET-FOSA, NETFOSAA, PFOS, PFOA.

Expanded Site Investigation Area Results	
● Non-detect	● Less than Recommended Enforcement Standard
● At or Above Recommended Enforcement Standard, or Hazard Index Meets or Exceeds 1	

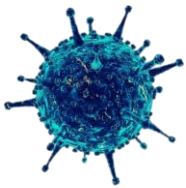
Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P. Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCO, IGN, etc.

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DNR Well Sampling - Where Are We At So Far?

Mailer Details				Well Sampling Activities	
Total Sent	Opt Out	Opt In	Outstanding	Well Sampling Scheduled	Well Sampling Completed
578	18	411 (71%)	149	395	395



- Sampling schedules adjusted following local and state health recommendations for Covid

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Status of DNR Potable Well Sampling

Sample Results	Number of Wells
Non-Detect	84
< Recommended Standard (RES)	250
≥ Recommended Standard (RES) or Hazard Index ≥ 1.0	20
Range of Values ≥ RES	23-110 ppt



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Sampling Schedules and Water Supply

- Sampling will be completed by June 30, 2021
- Water supply extended 6-months for wells meeting or exceeding DHS recommended standards
- What's Next:
 - DNR will work closely with contractor to evaluate data and long-term solutions



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Hazard Index and PFAS Mixtures

Brita Kilburg-Basnyat, Ph.D.
Toxicologist
Hazard Assessment Section

May 19, 2021
Marinette-Peshtigo Listening Session



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Why PFAS Hazard Index?

- Toxicologically similar
- PFAS are found as mixtures in groundwater
- Same critical target organ or system
- Interaction effects unknown

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Previous Hazard Index uses

DHS has used hazard index for groundwater contaminants including:

- Certain classes of pesticides
- Volatile organic compounds

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PFAS Hazard Index Advantages

- Considers health risk of multiple chemicals on non-cancer related health effects
- Reduces overall risk for health effects from similar compounds

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Hazard Index PFAS Groupings

PFAS with DHS Recommended Standards	
FOSA	PFNA
NEtFOSA	PFDA
NEtFOSAA	PFUnA
NEtFOSE	PFBS
PFOA	PFHxS
PFOS	PFDoA
PFTeA	HFPO-DA; GenX*
PFBA	PFODA
PFHxA	DONA

All had reproductive and/or developmental health effects in animal studies

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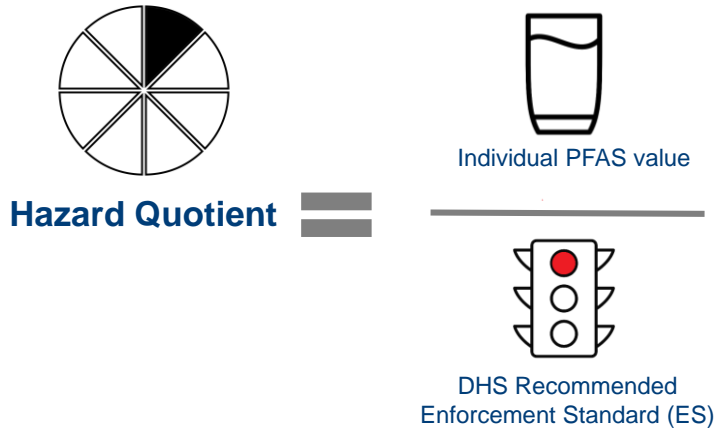
PFAS Hazard Index is Protective

- Health effects from PFAS mixtures are unknown
- Health risks are reduced by eliminating or reducing PFAS exposure

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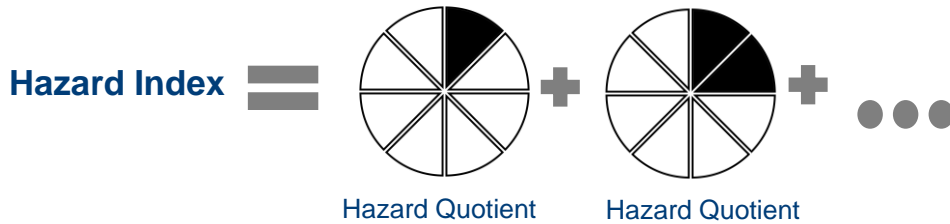
PFAS Hazard Quotient



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PFAS Hazard Index



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Hazard Index Interpretation

- If hazard index is ≥ 1 , potential concern for adverse health effects.
- DHS recommends action to reduce the potential risk of human health effects.

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Questions about PFAS and Health?

1-608-266-1120 ex. 5

DHSEnvHealth@dhs.wi.gov

- Leave us your contact information and we will follow-up with call to discuss.
- DHS does not give medical advice but provides general health information.

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

The screenshot shows the Wisconsin Department of Natural Resources website. The header includes the DNR logo and navigation links: HUNTING, FISHING, PARKS, CLIMATE, ENVIRONMENT, FORESTRY, LICENSES, NEWS, ABOUT, CONTACT. Below the header, there is a link to view an enlarged version of the map. A navigation bar contains tabs for Meetings, Actions, Investigations, Drinking Water, Wastewater/Biosolids, Surface Water/Fish, and Health. The main content area is titled "UPCOMING PUBLIC MEETINGS" and provides information about PFAS contamination in the Marinette-Peshtigo area. A table lists a listening session on May 19, 2021, which is remote via web and phone. A red arrow points to a red-bordered box containing contact information for health-related questions.

View an enlarged version of the map. [PDF]

Meetings Actions Investigations Drinking Water Wastewater/Biosolids Surface Water/Fish Health

UPCOMING PUBLIC MEETINGS

Questions about PFAS contamination in the Marinette-Peshtigo area may be submitted in advance of the listening sessions by phone (888-626-3244) or by email (DNRJCI PFAS@wisconsin.gov).

Public Meeting	Date	Time(s)	Location	Information
Listening Session 14	Wed., May 19, 2021	noon-2 p.m. and 6-7:30 p.m.	Remote via web and phone	Join remotely via web: Zoom [exit DNR]

Visit dnr.wi.gov, search PFAS.

Leave a message for DNR staff:
DNRJCI PFAS@wisconsin.gov
tel:+1-888-626-3244

For health-related questions, email
DHS staff:
DHSEnvHealth@dhs.wisconsin.gov

Wisconsin Department of Health Services

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Thank You!

Brita Kilburg-Basnyat, Ph.D.

Toxicologist

Wisconsin Department of Health Services

brita.kilburgbasnyat@dhs.wisconsin.gov

PFAS & Health:

1-608-266-1120 ex. 5

DHSEnvHealth@dhs.wi.gov

Wisconsin Department of Health Services

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Interim Remedial Actions – Alyssa Sellwood



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Foam Collection

Foam Monitoring Plan (4/15/21)
<https://dnr.wi.gov/botw/DownloadBlobFile.do?docSeqNo=194136>

- Ditches A - E
- Booms Deployed (Spring thru Fall)
- Daily Inspections
- Collect and Drum Foam
- Characterize (PFAS) and Dispose

DHS Memo on PFAS in Surface Water & Foam (June 2019)
<https://dnr.wi.gov/topic/Contaminants/documents/jci/DHSSurfaceWaterLetter20190621.pdf>

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✓ GETS Design Report Approved

- Conditional Approval Letter - 5/18/21
 - Remedial approach
 - Monitoring plan
 - Not an approval of the engineering design
- Other Approvals Needed
 - High-Capacity Wells
 - WPDES Discharge Permit (water treatment)
 - Wetlands
 - Local Permits / Access

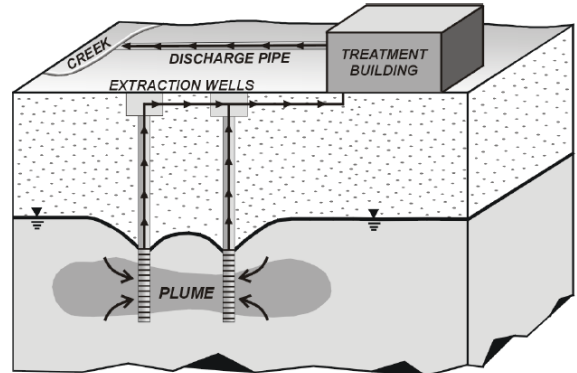
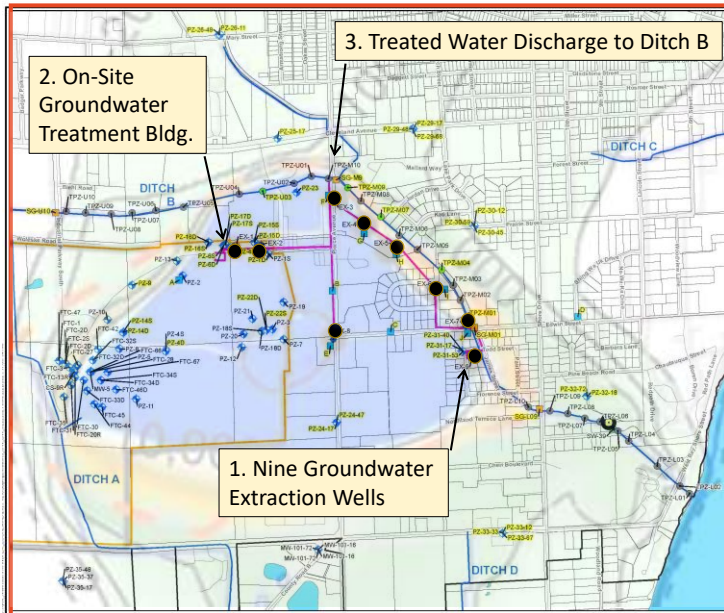


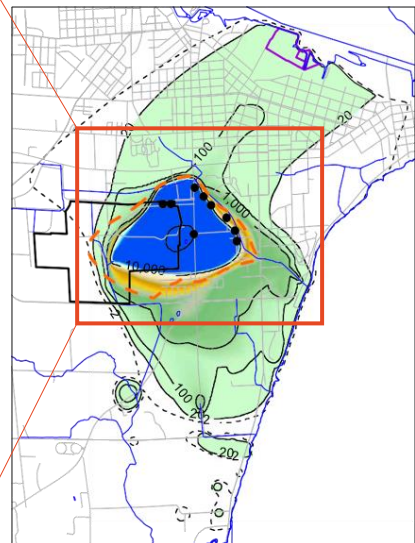
Image from EPA 542-R-01-021b

Link to Conditional Approval Letter
<https://dnr.wi.gov/botw/DownloadBlobFile.do?docSeqNo=196645>

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GETS Overview



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GETS Design Goals

-  Reduce upwelling of PFAS-impacted groundwater into Ditch B;
-  Treat the recovered groundwater to reduce concentration of PFAS;
-  Reduce migration of PFAS in groundwater.



What is Conditional Approval?

OK to proceed, but certain actions must be done along the way



Approved: JCI/Tyco's Design Meets Requirements

- ✓ Proven approach to treat PFAS
- ✓ Designed to capture highly contaminated groundwater
- ✓ Designed to reduce upwelling into Ditch B
- ✓ Monitoring Plan to track effectiveness



Conditions: Actions JCI/Tyco Must Complete*

1. Monitor baseline conditions before startup
2. Revise the Monitoring Plan
3. Notify the public on "What to Expect from the GETS"
4. Submit As-Built and O&M Plan

** Conditions are not expected to delay startup of the GETS*

GETS Interim Action What to Expect

- ✓ Reduce amount of PFAS in the environment
 - ✓ Improve groundwater near FTC
 - ✓ Improve surface water in Ditch B
- ✓ Limit migration of PFAS from the FTC
- ✓ Lower groundwater ~3 feet near each extraction well
- ✓ Increase baseflow slightly in Ditch B



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GETS Interim Action What to Expect

- Operate for many years with regular maintenance
- Groundwater with PFAS \geq DHS recommendations
- Minimal influence on private wells
- **Monitoring reports** posted every 6 months
- Refinements and additional actions possible



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Soil Interim Action What to Expect

- Removes highly contaminated soils
- Reduces PFAS migration from soil to groundwater
- Soil Contamination will remain at FTC
 - PFAS concentrations less than direct contact risk
 - PFAS in soil may still impact groundwater
 - Additional actions or controls possible

Load



Haul



Dispose

Waste Management
Arlington, OR



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Other Updates



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Updated DHS Gardening Memo

- First issued in 2018 – discussed use of private wells for fruit and vegetable gardening and other activities (e.g., filling pools)
- Previously referenced EPA Health Advisory Level of 70 ppt
- Updated May 2021 to reflect DHS recommendations for groundwater standards under Cycle 10 and Cycle 11



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Updated Gardening Memo

- Plants are a minor source of PFAS → area of emerging science
- Drinking water is main pathway
- **To avoid even small amounts of exposure to PFAS – do not use water with PFAS levels at or above DHS recommended standards for fruit and vegetable gardens**
- May use water for filling pools



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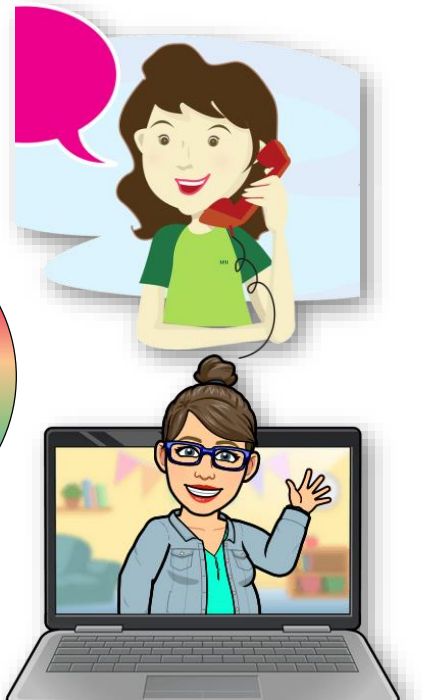
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Listening Session Schedule

- Four new dates
- Aligns with project milestones
- Reach out to us in-between meetings
 - Call us!
 - Email us!
 - Email subscription list
 - Website updates
 - BRRTS updates

Upcoming Meetings

July 21, 2021
 October 20, 2021
 January 19, 2022
 April 20, 2022



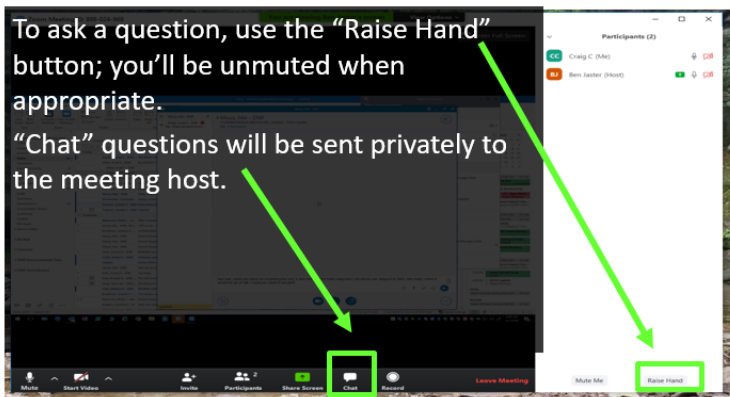
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Listening Session – Open Q + A



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To ask a question, use the “Raise Hand” button; you’ll be unmuted when appropriate.
 “Chat” questions will be sent privately to the meeting host.

- Use the ‘chat’ feature *or* ‘raise hand’ feature to request to be unmuted to ask a call
- If you are joining by phone:
 - *9 raise hand
 - *6 unmute/mute

Ground Rules – Listening Session

- 3-mins per person → everyone has the opportunity to voice concerns
- Keep comments constructive
- Attack the problem not the person

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CONNECT WITH US

Call: (888-626-3244)

Email:
DNRJCIPFAS@wisconsin.gov

