NR 809 Safe Drinking Water Stakeholder Meeting

March 4, 2025

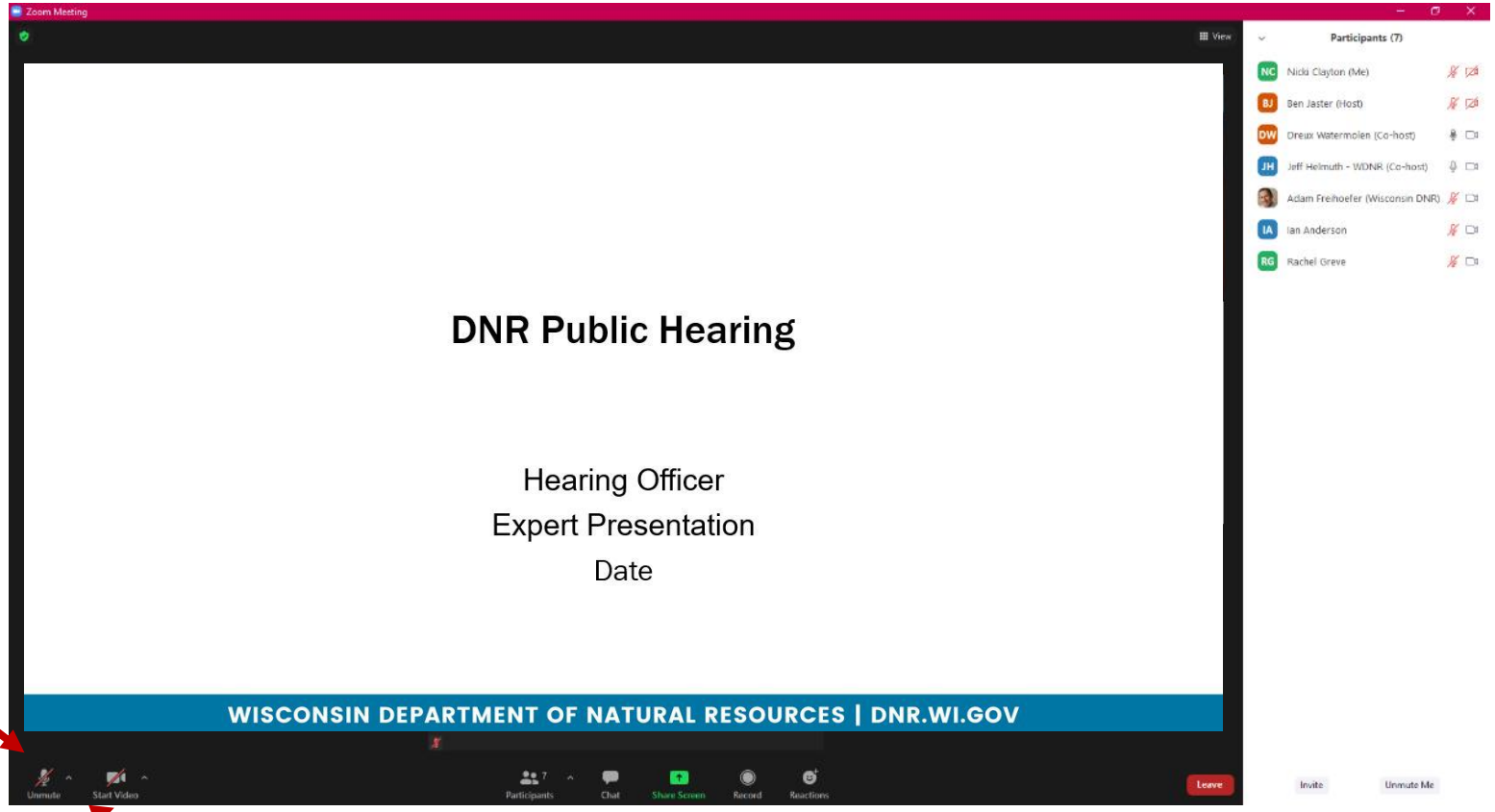
Beth Finzer, Water Supply Specialist
Dino Tsoris, Water Supply Specialist
Adam DeWeese, Section Manager
Elaine Meier, Federal Programs Outreach Coordinator
Natalia Hernandez, Outreach Specialist

Agenda

1. Introductions/Meeting logistics - Elaine
    1. Questions in the chat
    2. Questions at the end
2. Overview of the two scopes - Adam
3. PFAS
    1. Current WI MCLs - Dino
    2. Federal MCLs and specifics of the new rules - Dino
    3. DHS recommendations for 140 - Adam
    4. How'd we do with the 2022 EIA - Adam
    5. The 2025 EIA components - Adam
    6. Rule promulgations steps/Timeline - Adam
4. Technical Edits - Finzer
5. Funding availability - Adam
6. Questions

Attendees Using Zoom

- You are currently **muted**
- You *cannot* share video



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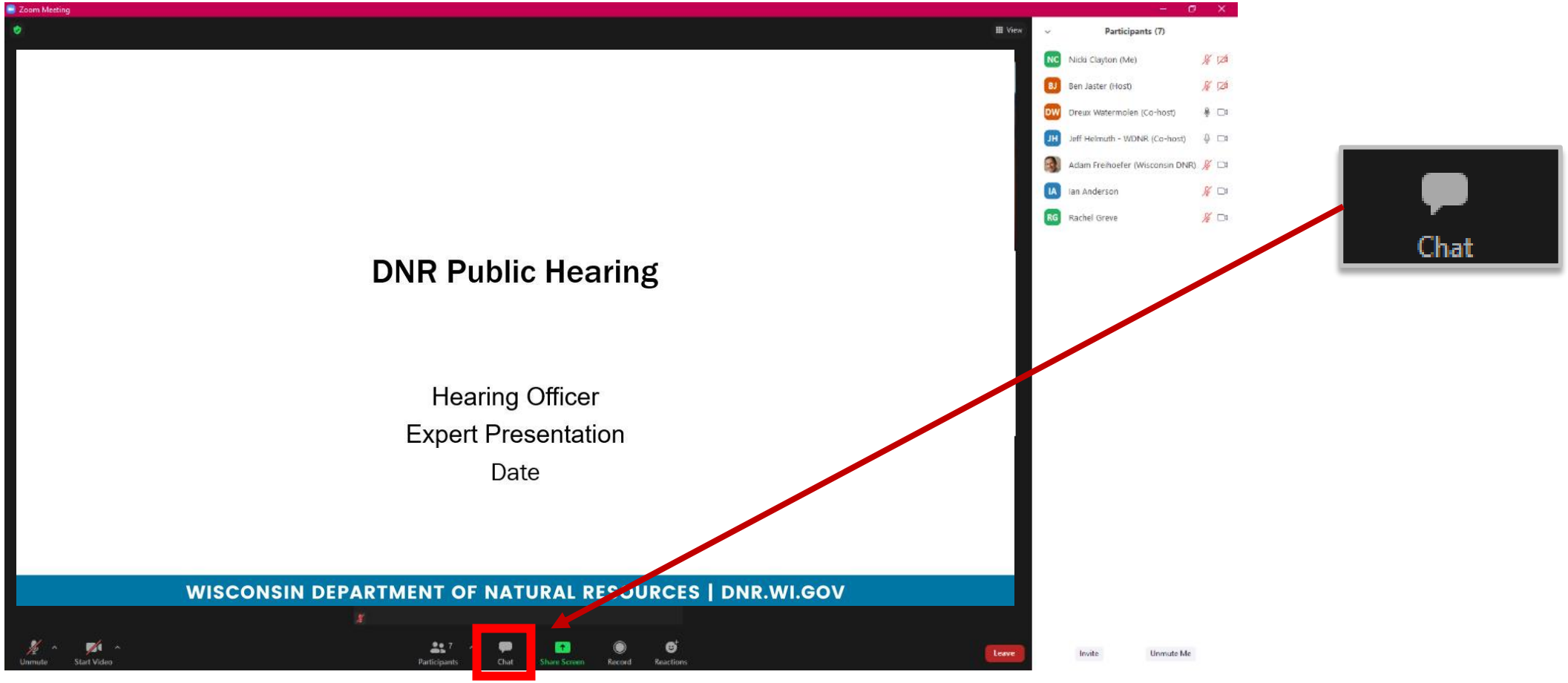


Overview of Scope Statements

1. Statement of Scope SS 092-24 (Board Order DG-01-24), related to drinking water standards for PFAS.

2. Statement of Scope SS 093-24 (Board Order DG-02-24), to clarify and correct existing language and add federal Consumer Confidence Report requirements.

Cycle 12 - PFAS (Started in 2025)

The DNR will hold a public hearing on the scope statement on Mar. 6, 2025. Details about this hearing are available in the Preliminary Hearing Notice DG-02-25 [PDF].

The DNR is in the early stage of the rule development and anticipates presenting the scope statement to the Natural Resources Board for approval in the spring of 2025.

Spring 2024

- DNR letter sent to DHS [PDF] - May 22, 2024

↓

Winter 2025

- DHS letter sent to DNR [PDF] - received on Jan. 30, 2025; revised on Feb. 7, 2025.
- Statement of Scope [PDF] approved by DNR secretary, governor.
- Notice of public hearing on scope statement [PDF] - Feb. 26, 2025.

← We are here

NR 140 Groundwater Quality Standards Update | | Wisconsin DNR

1. PFAS Scope Statement

Statement of Scope SS 092-24 (Board Order DG-01-24), related to drinking water standards for PFAS.

NR 809 PFAS Revision

Dino Tsoris – DNR Monitoring Coordinator SDWA Contaminants

Safe Drinking Water Act BACKGROUND

Safe Drinking Water Act (SDWA) federal rule passed in 1974 and amended in 1986 and 1996.

EPA sets standards for drinking water based on scientific evaluation to protect against health risks, consideration of available technology, and cost.

Safe Drinking Water Act BACKGROUND

The National Primary Drinking Water Regulations (NPDWRs) are water quality standards which limit contaminants in drinking water and apply to public water systems.

Based on an evaluation, certain contaminants are given national primary drinking water standards.

There are currently over 90 contaminants regulated under NPDWR and the Safe Drinking Water Act.

PFAS BACKGROUND

PFAS compounds are synthetic chemicals used in industrial and consumer products since the 1940's.

There are thousands of PFAS compounds that have been identified.

Potential human health concerns identified over several the decades.

PFAS BACKGROUND

2006

In 2006 the EPA initiated a program to encourage U.S manufacturers to eliminate some PFAS compounds in manufacturing.

2013

PFOS and PFOA were two of six PFAS compounds included in drinking water monitoring under EPA's 2013 UCMR 3 monitoring rule.

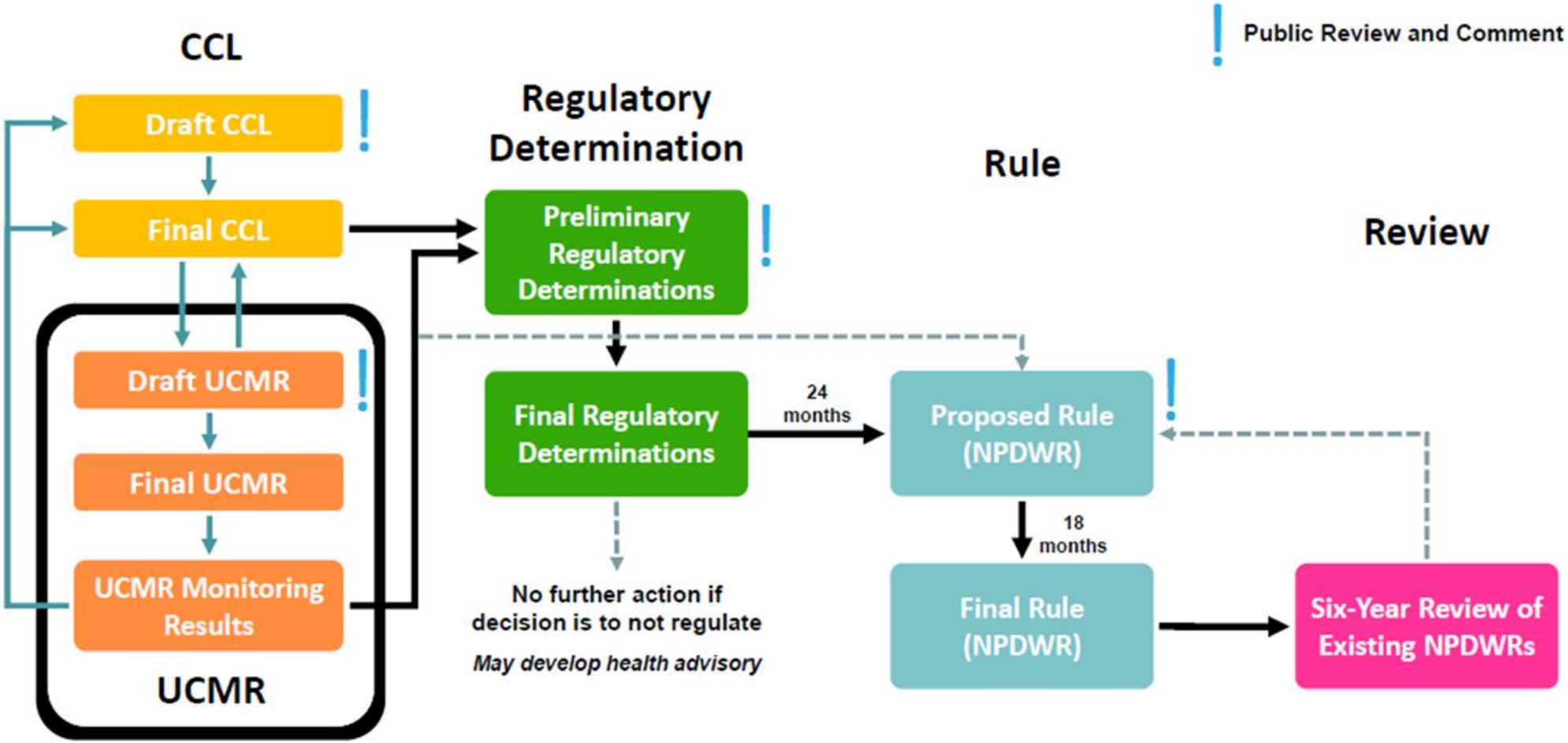
Research indicates mixtures of different PFAS chemicals can have additive health effects.

Potential health effects include certain cancers, liver and heart impacts in adults, and immune and developmental impacts to infants and children.

PFAS BACKGROUND

EPA Regulatory Determinations

General Flow of SDWA Regulatory Processes

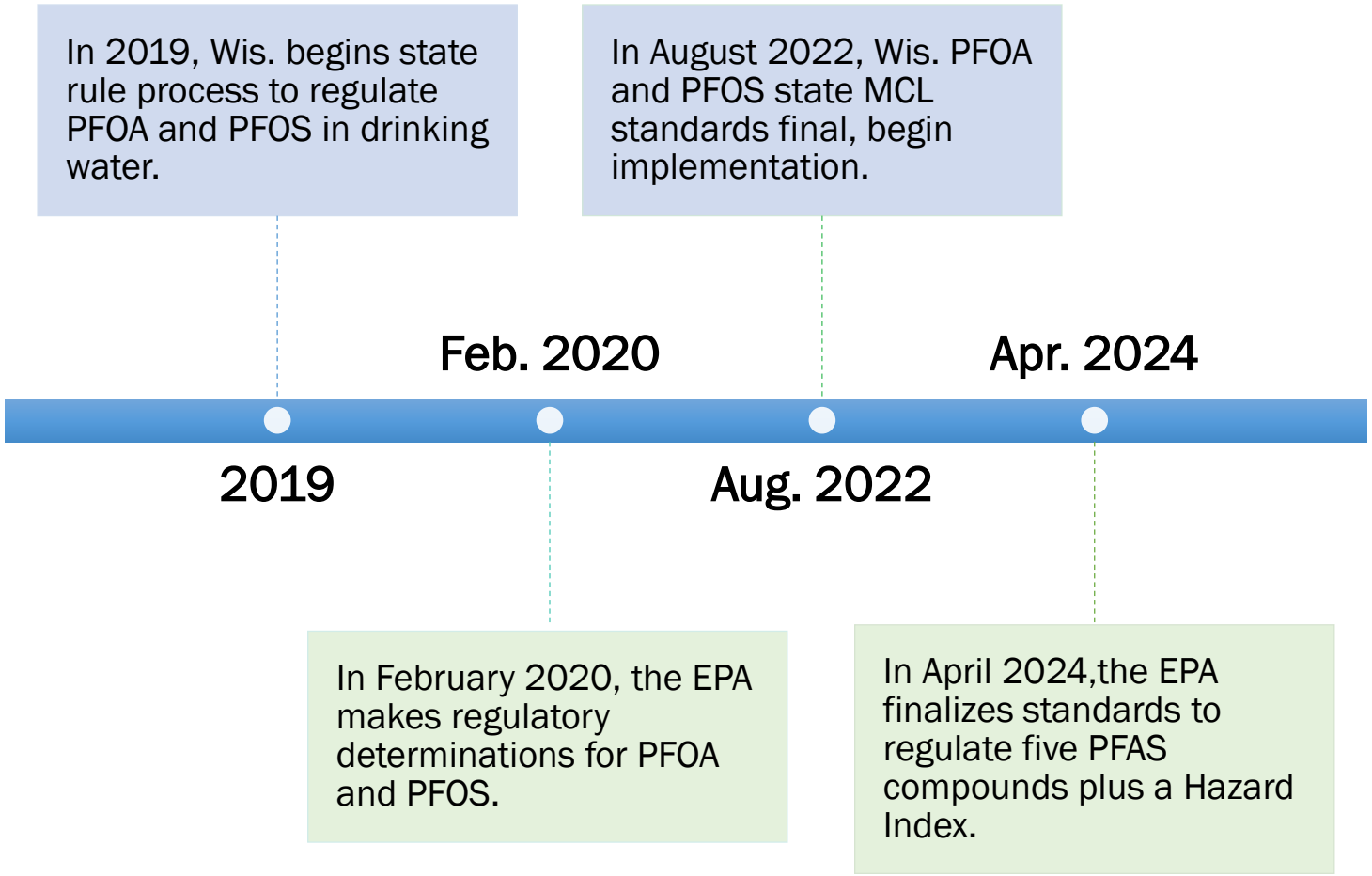


PFAS Regulatory Determination

- A regulatory determination is an EPA decision about whether to begin the process to propose and promulgate a national primary drinking water regulation (NPDWR) for an unregulated contaminant.
- After EPA considers public comment, EPA makes a final determination.

PFAS REGULATORY TIMELINE

WISCONSIN AND EPA



Current Wisconsin NR 809 PFAS Standards

Wisconsin current NR 809 Wis. Adm. Code MCL standard for PFOA and PFOS is 70 nanograms per liter (ng/L) or parts per trillion (ppt)

The NR 809 Wis. Adm. Code PFOA and PFOS MCL was originally proposed at 20 ng/L by the DNR but was changed to 70 ng/L as part of the rule approval at the February 2022 Natural Resources Board Meeting.

NR 809 Revision - New EPA PFAS Standards

The new EPA rule has set the enforceable Maximum Contaminant Levels (MCLs) at 4.0 parts per trillion for PFOA and PFOS, individually.

"This standard will reduce exposure from these PFAS in our drinking water to the lowest levels that are feasible for effective implementation."- EPA.

For PFNA, PFHxS, and HFPO-DA (GenX Chemicals), EPA has set the MCLs at 10 parts per trillion.

NR 809 Revision - New EPA PFAS Standards – Hazard Index

- EPA will also regulate, through a hazard index (HI), mixtures of four PFAS compounds—PFHxS, PFNA, HFPO-DA, and PFBS.

"Decades of research show some chemicals, including some PFAS, can combine in mixtures and have additive health effects, even if the individual chemicals are each present at lower levels." - EPA

- PFAS can often be found together and in varying combinations as mixtures.

NR 809 Revision - New EPA PFAS Standards - Hazard Index

- "The Hazard Index is a long-established approach that the EPA regularly uses, for example in the Superfund program, to determine the health concerns associated with exposure to chemical mixtures." – EPA
- The Hazard Index is calculated by adding the ratio of the water sample concentration to a Health-Based Water Concentration (requires two or more PFAS contaminants).

$$HI\ MCL = \left(\frac{[HFPO\text{-}DA_{water}]}{[10\ ppt]}\right) + \left(\frac{[PFBS_{water}]}{[2000\ ppt]}\right) + \left(\frac{[PFNA_{water}]}{[10\ ppt]}\right) + \left(\frac{[PFHxS_{water}]}{[10\ ppt]}\right) = 1$$

NR 809 Revision - New EPA PFAS Standards

Chemical	Maximum Contaminant Level Goal (MCLG)	Maximum Contaminant Level (MCL)
PFOA	0	4.0 ppt
PFOS	0	4.0 ppt
PFHxS	10 ppt	10 ppt
HFPO-DA (GenX chemicals)	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	Hazard Index of 1	Hazard Index of 1

*Compliance is determined by running annual averages at the sampling point

NR 809 Revision PFAS Implementation

PRIMARY RULE OBJECTIVES

Under the revised rule, public water systems will need to:

- Conduct initial and ongoing compliance monitoring for the regulated PFAS in accordance with the new EPA PFAS rule.
- Implement corrective actions to reduce regulated PFAS in the drinking water for MCL exceedances.
- Inform the public of the levels of regulated PFAS measured in their drinking water and if a MCL is exceeded.

NR 809 Revision – PFAS Rule Timelines

2024–2027

Within three years of rule promulgation:

- Initial monitoring must be complete, **April 26, 2027**

2027–2029

Starting three years following rule promulgation:

- Results of initial monitoring need to be included in Consumer Confidence Report (CCR).
- Regular monitoring for compliance must begin, and results of compliance monitoring need to be included in the CCR.
- Public notification for monitoring and testing violations.

2029

Starting five years following rule promulgation (starting 2029):

- Comply with all MCLs.
- Public notification of MCL violations.

NR 809 Revision – Initial PFAS Monitoring

PFAS Initial Monitoring Requirements	
Type of system	Minimum monitoring frequency
All Surface Water systems and Groundwater systems >10,000 persons	Four (4) consecutive quarters of samples at each entry point within a 12-month period. Samples must be taken two to four months apart.
Groundwater systems <10,000 persons	Two (2) consecutive samples at each entry point within a 12-month period. Samples must be taken five to seven months apart.

NR 809 Revision – Routine PFAS Monitoring

Reduced PFAS monitoring is one sample every three years.

Analytical results must be below the trigger action levels (half the MCL) to maintain triennial monitoring.

NR 809 Revision – PFAS Monitoring Cont.

A reduced triennial analytical result greater than the trigger level (half the MCL) will increase the monitoring frequency to quarterly.

Quarterly monitoring will continue until results are reliably and consistently below the MCL (minimum of four quarterly samples).

If results are reliably and consistently below the MCL, monitoring will be annual for three years.

NR 809 Revision – PFAS Monitoring Cont.

Schematic General Summary only – *See code for specific monitoring requirements.*

Monitoring Status	Monitoring Frequency
Initial	Quarterly*
Reduced	Triennial (every 3 years)
Increase	Quarterly
Post–Increase \ Reliably & Consistently < MCL	Annual for 3 years

*Four quarters surface water systems and groundwater systems >10,000 persons. Two consecutive samples for groundwater systems <10,000 persons.

NR 809 Revision – PFAS Monitoring Trigger Levels

Trigger Action Levels for PFAS Contaminants	
Contaminant	**Trigger level**
Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, PFNA)	0.5 (unitless)
HFPO-DA	5 ng/l
PFHxS	5 ng/l
PFNA	5 ng/l
PFOA	2.0 ng/l
PFOS	2.0 ng/l

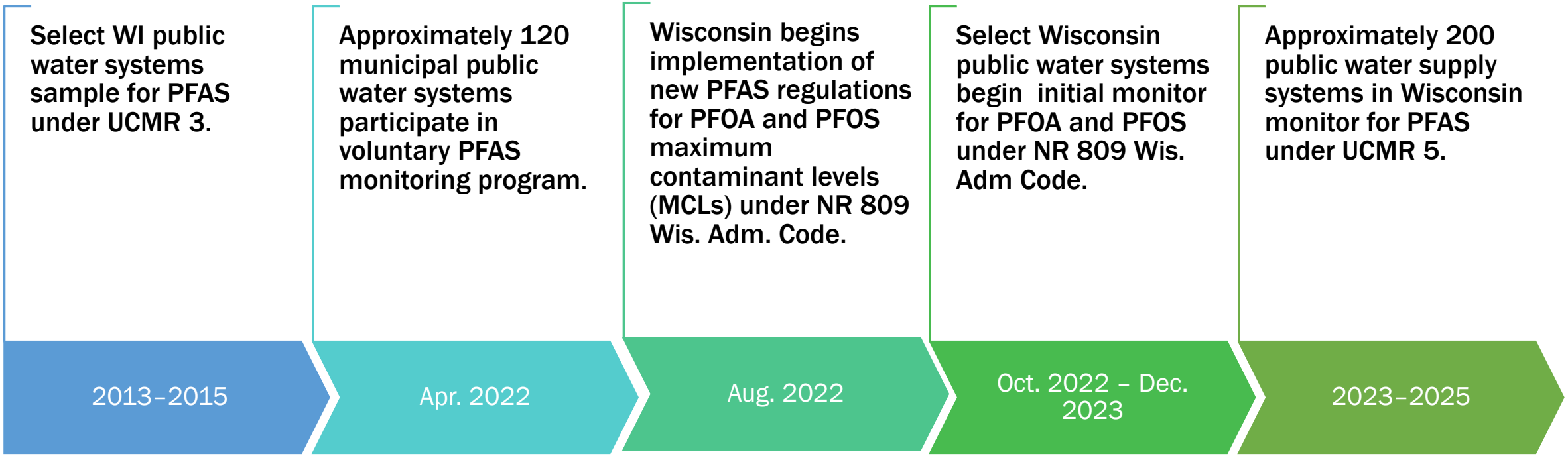
PFAS Monitoring - *Use of Previous Data*

Previous PFAS monitoring data collected by a public water system after January 1, 2019, may be used toward initial compliance monitoring under the revised NR 809 Wis. Adm. Code PFAS rule.

Previous results cannot be greater than the MCLs.

Previous results must be below the trigger action levels to be eligible for triennial monitoring.

Existing PFAS Monitoring Data



NR 809 Revision - MCL Exceedance

- A MCL exceedance will require a Tier 2 public notice.
- The Tier 2 Public notice will include language of health effects for the PFAS contaminants listed in the table below:

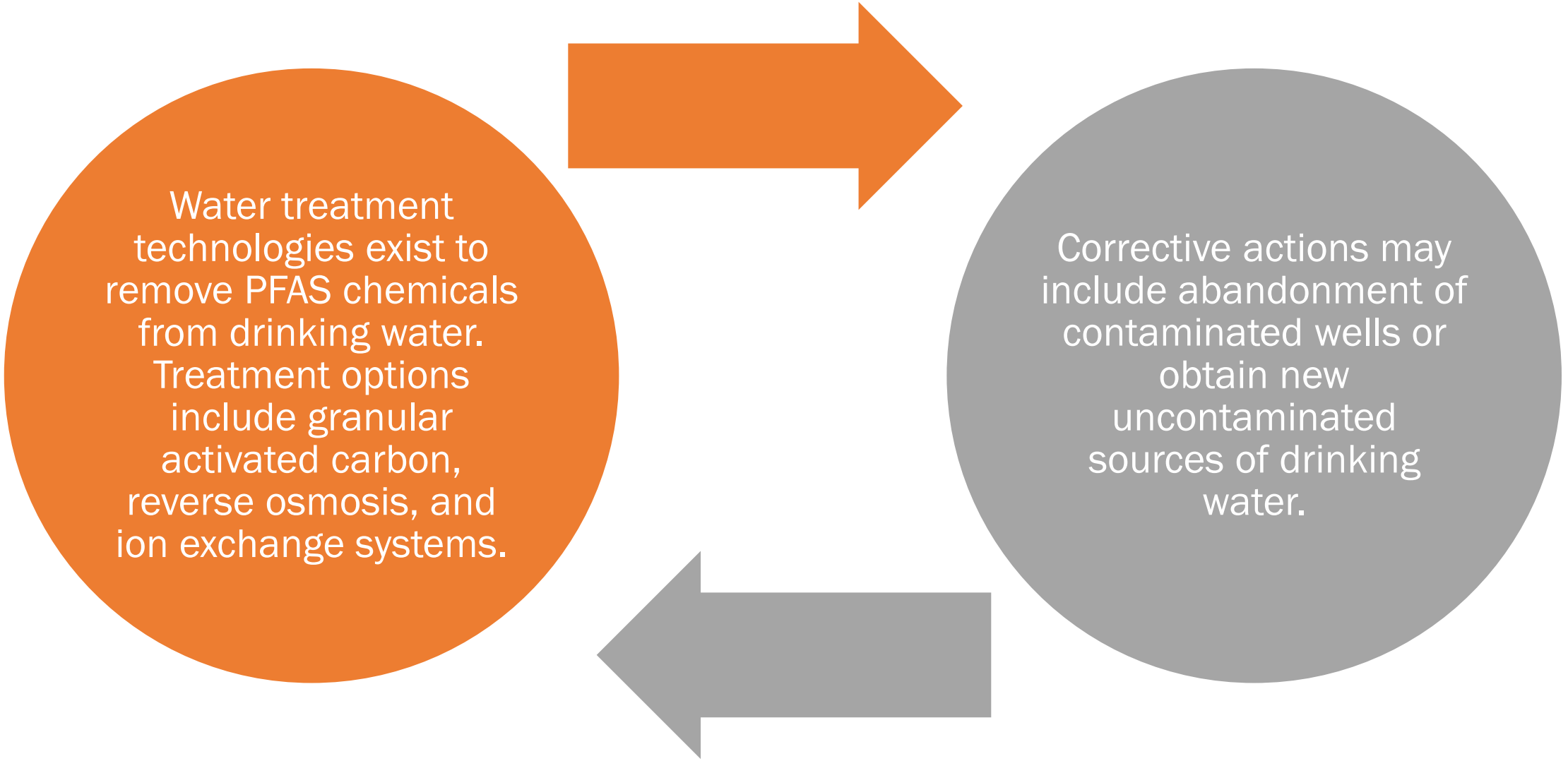
Health Effects	PFOA	PFOS	PFHxS	PFNA	HFPO-DA	HI
Cardiovascular	X	X				
Immune	X	X	X	X	X	X
Liver	X	X	X	X	X	X
Cancer Incidence	X	X			X	
Thyroid			X			X
Kidney	X				X	
Cholesterol				X		
Developmental Effects	X	X	X	X	X	X

NR 809 Revision - MCL Exceedance

- Example of Health Effects language (PFOS):

"Some people who drink water containing PFOS in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including liver cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOS in excess of the MCL following repeated exposure during pregnancy and/or childhood."

PFAS - Corrective Action Options



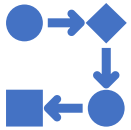
NR 809 Revision PFAS - Implementation

The EPA PFAS rule will protect public health with rule flexibility which includes, cost savings, and requirement reductions for public water systems.

Reduction in initial monitoring for most small water systems.

The use of previous system drinking water data to satisfy some initial monitoring requirements (i.e., previous NR 809 PFAS compliance data and/or UCMR data).

Reduced compliance monitoring based on sample results.



Additional time to comply with the PFAS MCLs to allow systems time to plan, design, and find the best available solutions for their system and community.

PFAS – Economic Impact Elements

- Number of systems and entry points affected
- Monitoring frequency
  - Initial
  - Reduced
  - Increased
- Monitoring/Analysis costs
- Mitigation
  - Treatment
  - New Well

PFAS – Economic Impact (2022) Predicted Costs

	Predictions Based on 20 ppt MCLs			Predictions Based on 70 ppt MCLs		
Cost	One-time Cost (Year 1)	Annual (Year 2)	Max in any 2-yr period	One-time Cost (Year 1)	Annual (Year 2)	Max in any 2-yr period
Monitoring	$1,428,375	$59,333		$1,428,375	$14,883	
Mitigation	$4,172,022	$3,691,220		$1,043,005	$922,805	
Total Estimate	$5,600,397	$3,750,552	$9,350,949	$2,471,380	$937,638	$3,409,019

NR 809 safe drinking water standards update | | Wisconsin DNR

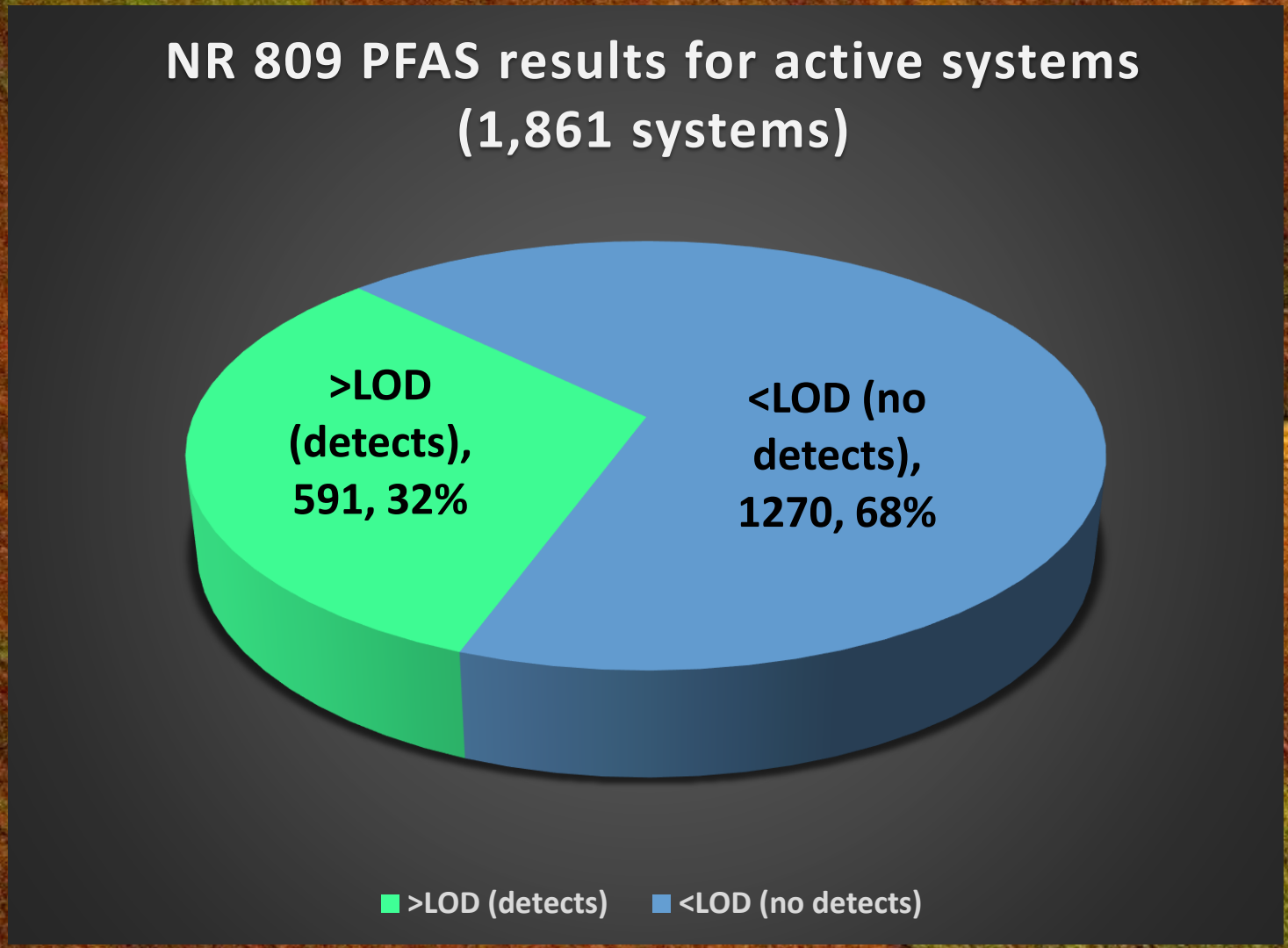
PFAS – Economic Impact (2022)
Predicted number of systems over state MCL

	Predicted		Actual	
Water System Type	>20 ppt	>70 ppt	>20 ppt	>70 ppt
Community	10	2	17	2
Non-Transient Non-Community	8	2	8	2
Total	18	4	25	4

To estimate the number of systems for each type of monitoring, the department used an average of national occurrence data gathered as part of the Unregulated Contaminant Monitoring Rule (UCMR) and data gathered in Michigan. This estimate assumes that 1.35% of Wisconsin systems will have results greater than the proposed standard of 20 ppt. For perspective, data gathered in Ohio also had 1.22% of entities sampled above 20ppt.

NR 809 RESULTS

PFAS ng/L (ppt)	# of systems	Percent
>EPA MCLs	95	5.1%
>trigger levels	191	10.3%
> Current MCL (70 ppt)	4	0.2%
>LOD (detects)	591	31.8%
<LOD (no detects)	1,270	68.2%



PFAS – Economic Impact (2022 mitigation)

	Non Community	Small CWS (OTM)	Municipal CWS
New Well in 2019	$15,000	$50,000	
Treatment Installation			Average ~$3.9 million per system with a wide range. Sized based on pumpage needs $5.5/gal*
Treatment (GAC) maintenance			$0.000959/gal/day of treated water

*Example: A treatment plant pumping 1 Million gal/day would cost $5.5 Million to install. The average pumpage was 668,000 gal/day

PFAS – Economic Impact (2025 mitigation)

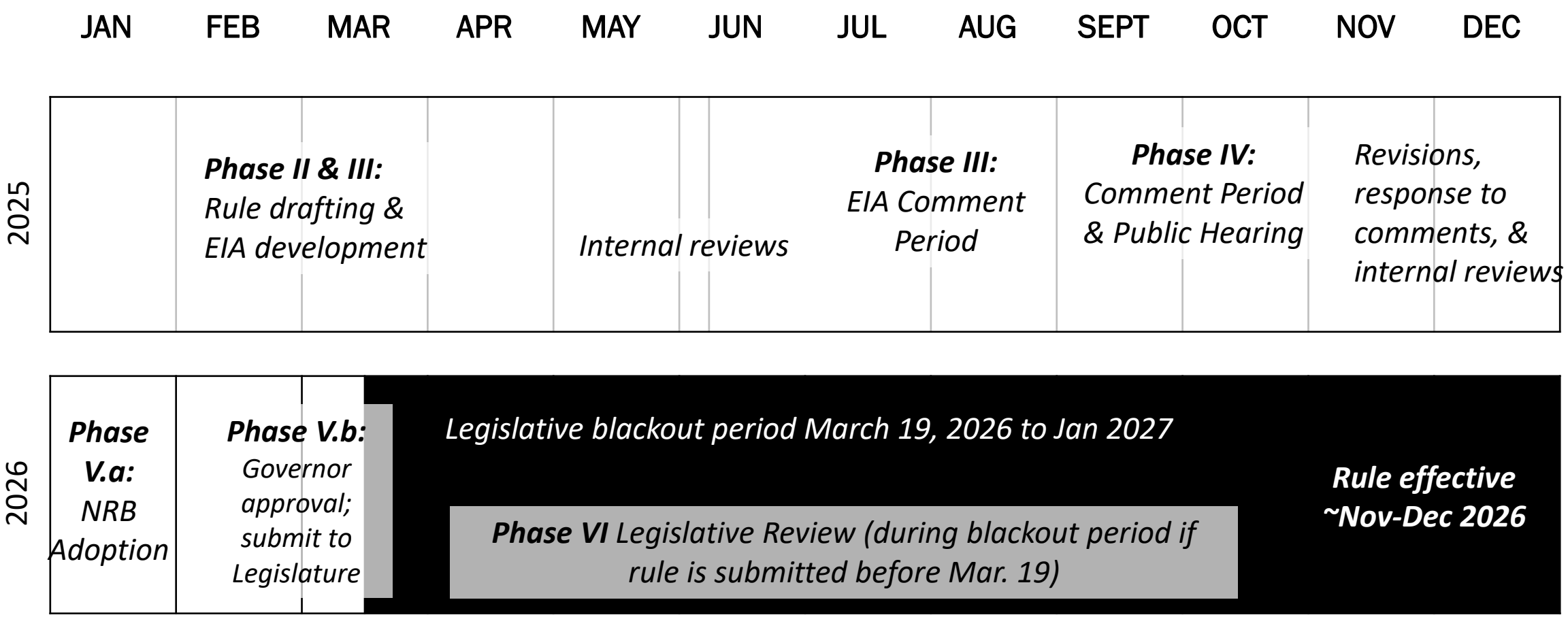
	Non Community	Small CWS (OTM)	Municipal CWS
New Well in 2019	Need new estimate	Need new estimate	
Treatment Installation			Need new estimate based on size of system (pumpage records from EMOR) and new Wisconsin data
Treatment maintenance costs (GAC)			Need new 2025 estimate

PFAS – Funding

EC-SDC OTM/NN PFAS Funding			
PFAS Grants Awarded	Remaining PFAS Grant Funding	PFAS Grants Awarded to Nonprofit NNs	PFAS Grants Awarded to OTMs
$740,219.60 (n=6)	$5,259,780	$496,470 (n=3)	$243,749 (n=3)

EC-SDC Municipal PFAS Funding	
	Grants Awarded
Total	$6,771,821 (n=2)
Remaining Funding	$10,264,946

Timeline for Rule Promulgation



Scope statement expires Feb. 12, 2027

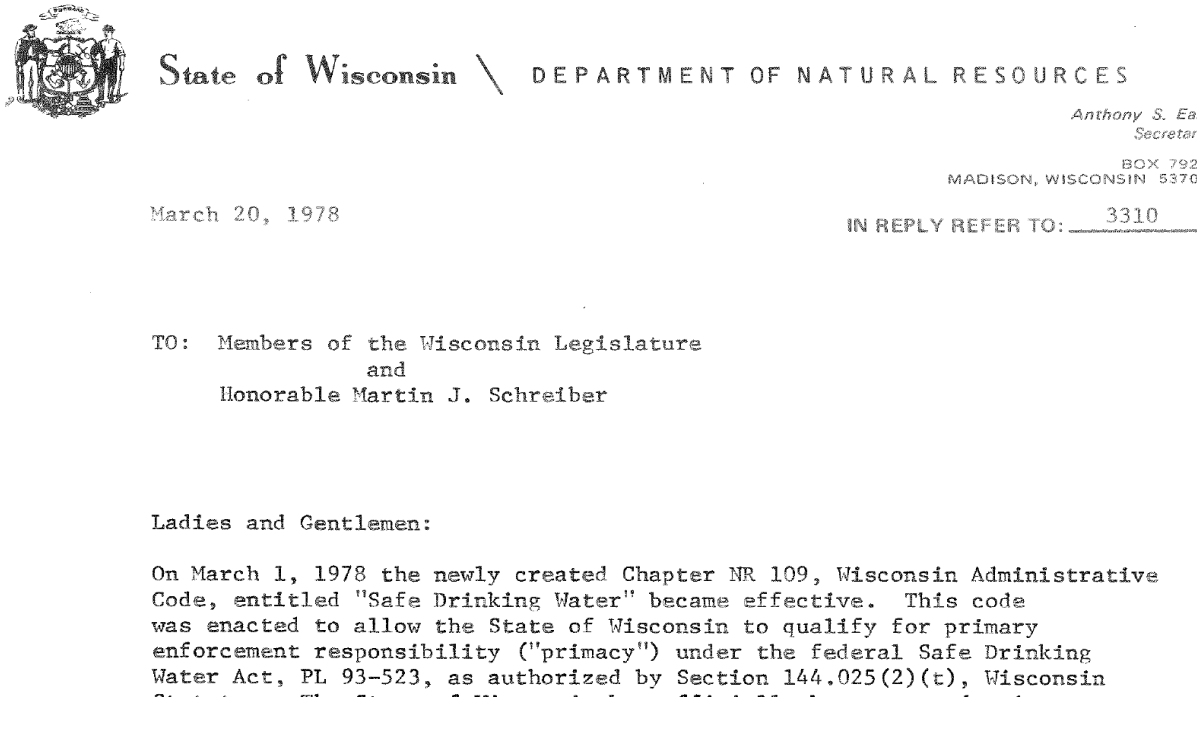
2. Technical Edits Scope

2. Statement of Scope SS 093-24 (Board Order DG-02-24), to clarify and correct existing language and add federal Consumer Confidence Report requirements.

Technical Edits

- ❑ Incorporate EPA edits for previous Rules
  - Revised Total Coliform Rule (RTCR)
  - Disinfection By Products Rule (DBPR)
  - Filter Backwash Recycling Rule **Future updates needed in NR 810 & NR 811*
- ❑ Removing Variance and Exemptions language
- ❑ Remove requirement to only use the Wisconsin State Lab of Hygiene for analysis of Fluoride split samples
- ❑ Add definition for *Service Connection*
- ❑ Add 2024 Consumer Confidence Rule (CCR) revision

Edits For Primacy to administer Safe Drinking Water Act



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Anthony S. Ea
Secretar

BOX 792
MADISON, WISCONSIN 5370

March 20, 1978

IN REPLY REFER TO: 3310

TO: Members of the Wisconsin Legislature
and
Honorable Martin J. Schreiber

Ladies and Gentlemen:

On March 1, 1978 the newly created Chapter NR 109, Wisconsin Administrative Code, entitled "Safe Drinking Water" became effective. This code was enacted to allow the State of Wisconsin to qualify for primary enforcement responsibility ("primacy") under the federal Safe Drinking Water Act, PL 93-523, as authorized by Section 144.025(2)(t), Wisconsin

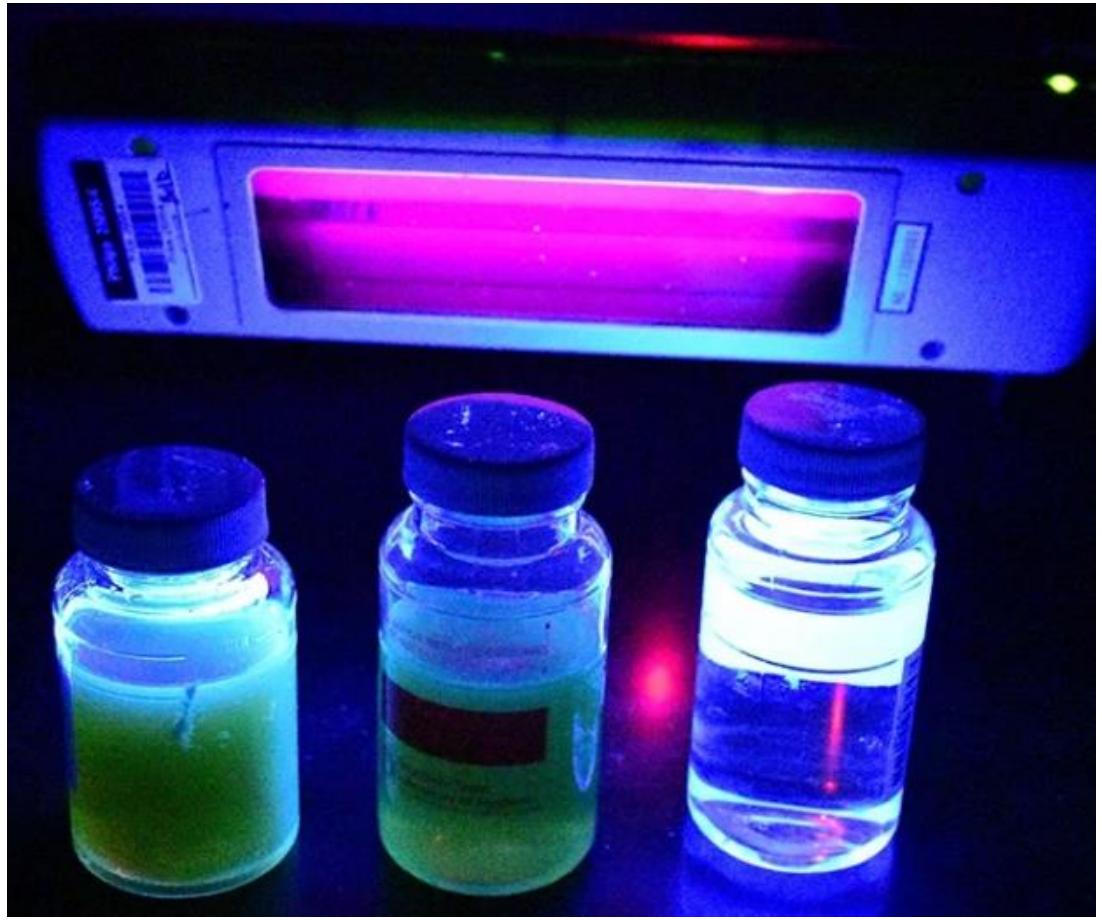
EPA United States Environmental Protection Agency

1. Edit typos, simple language changes to be consistent with federal rule

2. Correct internal cross-reference rule citations

- RTCR – Interim primacy
- DBP Stage 2 – Interim primacy
- FBRR – Interim primacy

RTCR – Revisions and Timeline



- DNR received interim primacy - 2017
- EPA provided additional comments - 2021
- Simple edits were made in NR 809 revisions - 2022
- EPA provided final comments - June 2024

NR 809 Revisions – Stage 2 DBPR

- DNR applied for primacy in 2010
- EPA provided initial comments in 2015
- EPA provided final comments to proceed with DNR's primacy application in 2022

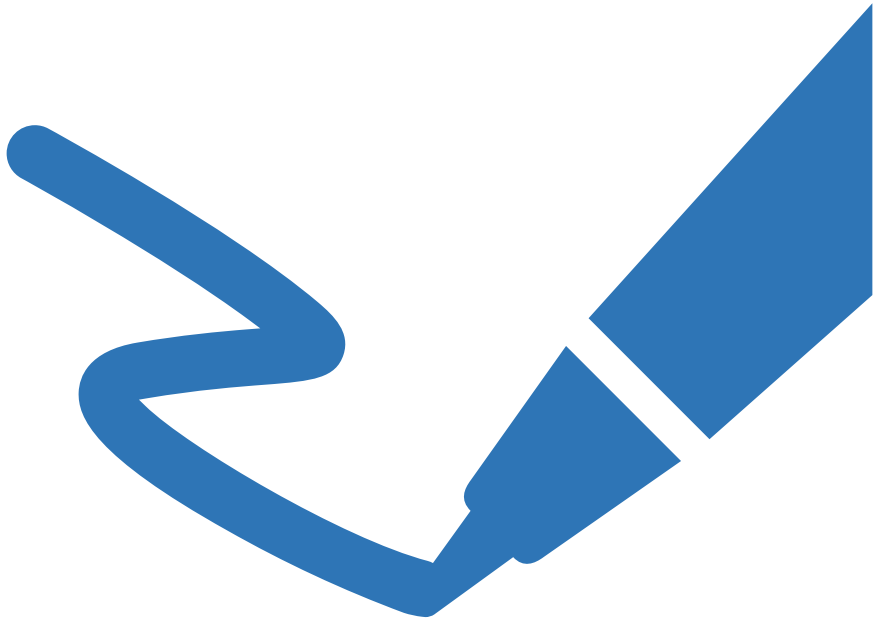
1. *Consecutive System* definition - Revise to be consistent with federal rule
2. Add a missing table for laboratory analysis of performance evaluation samples

Filter Backwash Recycling Rule

- Promulgated in NR 809, 810, and 811

- NR 809 – edits to clarify
  - ➢Monitoring requirements
  - ➢PN language

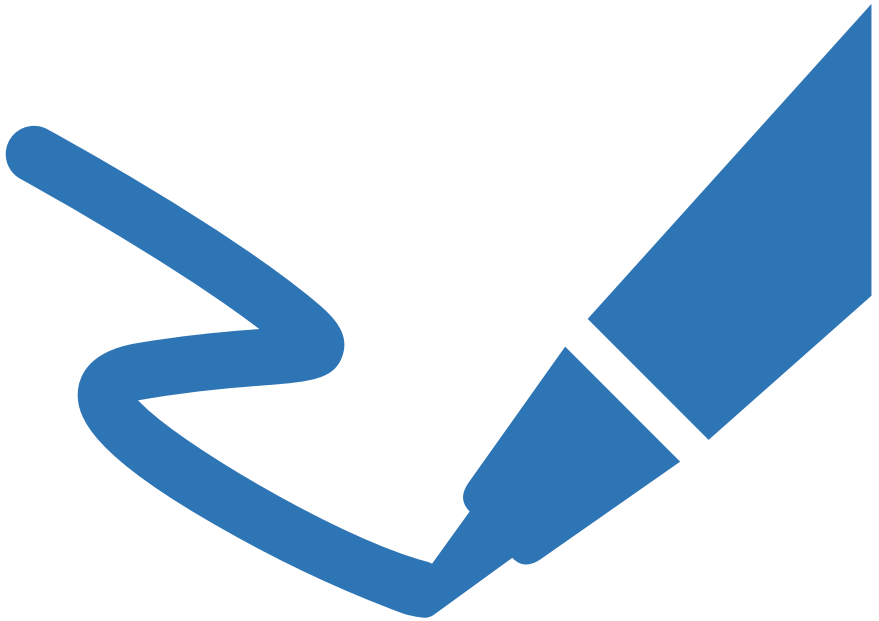
- NR 810
  - Operational Requirements
- NR 811
  - Design standards



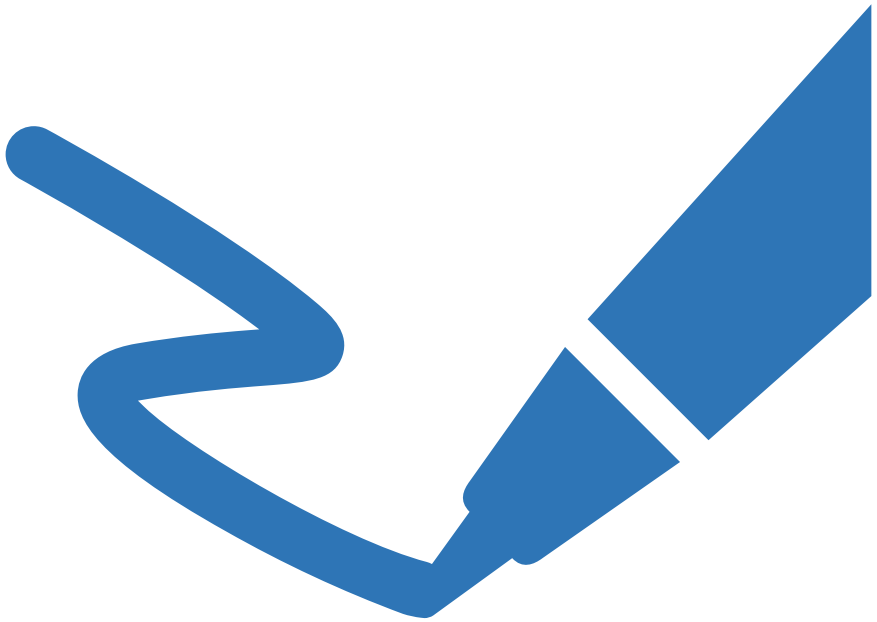
Safe Drinking Water Act – Variances & Exemptions

- NR 809.90; NR 809.905; NR 809.91 are not used in Wisconsin

- Remove from NR 809



Fluoride Split Sample Revision



- NR 809.74(1)(b)2 will be revised to allow public water systems with fluoride treatment to submit split fluoride samples to a certified laboratory other than the Wisconsin State Laboratory of Hygiene (WSLH).
- Current rule language requires split fluoride samples to be sent to WSLH only.

Service Connection Definition

- “Service Connection” is not defined in NR 809.
- The term appears throughout SDWA and NR 809 and a definition is needed

CCR Revisions: What is a Consumer Confidence Report

A Consumer Confidence Report, or CCR, is an annual report that summarizes water quality related information from the previous calendar year

EPA requires community water systems (CWSs) to provide a CCR to its customers as part of the “Right to Know” rules.

CCRs help customers understand what is in their drinking water and how it can affect their health

CCRs delivered in 2027 must meet new requirements

Changes to content

- Summary to include violations, action level exceedance, etc.
- Contact for translation assistance
- PWS ≥ 100,000 required to develop translation/communication plans
- Definitions for certain terms - e.g., pesticide, herbicide, corrosion control

Lead and Copper

- Corrosion control efforts explained
- Corrective actions to address action level exceedance, timeframe for completing actions

NOT IN TECHNICAL EDITS WILL BE PART OF LEAD AND COPPER

Frequency of Delivery

PWS ≥ 10,000 required to provide a CCR twice a year

CCRs must meet new requirements in 2027

- CWS ≥ 50,000 will be required to post CCRs on public website for 3 years
- Minor changes to “Good Faith” delivery options to reach consumers that do not receive water bills
- For CWS with biannual requirements:
  - First report by July 1st and will summarize results for Jan- Dec of the previous year.
  - Second report delivered by December 31st to provide 6-month update on any MCLs, ALEs, etc.
- CWS must submit a copy of the CCR & certification to primacy agency within 10 days of required delivery date to customers

CWS required to deliver CCR biannually, develop translation/communication plan

Population ≥ 10,000 biannually delivery			
		translation/communication plan	
Region	10,000 - <100,000	≥100,000	Total
Northeast Region	19	1	20
Northern Region	1		1
South Central Region	17	1	18
Southeast Region	31	2	33
West Central Region	16		16
Grand Total	**84**	**4**	**88**

Compliance Monitoring Data to EPA

CCR revision includes requirement for primacy agencies to report all compliance monitoring data to EPA beginning in 2027

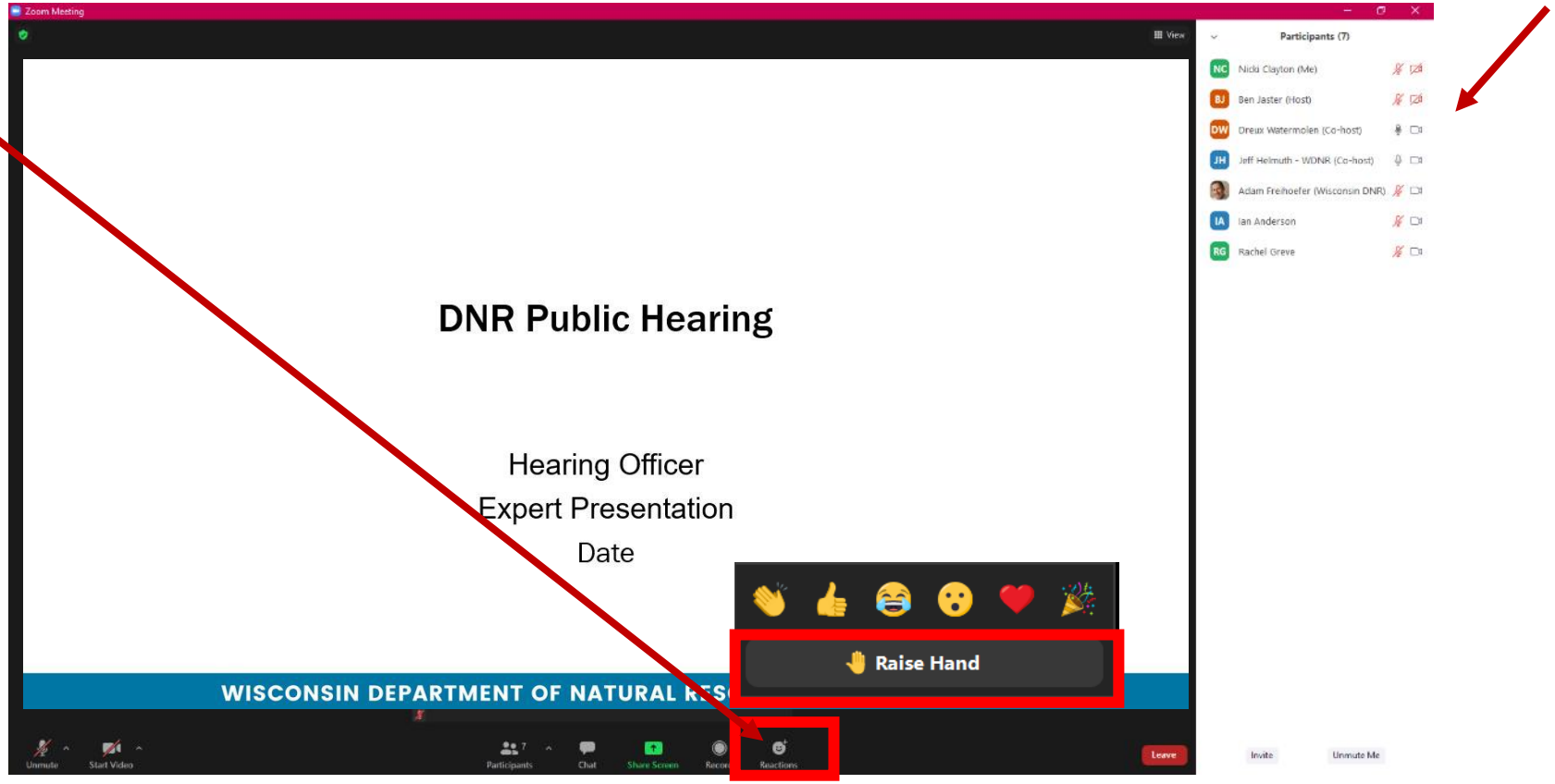
Questions

Hearing Logistics (Zoom): Raising Your Hand

If you'd like to comment:

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

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

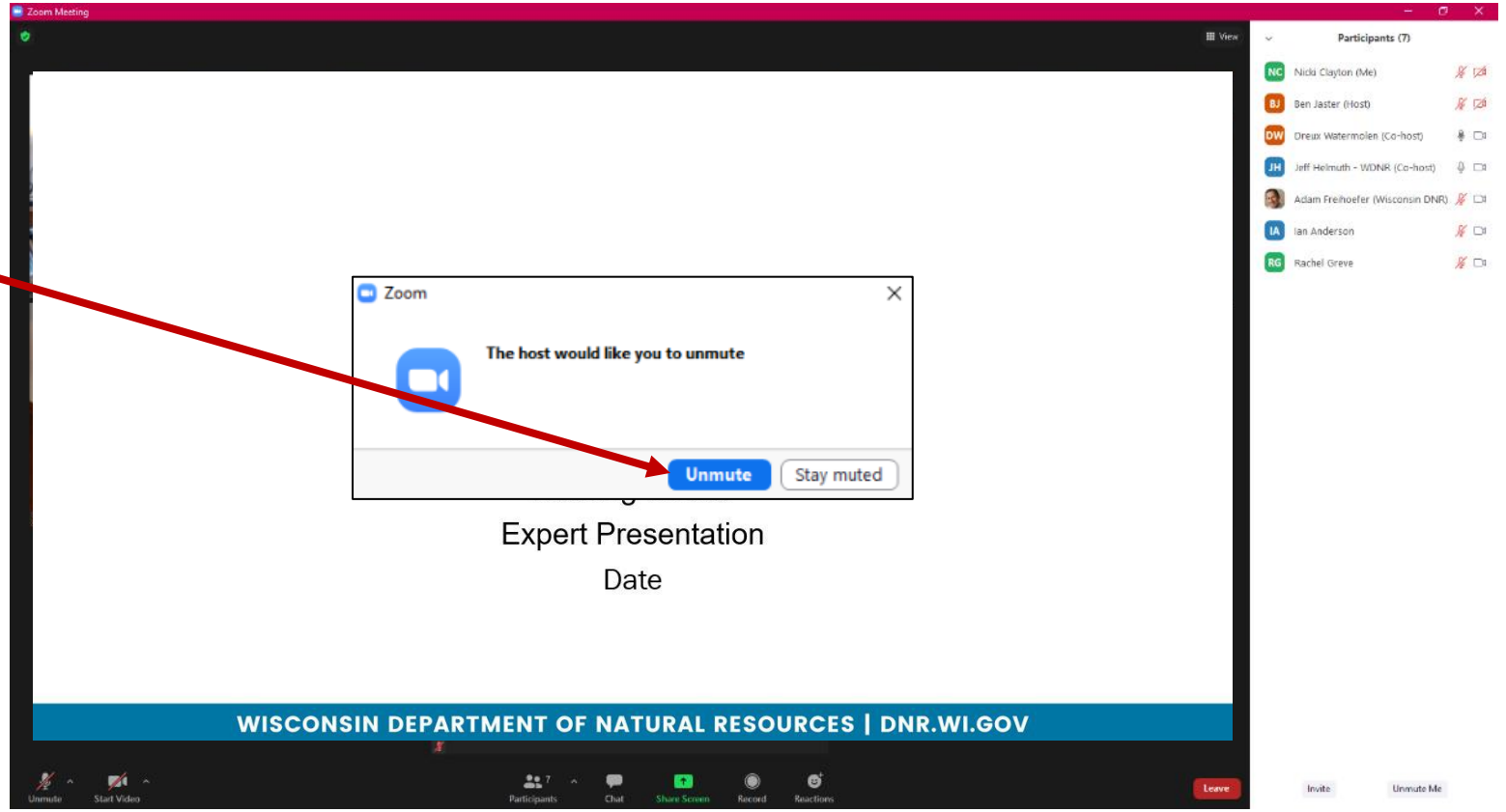


By phone:
Dial *9 to raise hand.

Hearing Logistics (Zoom): Unmuting

You should receive a pop-up "*The host would like you to unmute*" then *click* **Unmute.**

Unmute



By phone:
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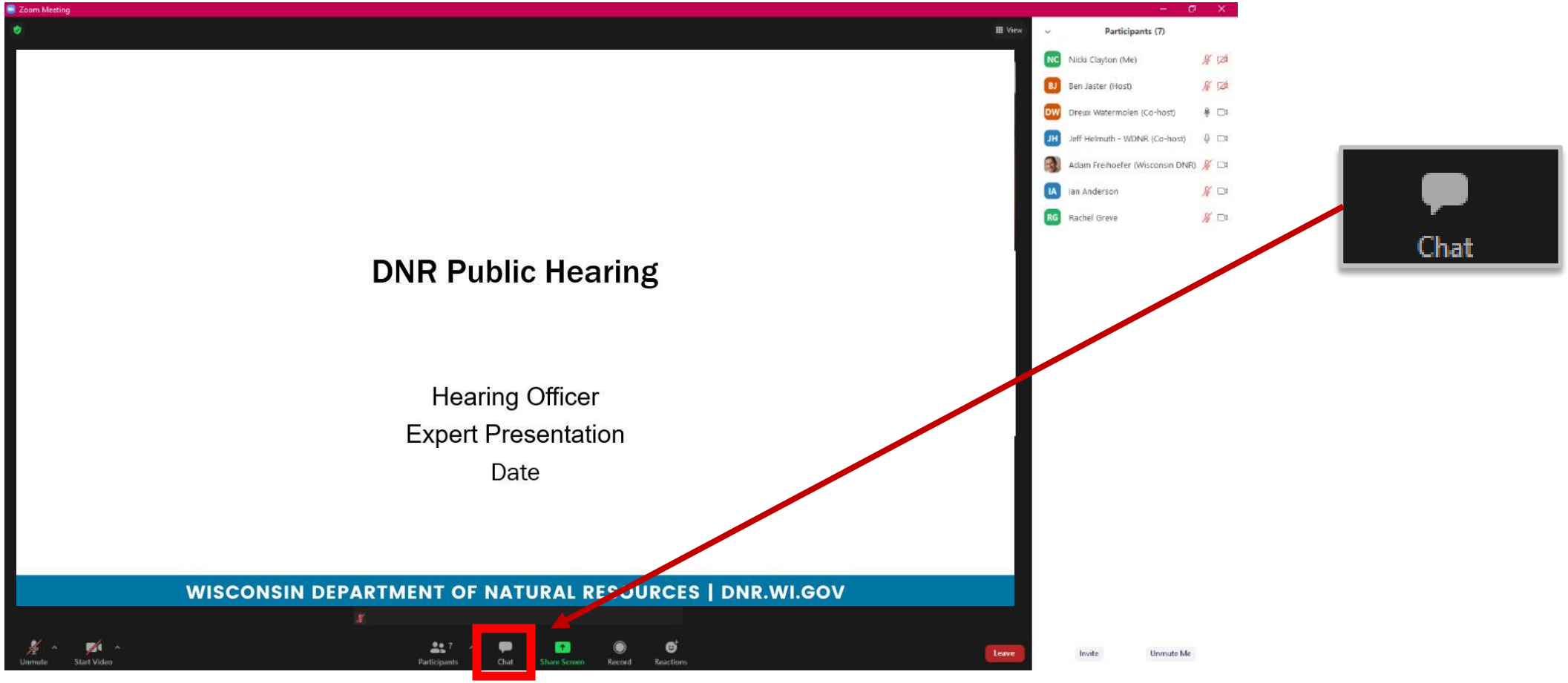
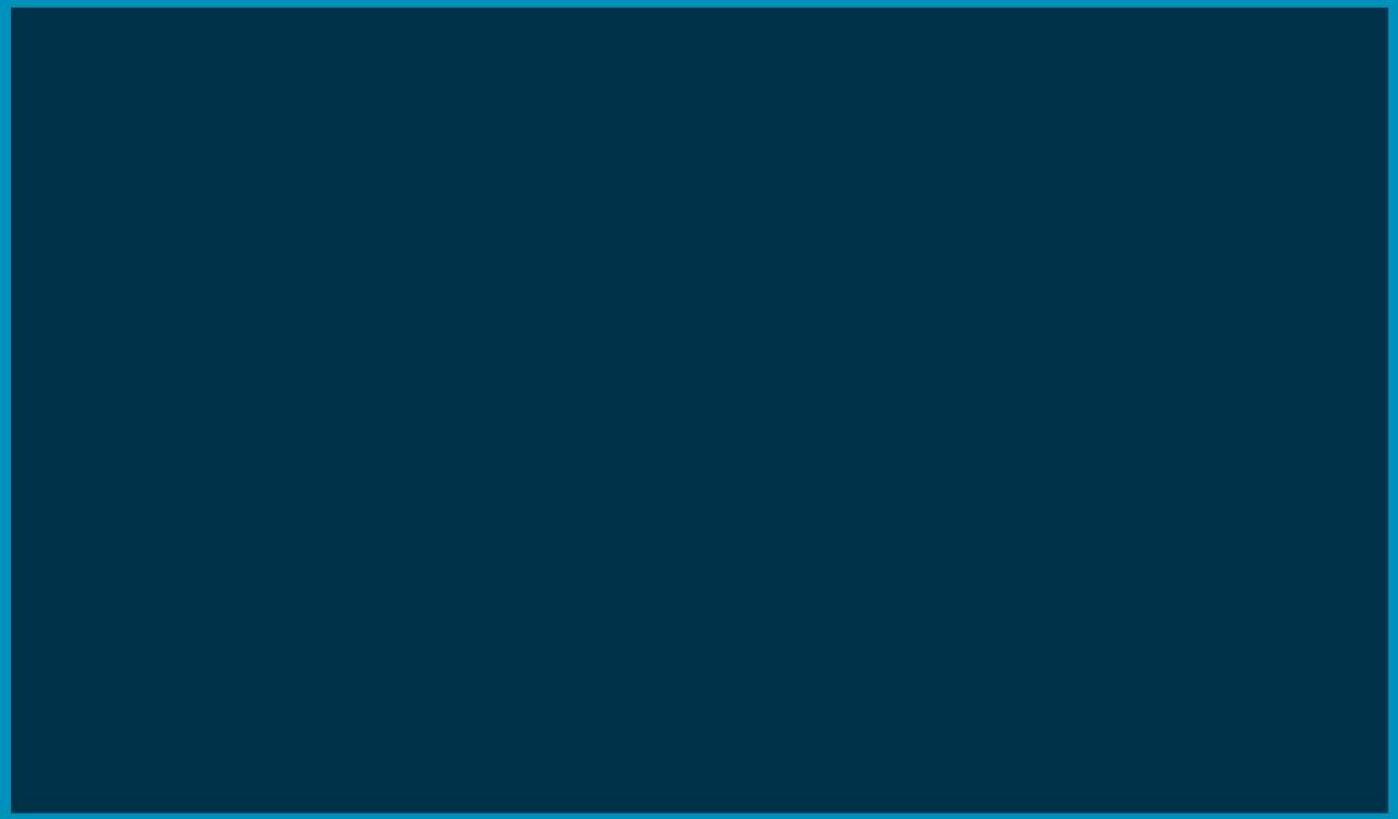


CONNECT WITH US



@WIDNR

@WI_DNR

/WIDNRTV

"WILD WISCONSIN:
OFF THE RECORD"