Triennial Standards Review

2024-2026

Public Hearing

Wisconsin Department of Natural Resources

July 17, 2024

Attendees Using Zoom

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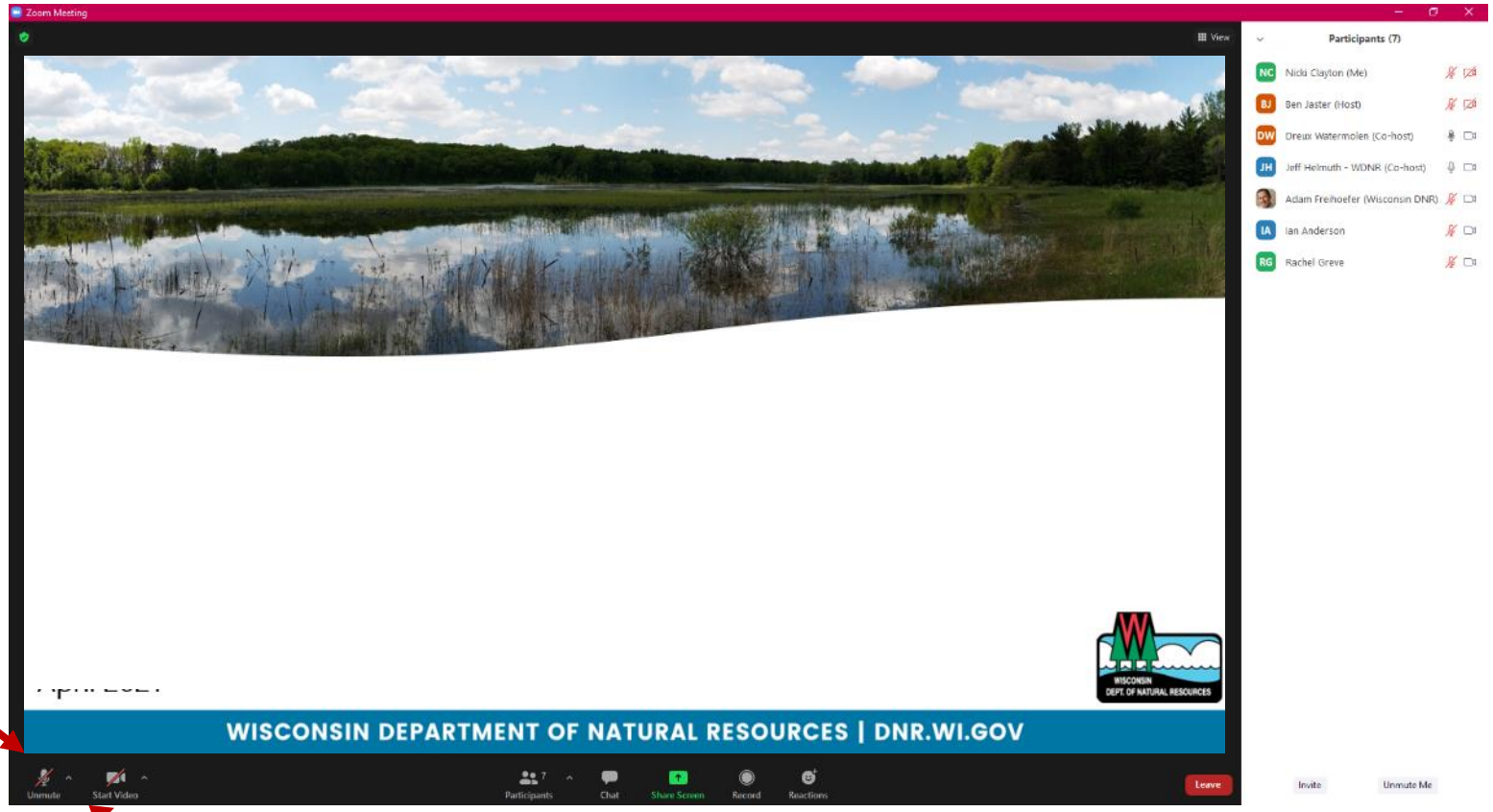

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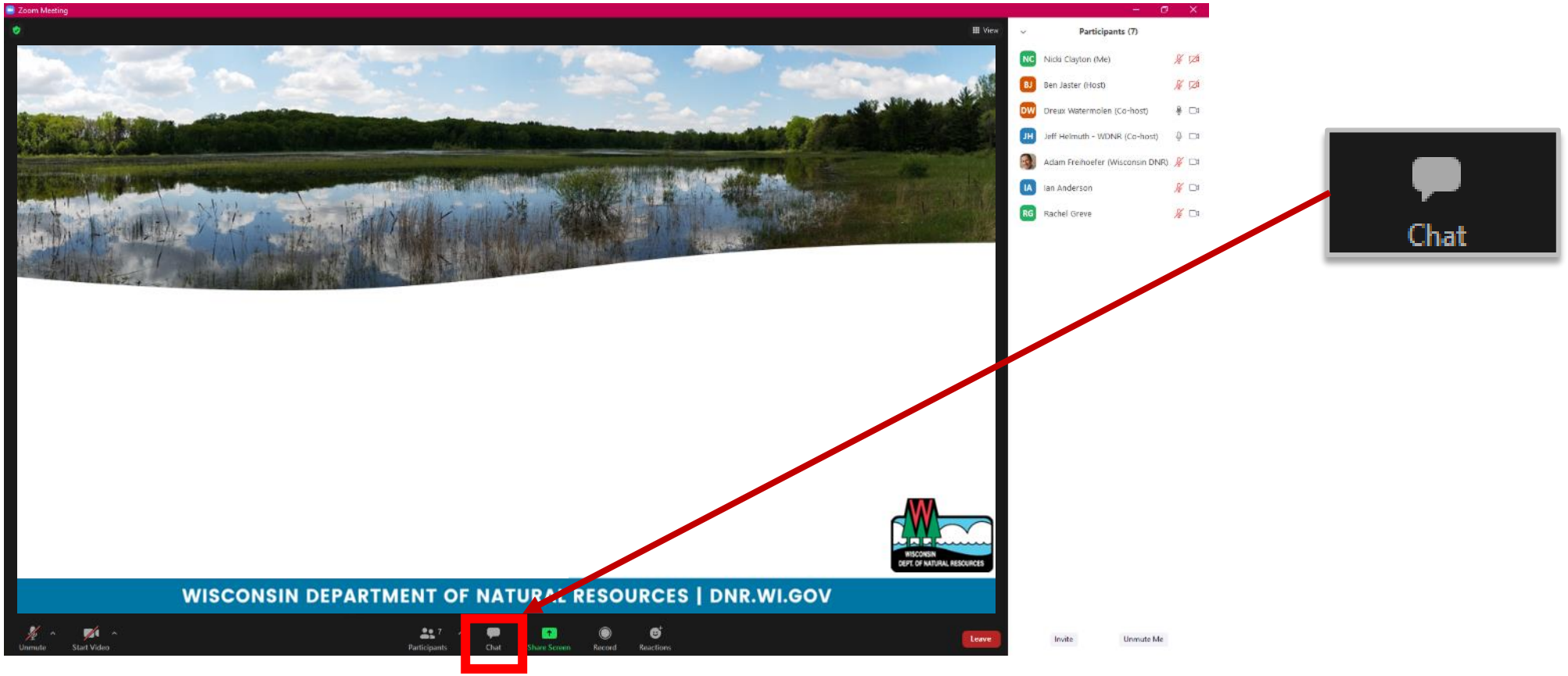


Your Comments, Please!

- Comments due July 26, 2024
  - Email: JenniL.Kempf@wisconsin.gov
  - Mail: Jenni Kempf
    Wisconsin DNR WY/3
    PO Box 7921
    Madison, WI 53707

- Website and Materials:
dnr.wi.gov/topic/SurfaceWater/TSR.html

Today's Agenda

- Triennial Standards Review Process Overview
- 2024 – 2026 TSR
  - Progress thus far
  - Discussion of topics and prioritization
  - Designated uses and variances
- Clarifying questions
- Formal comments

Jenni Kempf

Environmental Toxicologist

What is the Triennial Standards Review (TSR)?

- An opportunity to revise or develop water quality standards or related guidance for protecting Wisconsin's surface waters
- Occurs every 3 years as required by the Clean Water Act
- Provides a dedicated comment period to gain valuable input from stakeholders to aid work planning

Photo credit Wisconsin DNR

Topics covered in the TSR

- Water Quality Standards
- Water Quality Variances
- Rules or Guidance

Designated Uses

- <u>Designated Uses:</u> Each waterbody is expected to support a variety of uses by people, aquatic communities, and wildlife

Public health and welfare

Recreation

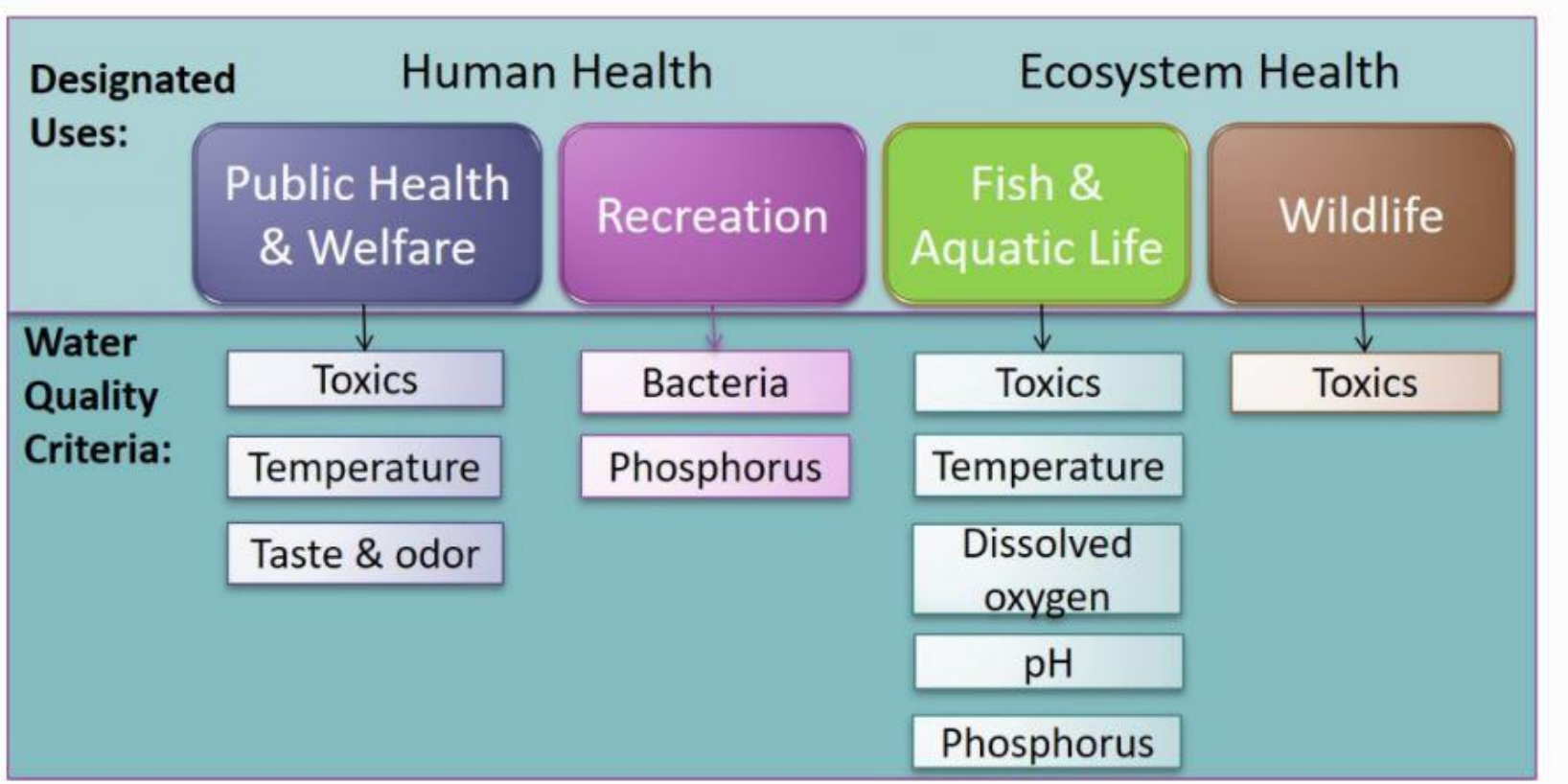
Fish and Aquatic Life

Wildlife

Photos credit Wisconsin DNR

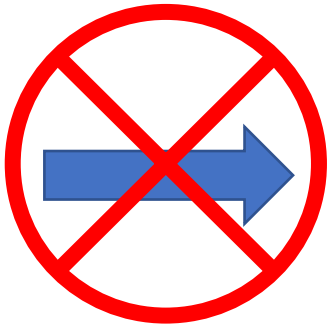
Criteria

Different water quality criteria protect different designated uses



Antidegradation

- Antidegradation: protect waters from degradation caused by new or increased discharges



Photos credit Wisconsin DNR

How is the TSR Structured?

DNR program input indicated to mainly focus on work remaining from previous cycles

1. Draft priorities for 2024-2026 TSR cycle

Fall 2023

2. Collect and analyze public input

Spring/Summer 2024

3. Refine priorities and submit final plan to EPA

Fall 2024

Triennial Standards Review Timeline

Prioritization of Categories

Your comments, please: public comment is requested on how DNR categorized topics

Category A	Priorities for this cycle 2024-2026
Category B	Priorities for further exploratory work as time/resources allow
Category C	Not priorities for this cycle

Category A	Priorities for this cycle 2024-2026

Antidegradation Rule Revision

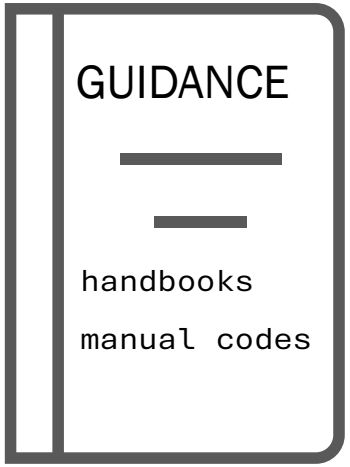
Human Health Criteria

Biological Thresholds for Streams and Rivers

Designated Uses/Structure/Process Revision

Antidegradation Rule Revision and Guidance

Photo credit: Wisconsin DNR



- A policy and procedures to protect waters from degradation from new or increased discharges
- Rule revisions underway. Submitted to the Legislature in late 2023 and is currently under consideration.
- Updates procedures for consistency with 2015 federal revisions
- Stormwater and Wastewater programs will need guidance with implementation

Human Health Criteria

Photo Credit: "Great Lakes Optimism, by Titus Seilheimer; Lake Michigan at Bailey's Harbor

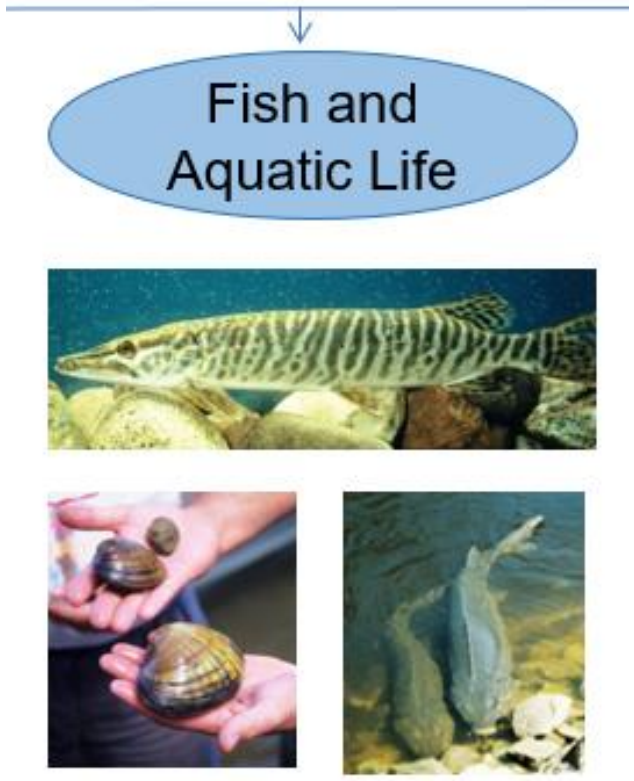
- Updates to human health criteria for health protection while swimming or eating locally-caught fish based on EPAs updated recommendations
- Efforts completed: identified which existing criteria need updates and which substances need new criteria developed
- Expectation: begin rulemaking for criteria updates during this cycle

Biological Thresholds for Streams and Rivers

Photo credit Wisconsin DNR. Sampling at Ashwaubenon Creek in Ashwaubenon

- In 2022 DNR promulgated lake assessment tools for lake plants, algae, and coldwater fish in lakes
- Parallel work underway for streams assessment tools for fish and aquatic insects
- Efforts underway: revising previous fish assessment tools for consistency with EPA recommended methods
- Expectation: begin rulemaking for streams and rivers

Designated Use(s) Structure/Process Revision



- Updating the state's classification system for fish and aquatic life and "limited" use waters
  - Refining the fish and aquatic life use subcategories
  - Improving the process for determining which use(s) are assigned to each waterbody
- Efforts are ongoing

Category B	Priorities for further exploratory work as time/resources allow

Antidegradation Implementation Guidance

Cyanobacterial (Harmful Algal Blooms) Guidance

Nitrate/Nitrogen Criteria Development

Additional PFAS Criteria Development

Neonicotinoid Insecticides

Cyanobacterial (Harmful Algal Blooms) Guidance

Photo Credit: Wisconsin DNR

- EPA released values for criteria or swimming advisories for microcystin and cylindrospermopsin in 2019
- Efforts completed: DNR decided to apply values as advisory levels for public notification of harmful conditions
- Expectation: DNR will create guidance to help local governments implement these advisories

Category B: exploratory

Nitrogen/Nitrate Criteria Development

Photo credit: Wisconsin DNR. Algal bloom on the Mississippi River

- Nitrogen is an abundant element in surface water in many different chemical forms that can adversely impact human and aquatic health

- Efforts Underway:
  - data collection
  - DNR is working with EPA to assess Nitrogen data in lakes and large rivers, relationship to algae levels, etc.

- Expectation: continued exploration for development of Total Nitrogen, Nitrate, and revised Ammonia criteria

Category B: exploratory

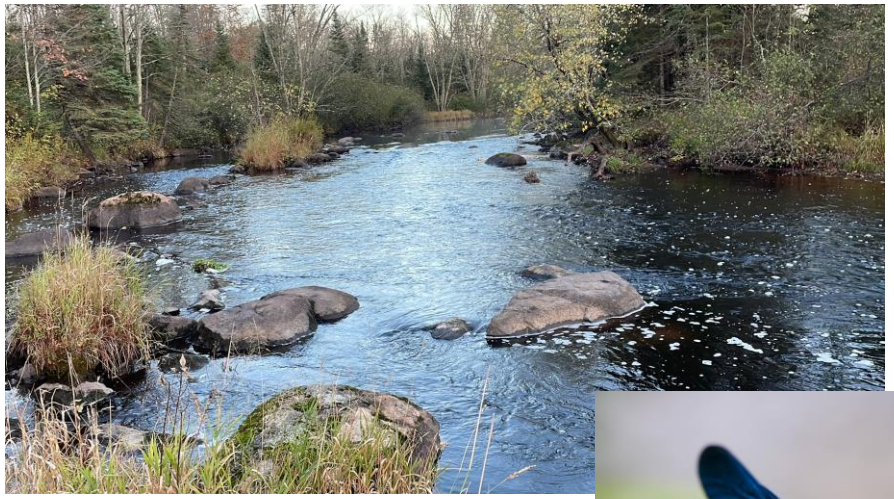
PFAS Compounds (other than PFOS & PFOA) Criteria Development

Products containing PFAS a.k.a. “forever chemicals”

- Per- and polyfluoroalkyl substances (PFAS) are used in several consumer products
  - Some are highly toxic
  - Long-lasting in the environment
- DNR promulgated surface water criteria for PFOS and PFOA in 2022
- Efforts Underway:
  - environmental sampling
  - exploration for the development of new PFAS criteria for other compounds
  - Continued collaboration with the Department of Health to evaluate EPA’s recent drinking water standards updates and how they may impact surface water standards

Category B: exploratory

Neonicotinoid Pesticides



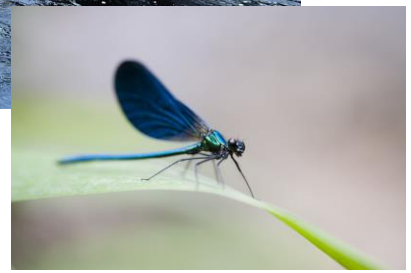


Photo credit (top): Wisconsin DNR

- This class of pesticides is implicated in global reductions of pollinator populations and toxic impacts to aquatic invertebrates.
- Efforts Underway: evaluating the growing evidence of presence of neonicotinoids in toxic amounts in surface and groundwater
- Expectation: exploratory work on impacts of clothianidin, imidacloprid, and thiamethoxam based on EPA's Office of Pesticide Programs aquatic life benchmarks.

Category C	Important future work, but not priorities for this review period

Aluminum Criteria Development

Copper Criteria Revision

Aquatic Life Water Quality Criteria Revision/Development

Bifenthrin and Chlorantraniliprole Criteria Development

Pharmaceuticals Criteria Development

Microplastics Criteria Development

Outstanding/Exceptional Resource Waters Process Revision

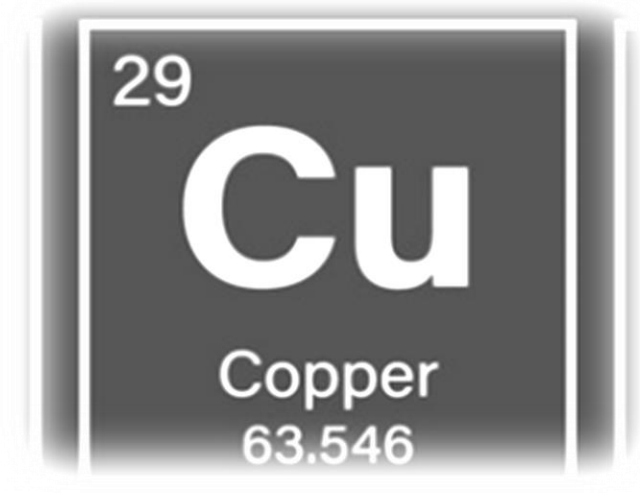
Sulfate Criteria Development

Total Suspended Solids (TSS) Criteria Development

Aluminum Criteria Development

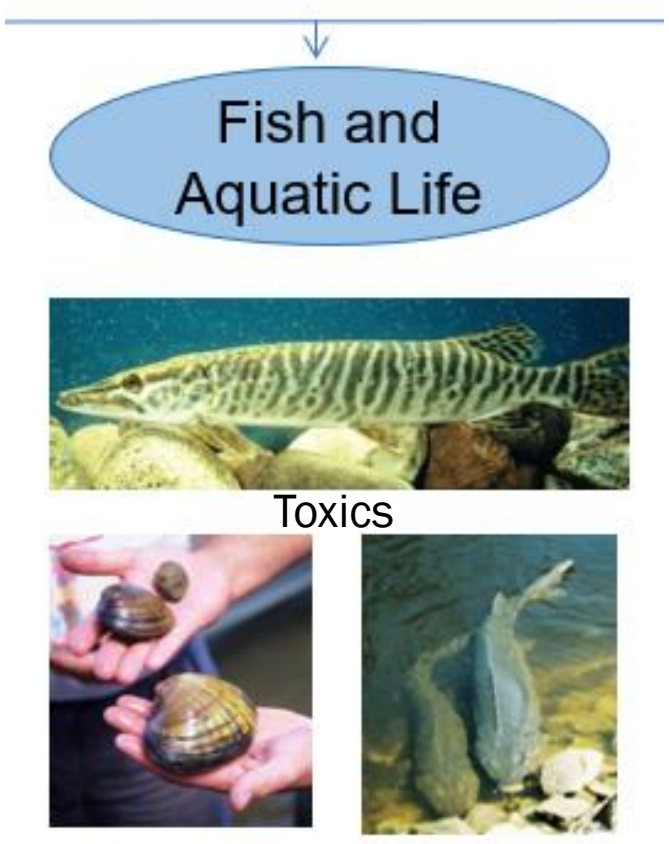
- EPA published updated water quality criteria for Aluminum in 2018
- Wisconsin currently does not include aluminum criteria in its water quality standards
- Aluminum criteria development remains a low priority, as not many facilities discharge aluminum under DNR's permit program

Copper Criteria Revision



- EPA has been recommending calculating site-specific copper criteria by using the Biotic Ligand Model
- Wisconsin has copper criteria, but does not use this model
- DNR will not transition to this model during this review cycle due to large data requirements and a small number of permitted facilities with copper limits

Aquatic Life Water Quality Criteria Revision



- EPA has developed or revised criteria for some compounds based on updated toxicological data
- Wisconsin currently does not have criteria for acrolein, carbaryl, diazinon, nonylphenol, and tributyltin
- Existing cadmium and selenium criteria could be revised
- Low need for efforts for these pollutants

Other Insecticides Criteria Development (Bifenthrin and Chlorantraniliprole)

- Bifenthrin and Chlorantraniliprole are active ingredients in commonly used insecticides in Wisconsin and the Midwest generally.
- Both of these compounds are implicated in invertebrate population decline, including an EPA ecological risk assessment for Chlorantraniliprole
- Current available data prioritizes development of criteria for neonicotinoids before these compounds are considered

Category C: not prioritized

Pharmaceuticals and Microplastics

Photo Credit: Martha Trowe, 2015 Great Lakes Photo Contest, Natural Category

Photo Credit: U.S. EPA

- Pharmaceutical byproducts and personal care products (PPCPs) and microplastics have been detected in aquatic ecosystems
- PPCPs are linked to physiological impacts for some aquatic animals
- Microplastics pose a physical risk to aquatic life through ingestion and associated growth and survival impacts
- Both classes of pollutants are very broad with limited data to support the development of water quality standards at this time

Outstanding or Exceptional Resource Waters Process Revision

Photo Credit: Wisconsin DNR, Chippewa River, Ashland County

- Wisconsin maintains a list of waters identified as Outstanding or Exceptional Resource Waters (ORW/ERWs), consistent with federal requirements
- DNR's existing guidance for identifying/listing these waters is outdated and not standardized
- Other water quality standards needs have been prioritized

Sulfate Criteria Development

Photo Credit: J. Sullivan, Wild Rice Pool 7

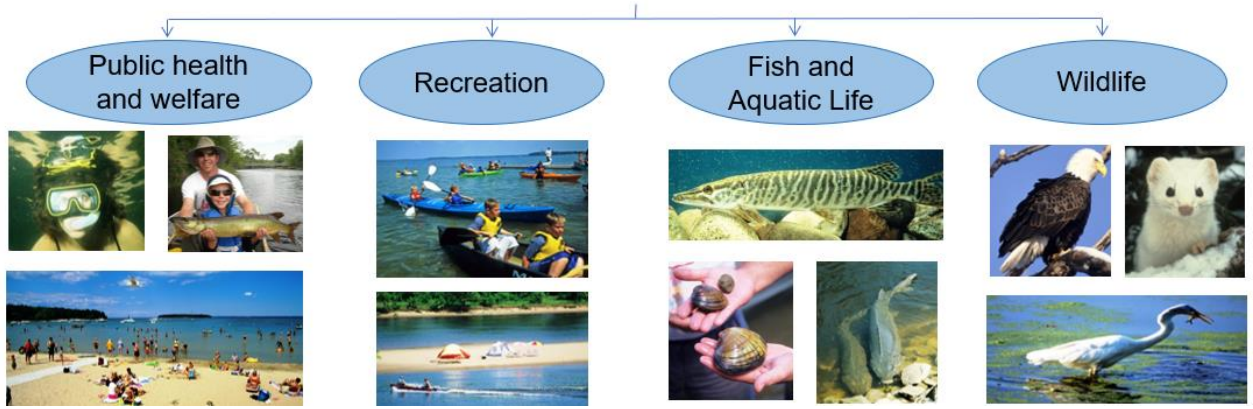
- Sulfate concentrations in water have been shown to negatively impact wild rice growth, an important source of subsistence and cultural tradition for many tribes.
- A strategic analysis of wild rice management has been completed and efforts are ongoing to determine the best approach to protection.
- Management planning team will continue to consider whether sulfate criteria development would be an important part of management actions.

Total Suspended Solids (TSS) Criteria Development

Photo Credit: Wisconsin DNR

- Excess suspended solids measured as TSS are from soil erosion, wastewater discharge, snowmelt, and stormwater runoff.
- TSS reduces light levels in the water column, impacting growth of desirable vegetation.
- TSS currently has a narrative standard. Numeric criteria would provide clarity in assessment.

Comments on Designated Uses for Individual Waterbodies



- Each waterbody has a variety of designated uses, which are listed in Chs. NR 102 and 104, Wis. Adm Code
- If you know of a waterbody that should have its designated uses updated, you can submit that information to the DNR during this comment period
- Changes may be included in a future code revision

Comments on Variances

- If a wastewater discharger cannot meet permit limits based on statewide criteria, a variance allows them additional time to improve their effluent before meeting the criterion

Individual Variances (per facility)

(chloride, copper, mercury, arsenic, phosphorus)

- Pollutant Control Technologies
  - Pollutant Sources
  - Flow or Water Levels
  - Economic Conditions
- Best Management Practices

Multi-Discharger Variance for Phosphorus

- Treatment availability updates
- Cost effectiveness of treatments

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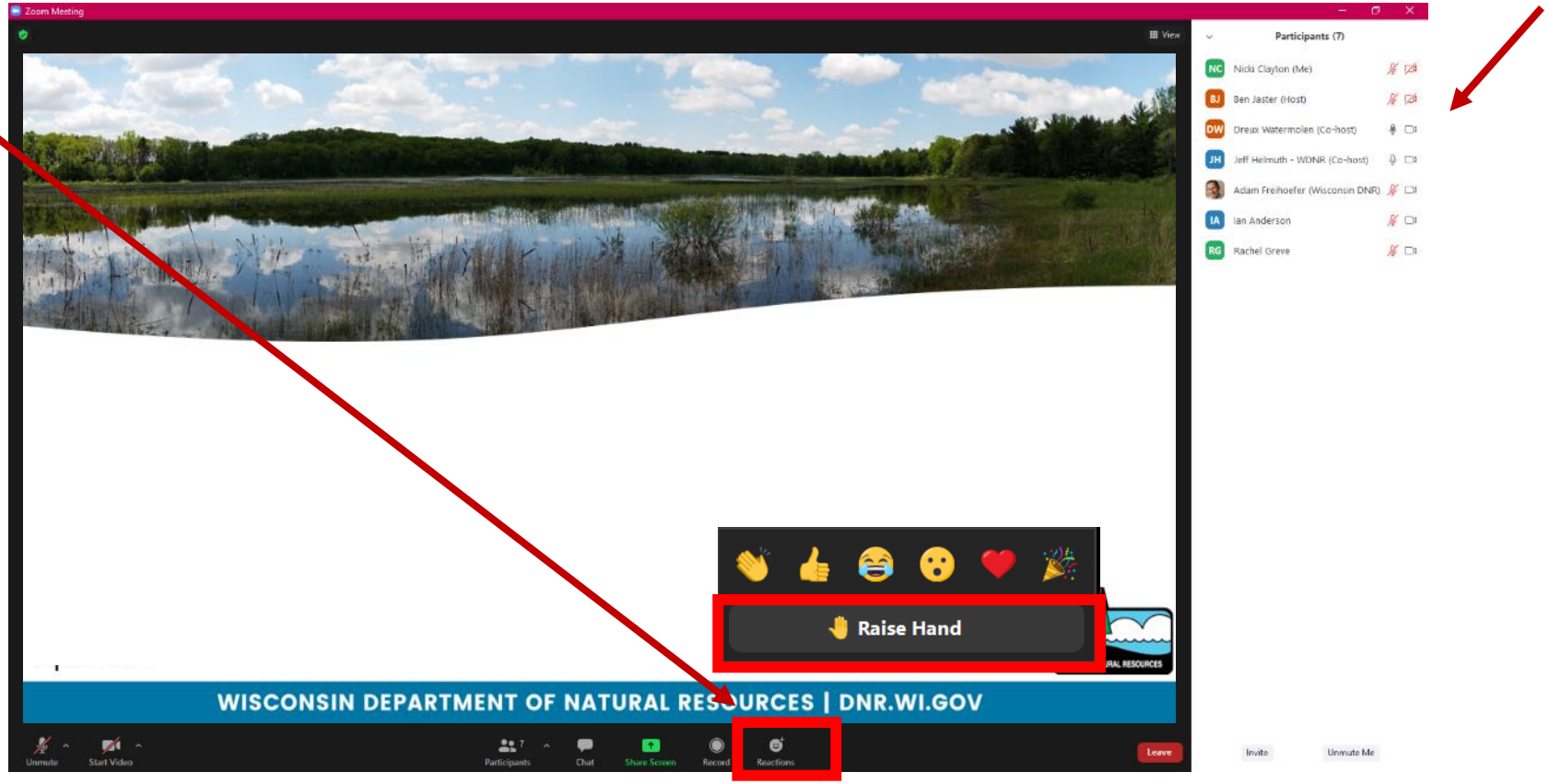
1) *Click* **Reactions**
2) *Click* **Raise Hand**

A "Raised Hand" icon will appear next to your name in the "Participants" window.



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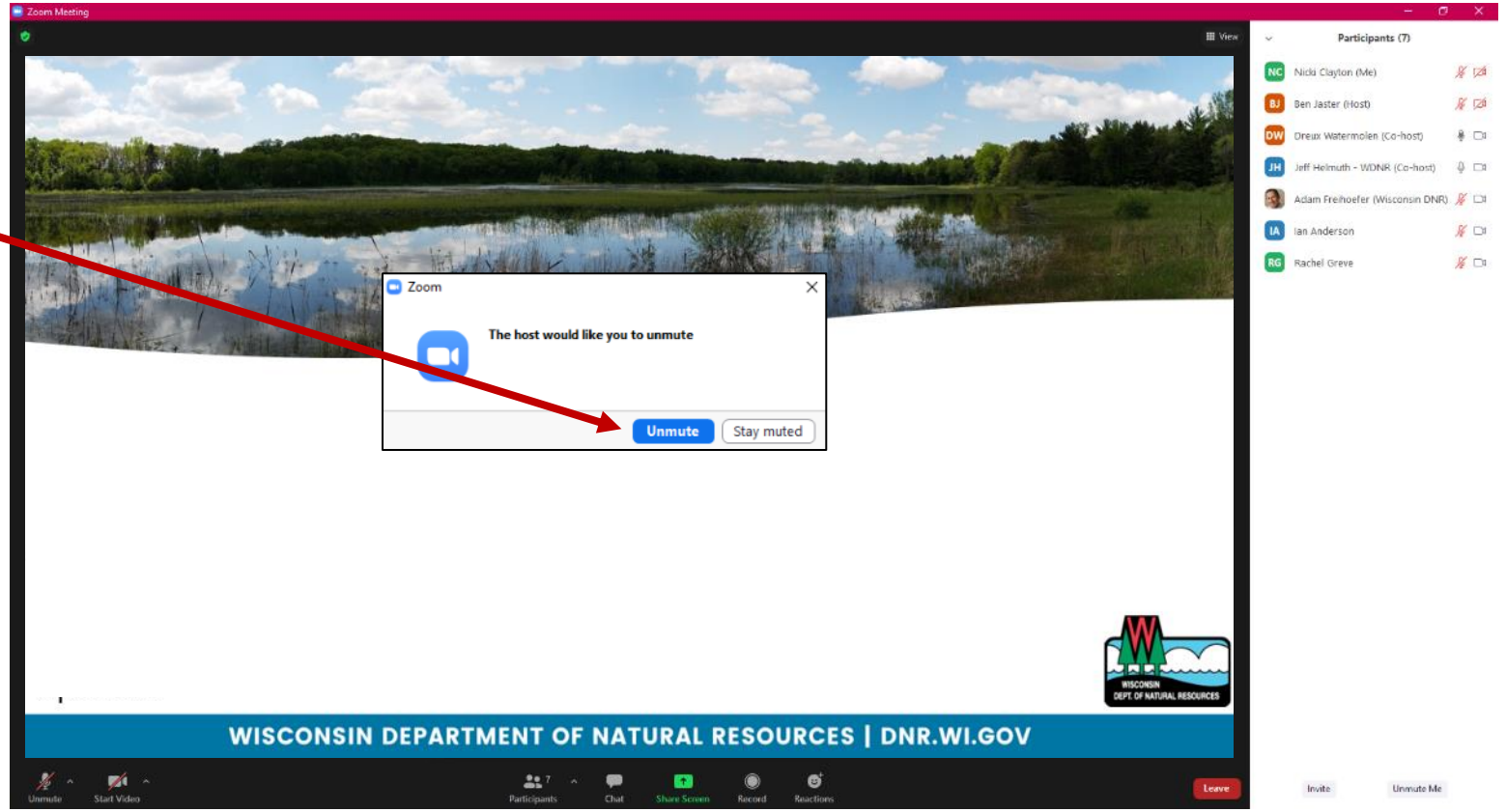

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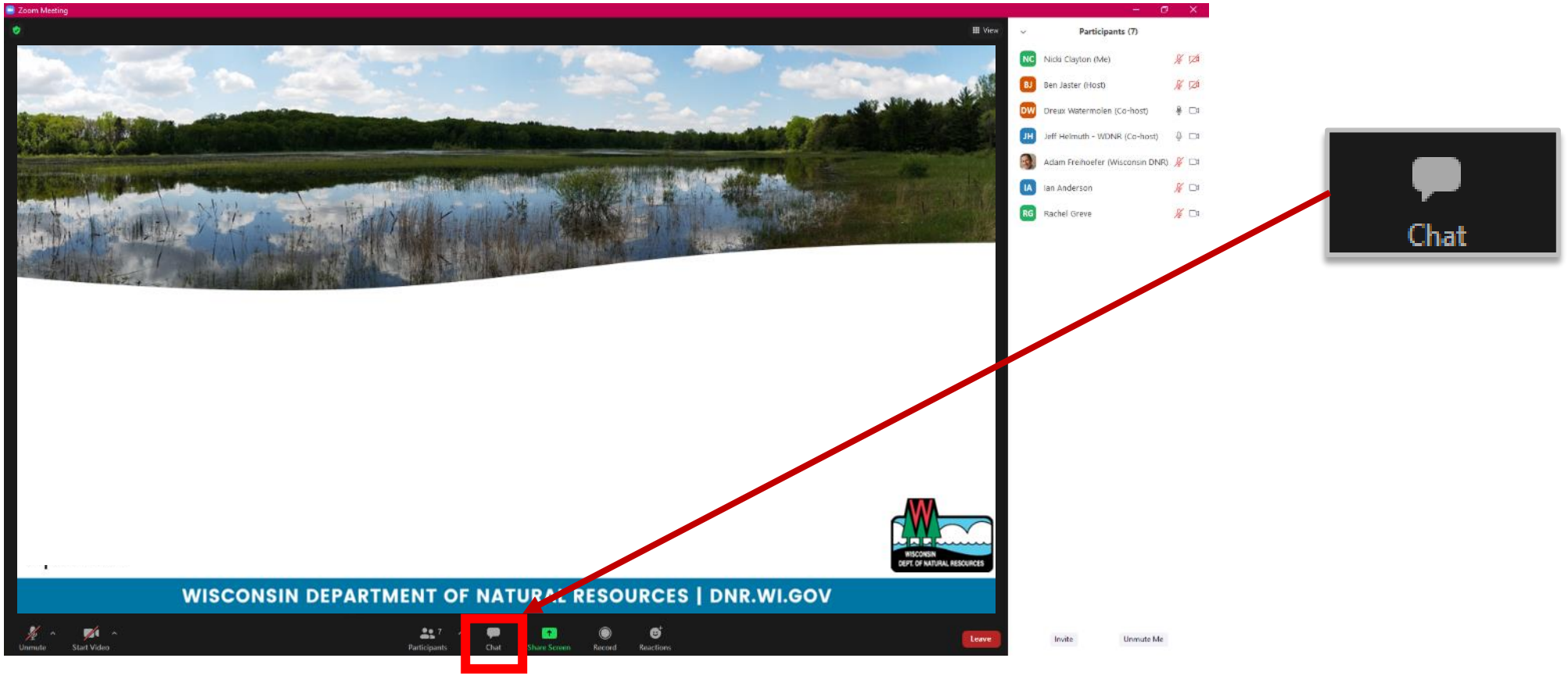

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