DG Study Group Meeting

May 1, 2025

GROUNDWATER & DRINKING WATER ADVISORY COMMITTEE

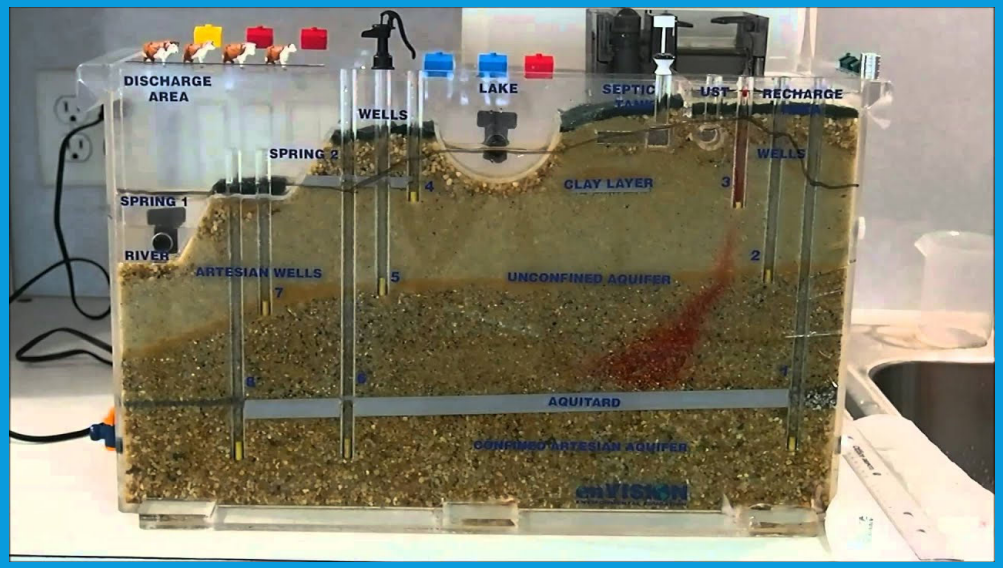
Jeffrey J Beiriger

WWWA Government Relations Advisor

May 2025

Arsenic, PFAS, and Other Contaminants…

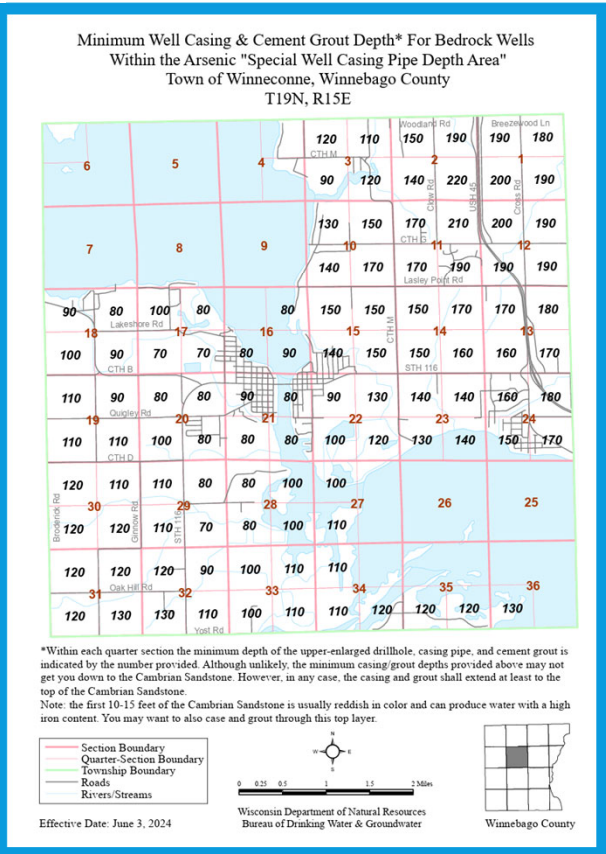
The groundwater flows…



Just like surface water…

Special Casing Areas

- Establish minimum casing and cement grout depths for bedrock wells.



Minimum Well Casing & Cement Grout Depth* For Bedrock Wells
Within the Arsenic "Special Well Casing Pipe Depth Area"
Town of Winneconne, Winnebago County
T19N, R15E

*Within each quarter section the minimum depth of the upper-enlarged drillhole, casing pipe, and cement grout is indicated by the number provided. Although unlikely, the minimum casing/grout depths provided above may not get you down to the Cambrian Sandstone. However, in any case, the casing and grout shall extend at least to the top of the Cambrian Sandstone.
Note: the first 10-15 feet of the Cambrian Sandstone is usually reddish in color and can produce water with a high iron content. You may want to also case and grout through this top layer.

Section Boundary
Quarter-Section Boundary
Township Boundary
Roads
Rivers/Streams

Effective Date: June 3, 2024

Wisconsin Department of Natural Resources
Bureau of Drinking Water & Groundwater

Winnebago County

Drillers and pump installers regularly test water from private wells and *report results to the property owner*. Tests are performed both within and outside of special casing areas.

But what happens if a well driller or pump installer identifies a trend with testing in a particular area of the state?

- Are they required to notify anyone?

And what about tests taken by differing well drilling and pump installing companies?

- Are we aggregating our data in a way that could demonstrate trends?

WWWA discussed this issue at a recent meeting of its Board of Directors after one of the member companies identified a high percentage of tests that were positive for arsenic in a part of the state that is not in a special casing area.

While they could provide assistance to their customer, what about other property owners in that same area? How could they be made aware of a potential contaminant in their private well?

For those who do test their wells, how do property owners know to add arsenic, PFAS, etc. to the contaminants for which they would test?

Can well drillers and pump installers provide these tests?

Of course! But…

Coming from us, would it seem self-serving? Especially given the additional costs associated with taking samples and having the appropriate lab tests run?

We're not talking about a county-based program to test water…

What we are interested in is aggregating and analyzing data that is *already being collected.* Possibly, the state might subsidize these additional lab tests to give us more data points without consumers paying that expense.

If that data indicates that the shape of a contamination area is shifting, the industry can work with the DNR to establish new protocols for testing, test water from sample wells, and see if special casing areas need to be established or existing maps redrawn.

In the world of private wells, we cannot use one data point to determine the quality of water for many people.

One data point only tells us about the quality of water for a single private well owner.

We need a way to collect and analyze multiple data points that can help identify trends which, like the groundwater, transcend property lines.

We're looking for your questions, your concerns, your thoughts…

WISCONSIN WATER WELL ASSOCIATION
EST. WWWA 1927
Providing & Protecting Wisconsin's Groundwater

WISCONSIN
OFFICE OF RURAL PROSPERITY

RESOURCE DIRECTORY | RURAL PRIORITIES | SUCCESS STORIES | NEWS | WHO WE ARE | CONTACT

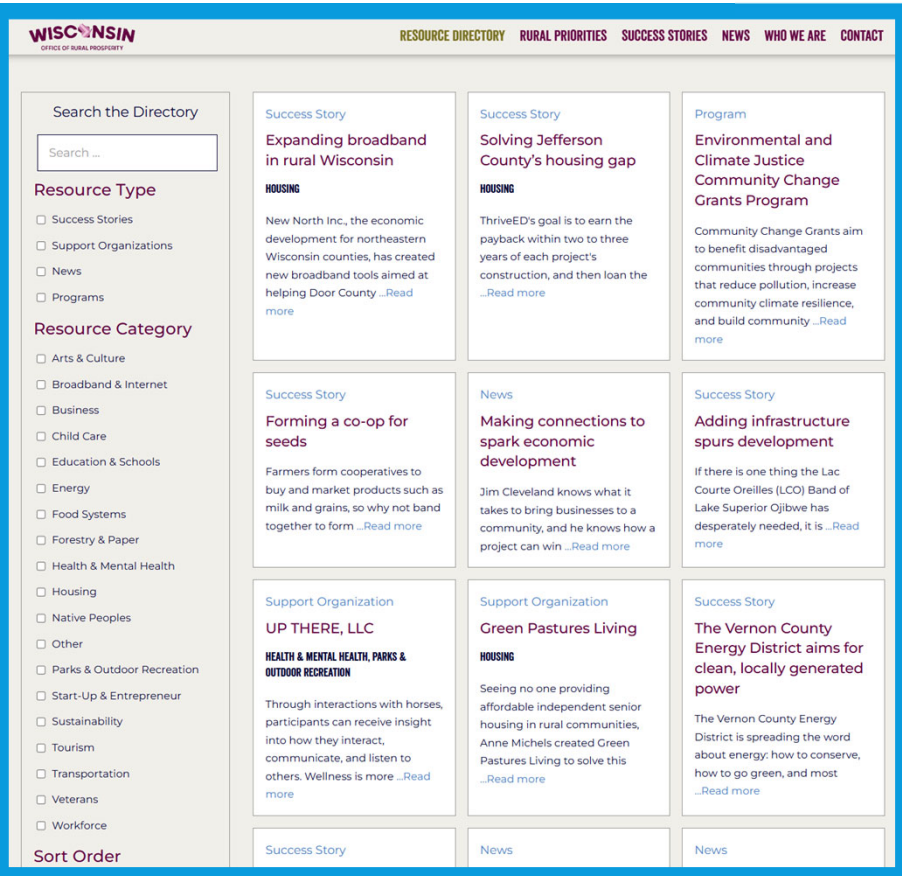
THE OFFICE OF
RURAL PROSPERITY

Wisconsin would not be the state it is without our rural communities. Farmland, wilderness, villages and small towns are an essential part of our identity, our quality of life and our economy.

At the same time, we understand that there is no one single 'rural economy'—every region is unique, with its own traditions, natural resources and mix of industries. Recognizing this complexity, Governor Tony Evers, in his January 2020 State of the State Address, called on WEDC to establish the Office of Rural Prosperity and that same month he signed Executive Order #65 calling for the creation of the Governor's Blue Ribbon Commission on Rural Prosperity.

Whether you're an individual, a business or a community organization, the Office of Rural Prosperity is here to connect you with the right programs, tools, partners and resources to build on your strengths.

WISCONSIN WATER WELL ASSOCIATION
EST. WWWA 1927
Providing & Protecting Wisconsin's Groundwater



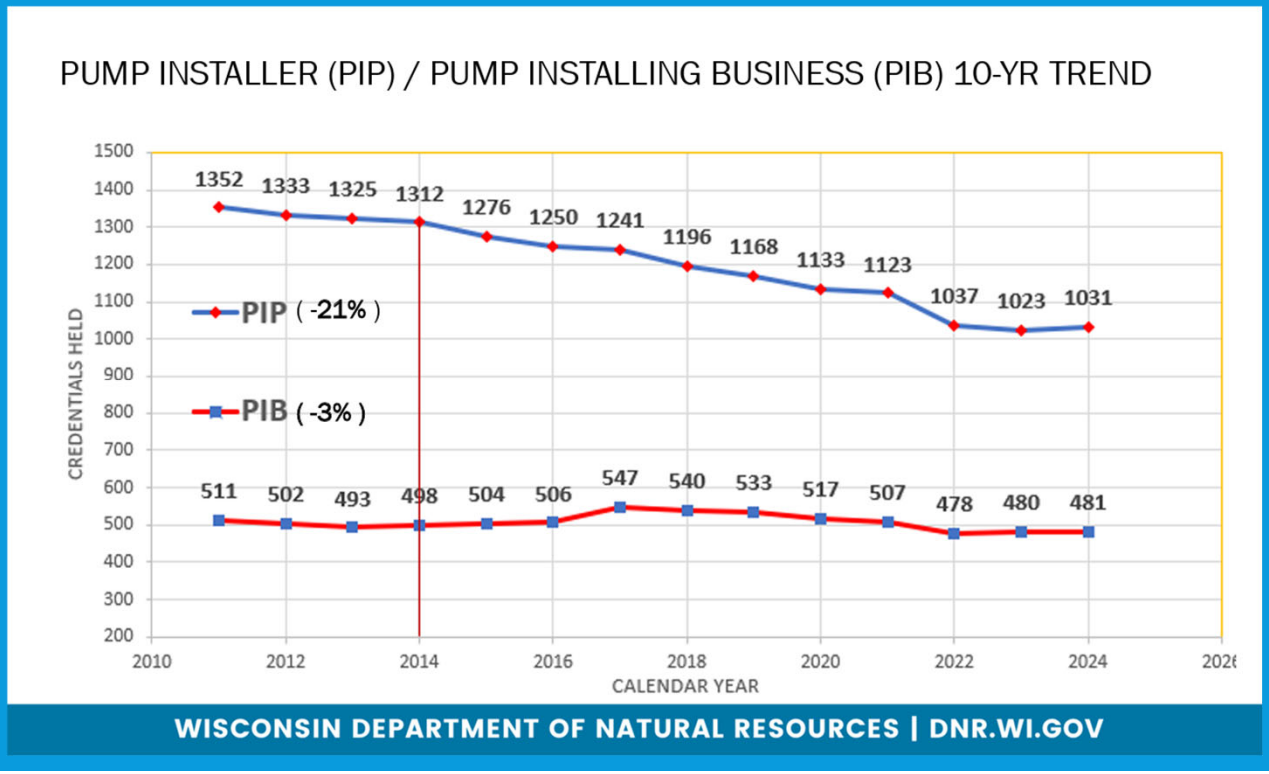
Among the listed resources…

Where is clean water?
Where is sanitation – septic installation?
Where is ongoing service - septic pumping?

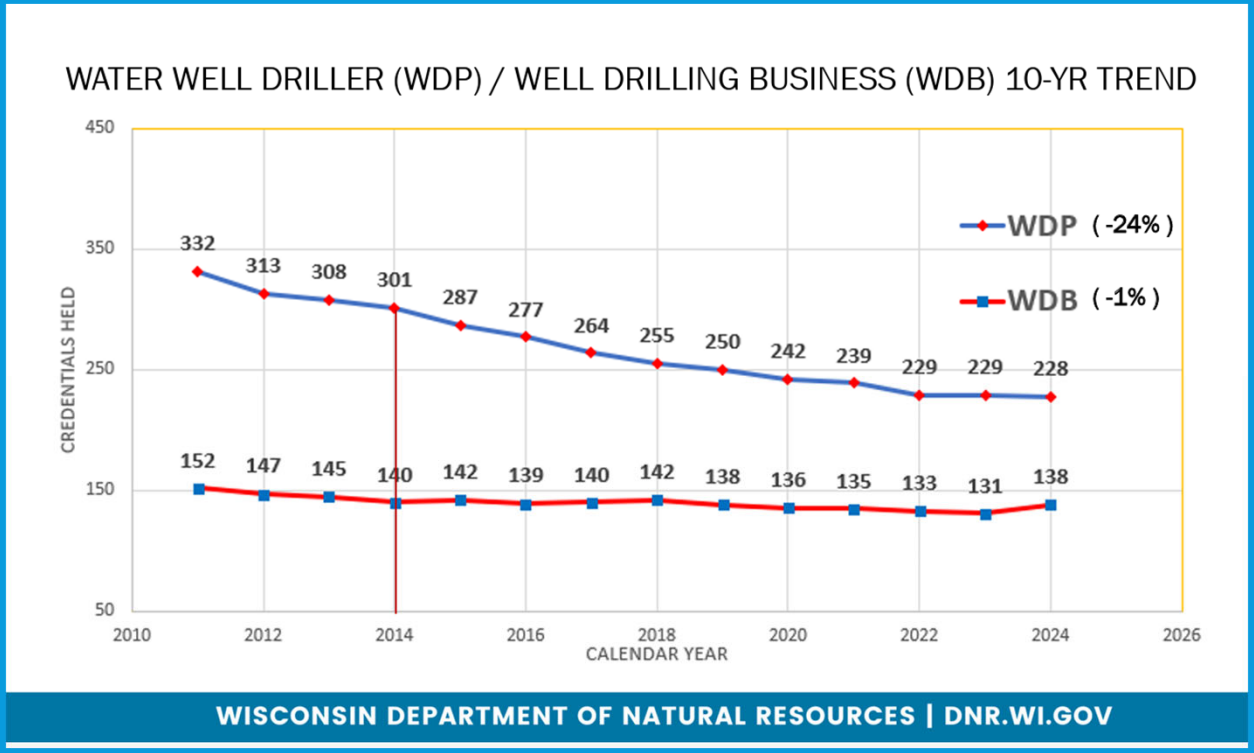
Is rural broadband <u>really</u> more important?

These are critical industries that are being overlooked
and industries that are critical to
our State's present and future!

The numbers don't look good… How do we reverse this trend?



The numbers don't look good… How do we reverse this trend?



We're looking for your questions, your concerns, your thoughts…

Jeffrey J Beiriger
jeff@assocmgmtservices.com
414/331-2059

Source Water Protection: Efforts and initiatives across Wisconsin

Dr. Carla Romano
Groundwater Section Manager, DNR

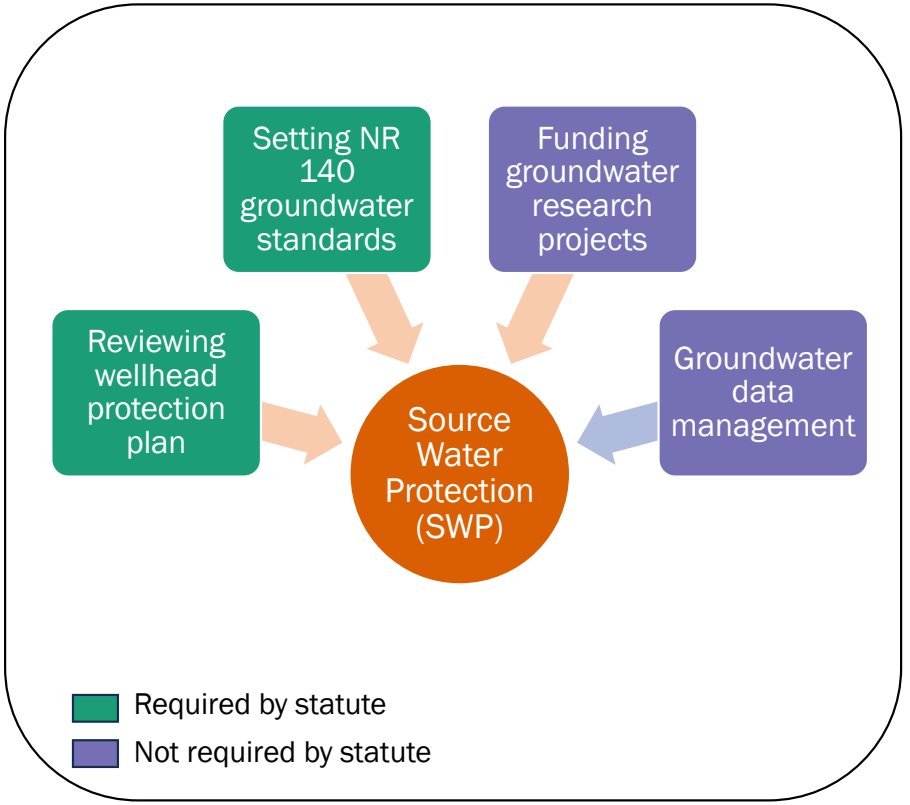
05-01-2025

What is source water protection (SWP)?

- Proactive approach to prevent contaminants from entering drinking water sources
- Focus on groundwater, but surface water systems (e.g., Ashland, Lake Winnebago) also benefit
- Applies to all contaminants – nitrates, pesticides, PFAS, geogenic sources, etc.
- Some SWP activities are supported by federal grants for implementation

Examples of SWP activities

- Wellhead Protection (WHP) Plan Review
- Establishing NR 140 Groundwater Standards
- Updating Source Water Assessment Areas
- Groundwater Data Management & Sharing (e.g., the Groundwater Retrieval Network).
- Underground Injection Control
- Funding groundwater research projects

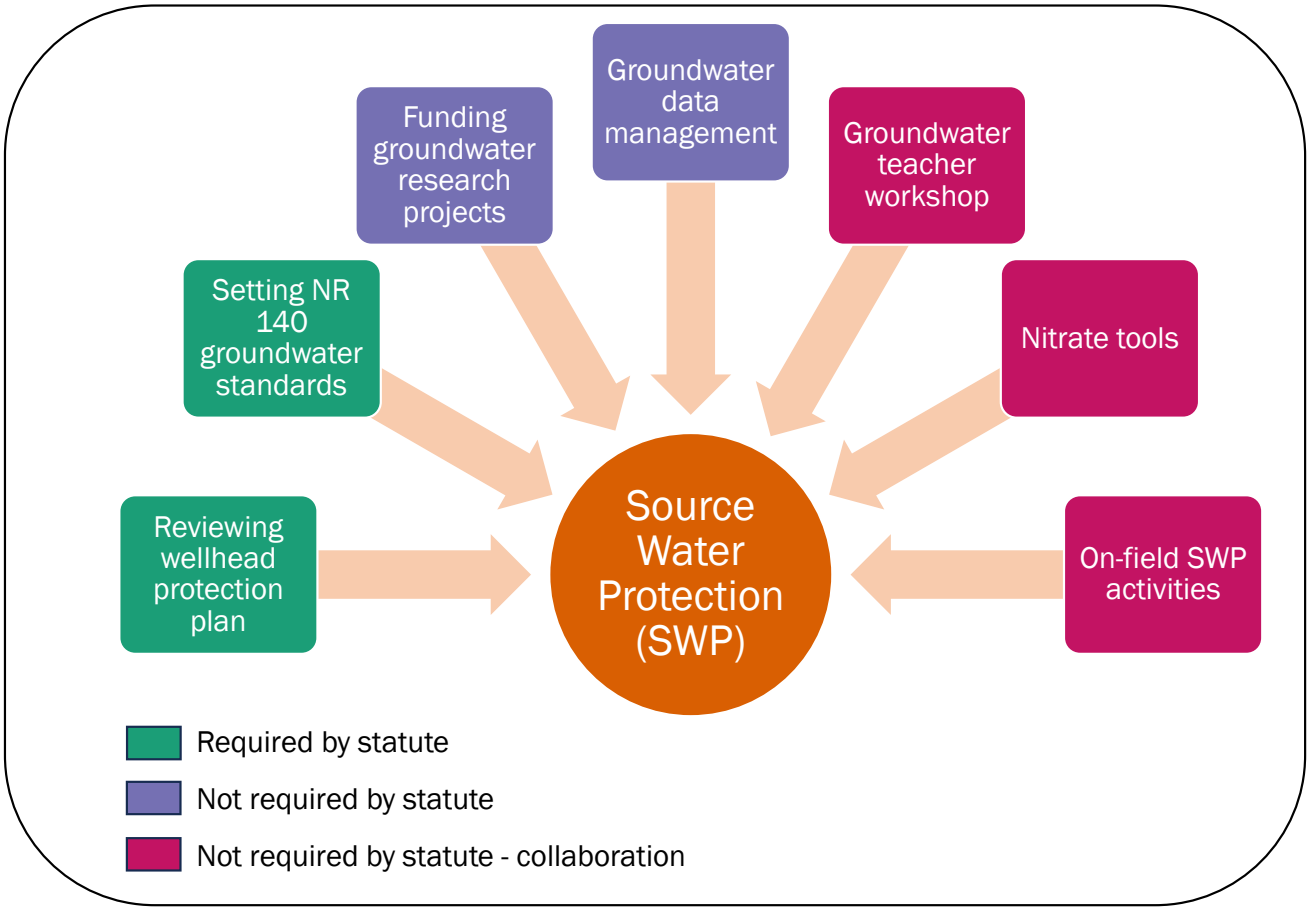


These are DNR efforts, but could partnerships enhance SWP?

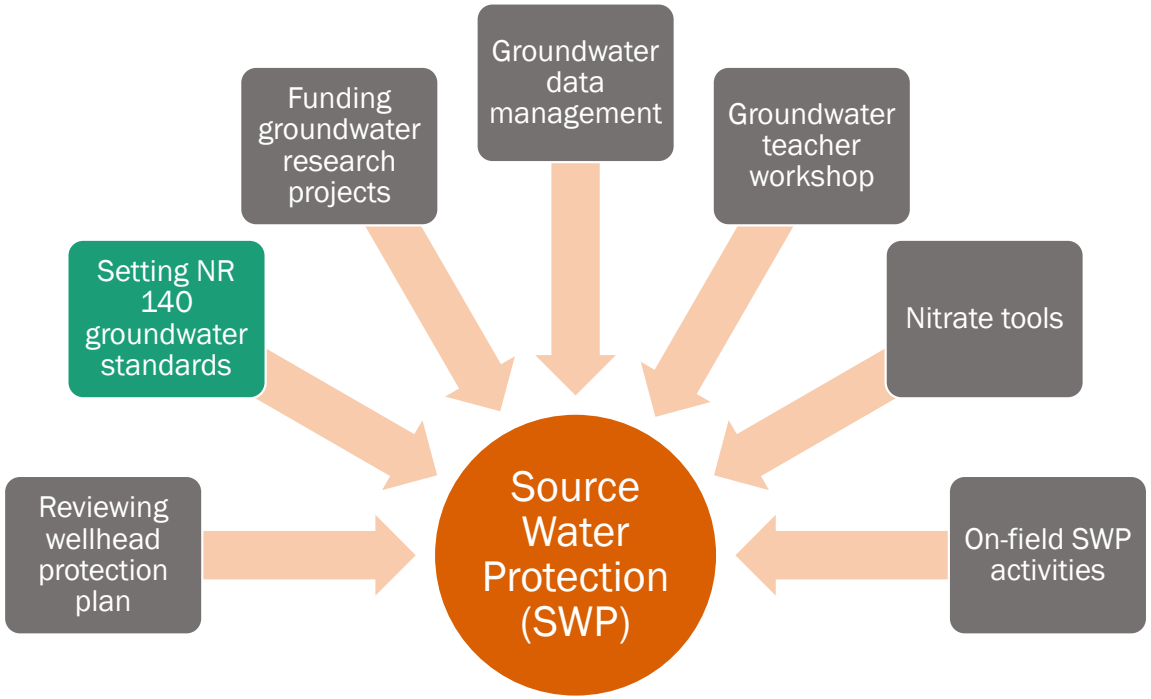
Stronger partnership = stronger protection

Since some polluting activities, such as certain agricultural practices, are not fully regulated, effective mitigation of groundwater contamination requires co-management with local partners

DNR plays a key role in coordinating SWP efforts.



SWP Discussion Topics



Required by statute

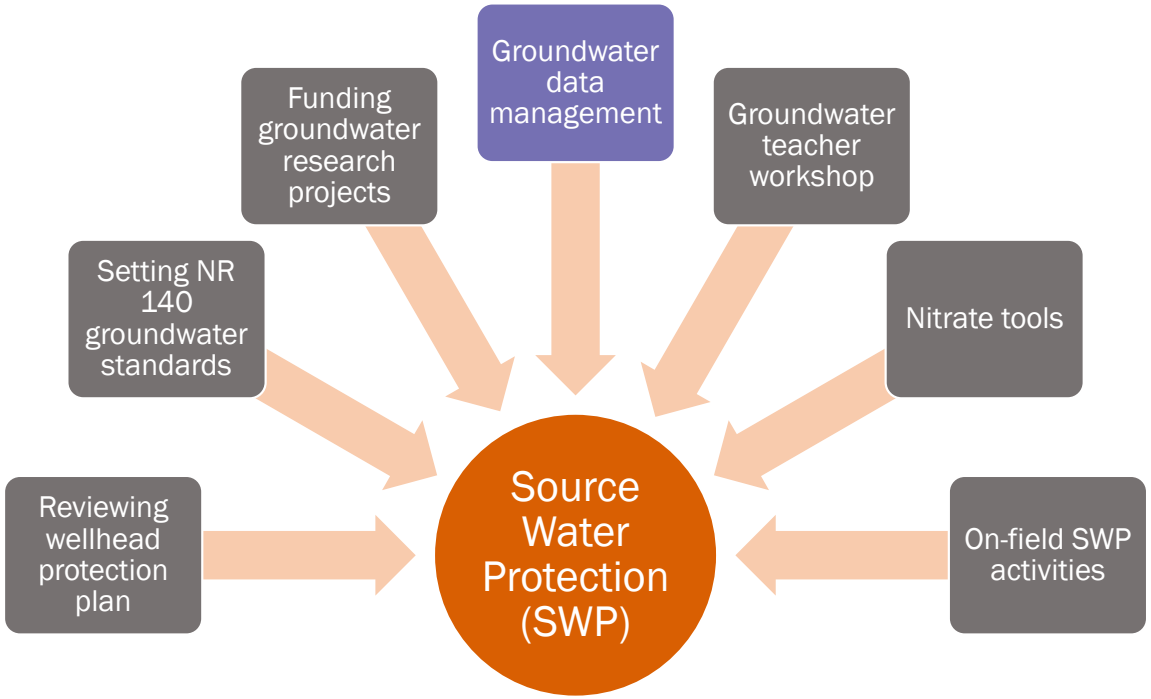
Not required by statute

Not required by statute - collaboration

Groundwater standards

- WI Admin. Code NR 140 establishes state groundwater quality standards for substances present or likely to enter the state's groundwater.
- It provides guidelines for designing and managing regulated activities and facilities to prevent the release of substances at concentrations exceeding the standards.
- Example of regulated activities and facilities:
    - Spills and remediation sites
    - Monitoring of manure storage
    - Monitoring of solid waste facilities

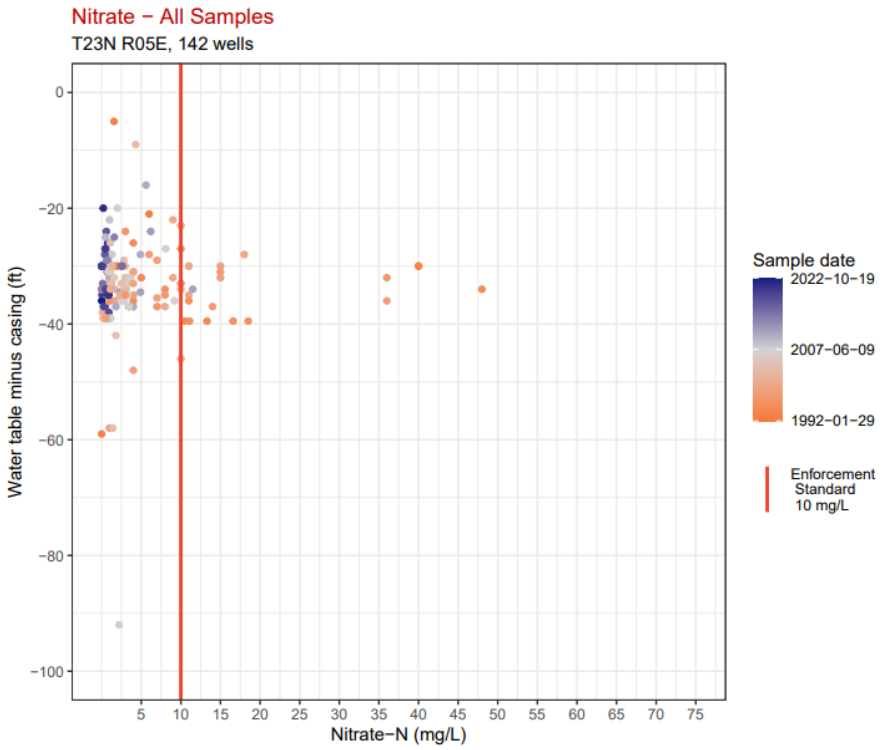
SWP Discussion Topics



Data management and analysis

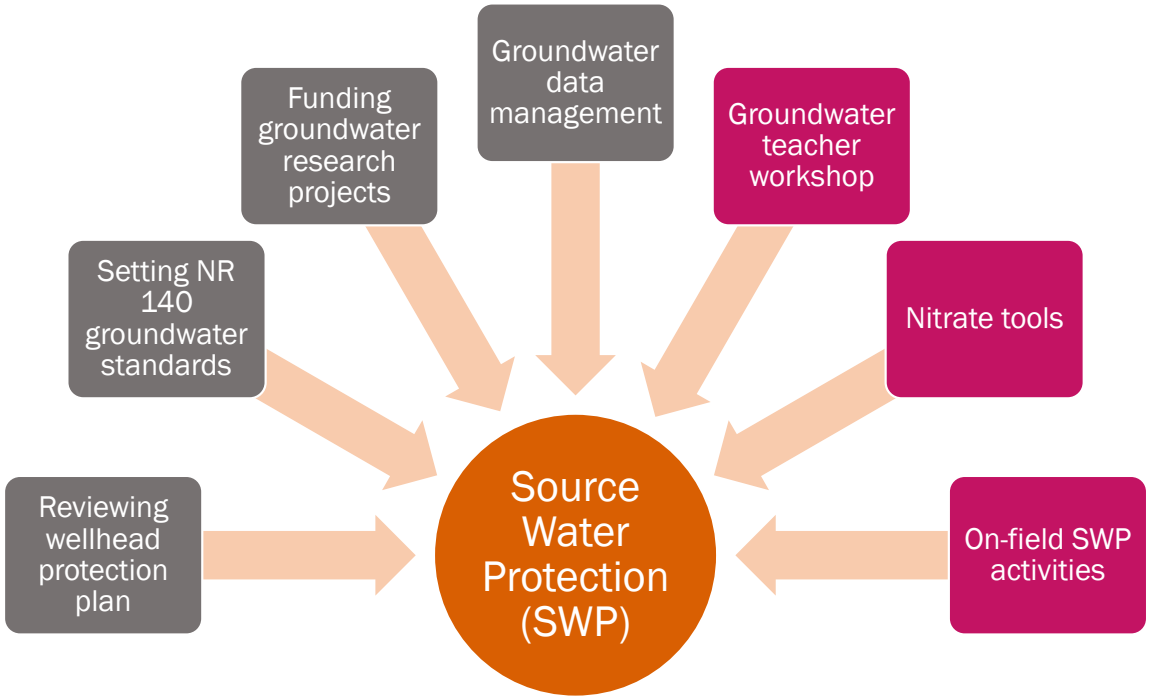
Nitrate Penetration Graphs

- We developed a tool that plots nitrate concentrations at various depths for each township, helping to determine how far below the water table the contamination extends.
- This analysis helps staff in making recommendations for external stakeholders, such as drillers.
- In the example on the right, nitrate concentrations were measured in 142 wells in township 23N, range 5E. The data reveals that at a depth of approximately 60 feet below the water table, nitrate levels drop below 10 mg/L.



https://dnr.wisconsin.gov/topic/Groundwater/GRN.html

SWP Discussion Topics



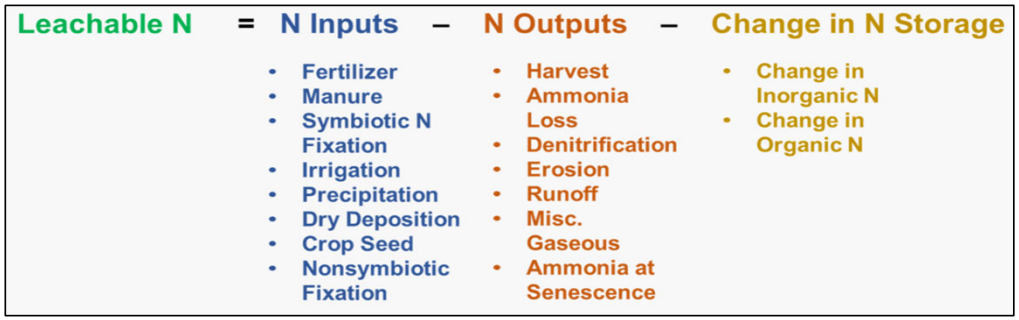
Teacher groundwater workshops

- Two one-day workshops provided per year to Wisconsin teacher, naturalist, or other educators
- Each attendee receives:
  - A sand-tank groundwater model for your school/organization
  - Hands-on lessons on groundwater concepts
  - Receive additional resources to guide students
- Collaboration with the Wisconsin Geological and Natural History Survey, UW-Stevens Point and UW-Madison

Nitrogen Budget & Leaching Calculator

An online tool funded by DNR and developed by UW-Stevens Point and UW-Madison for nitrate source management.

- Estimates potential leachable nitrogen with minimal inputs (fertilizer, yield, soil type, etc.)
- Provides reasonable results for susceptible soils, such as soils of the Central Sands region
- Helps plan nitrogen management by factoring in irrigation water, cover crops, and fertilizer rate comparisons



Check it out!

USGS decision tools

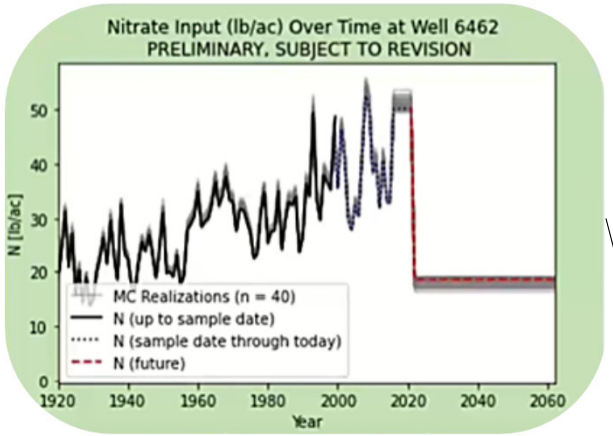
Two tools funded by DNR and developed by USGS focused on contaminant transports.

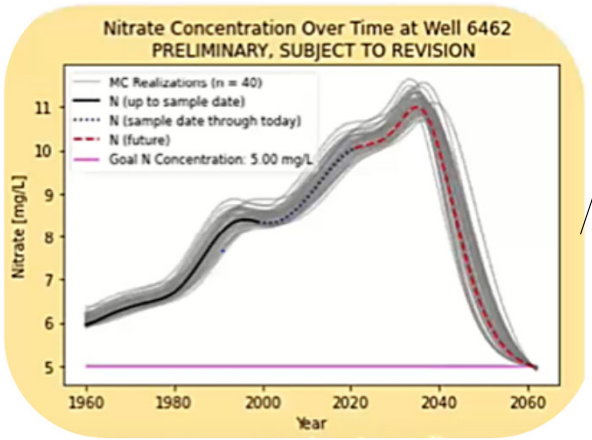
Tool #1:

- Predicts nitrate transport to wells
- Inputs: Nitrate concentration over time, well info and other geochemistry water data (if available) and other. Outputs: Nitrate load & time to reach target concentration in a well.

Tool #2:

- Develop a second tool to identify source water assessment areas using existing groundwater flow models (ongoing)



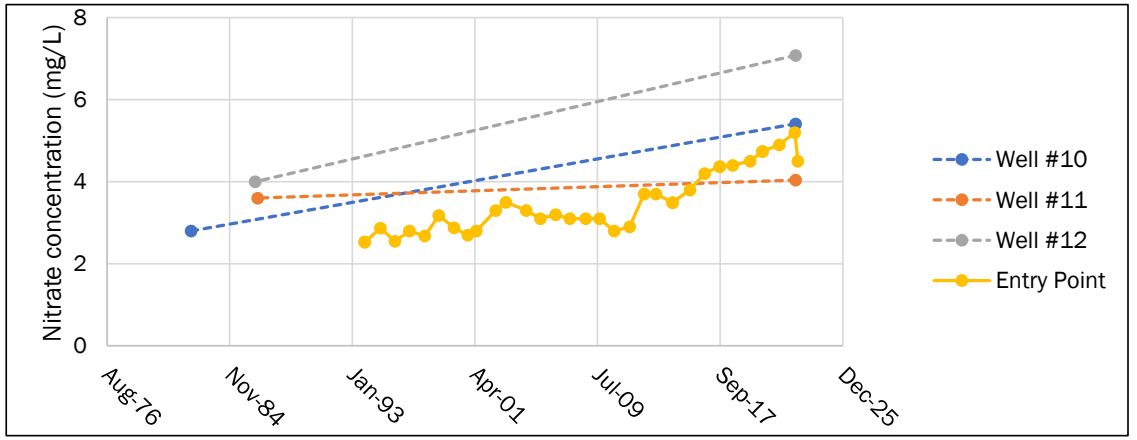


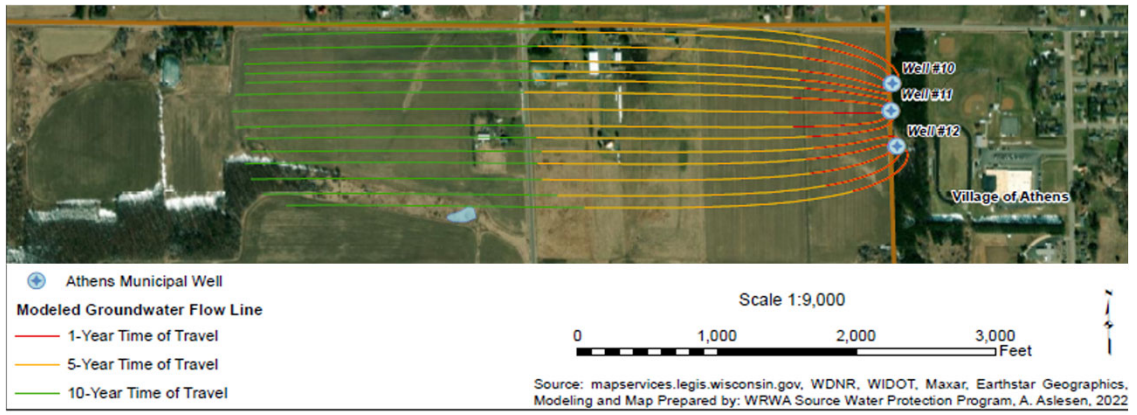
N input should be reduced to ~18 lb/ac to achieve a 5 mg/L concentration by 2060.

Published manuscript: Juckem et al., 2024. DOI: 10.1016/j.envsoft.2024.105999

Athens (Marathon County)

- Analyzed data to pinpoint wells with rising nitrate levels
- Worked with County, Wisconsin Rural Water Association, local farmers, and municipality
- Actions:
  - ➢ Modeling to determine nitrate contributions
  - ➢ Engaged a CAFO owner to adopt land practices that would reduce N input
  - ➢ Increased sampling frequency at shallow public wells for enhanced monitoring





Abbotsford (Marathon County)

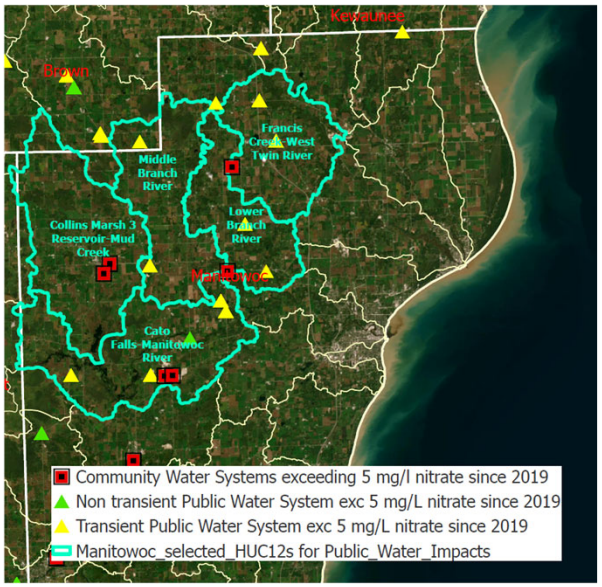
- Identified three wells with rising nitrate concentrations near a 17-acre ag field owned by the Abbotsford School District
- Collaborated with the school, Wisconsin Rural Water Association, WGNHS, and Thriving Earth Exchange
- Actions:
  - Replaced farming income with no-nitrate input activities
  - Students planted native vegetation. Students observed drilling of monitoring wells and learned about geology and water quality.
  - Installed monitoring wells at the property to collect additional data

St. Croix and Manitowoc Counties

- Federally funded through the National Water Quality Initiative – Wisconsin's first groundwater-focused watershed scale projects for public water supplies
- Collaboration with USDA/NRCS and counties.
- Actions:
  - ➢ Identified areas of concern for nitrate in public wells
  - ➢ Ongoing: Mapping recharge areas for wells
  - ➢ Ongoing: Partnering with counties for farmer outreach
  - ➢ Future: Implementing BMPs in recharge areas

St. Croix

Manitowoc



Kudos to the DG SWP team members!

- Brian Austin, GW section
- Beth Finzer, PWS supply section
- Dave Johnson, GW section
- A special thank you also goes to Amy Ihlenfeldt, Bill Phelps and Robin Wagner from the GW section

CONNECT WITH US

Dr. Carla Romano

Carla.romano1@wisconsin.gov
608-910-3458

/WIDNR

@WIDNR

@WI_DNR

/WIDNRTV

"WILD WISCONSIN:
OFF THE RECORD"

Break

Member Roundtable

Chris Groh | **Wisconsin Rural Water Association**

Camille Danielson | **Wisconsin State Lab of Hygiene**

Lawrie Kobza | **Municipal Environmental Group**

Paul Junio | **Pace Labs**

Jeff Kramer | **Wisconsin Well Water Association**

John Richmond | **Wisconsin Section – American Waterworks Association**

Sarah Yang | **Department of Health Services**

Rick Wietersen | **Wisconsin Association of Local Health Departments and Boards**

Sara Walling | **Clean Wisconsin**

Brad Stuczynski | **American Council of Engineering Companies - Water Committee**

Adam Jordahl | **Wisconsin Manufacturers & Commerce**

LCRR Service Line Inventory Consumer Notice Requirements

Cora Bachhuber, Lead and Copper Section, WI DNR

LCRR Consumer Notifications of Known or Potential LSLs

PWS with one or more Lead, Galvanized Requiring Replacement (GRR) or Lead Status Unknown service lines were required to notify persons served by those service lines by mail or in-person delivery by **November 15, 2024.**

Form for Reporting Delivery of Notifications of Known or Potential Service Line Containing Lead
[40 CFR 141.85(e) and 40 CFR 141.90(f)(4)]

CERTIFICATION (Required)	
PWS Name: Click or tap here to enter text.	
PWSID: Click or tap here to enter text.	
I hereby certify that the all the information entered in this form is complete and accurate to the best of my knowledge.	
Print and sign form, or type "email" if submitting electronically.[1]	Click or tap to enter a date.
Signature of Responsible Official[2]	Date
Click or tap here to enter text.	Click or tap here to enter text.
Printed Name	Title

Part A. Consumer Notice Delivery Method and Date

1. Method(s) used to deliver consumer notices:
   ☐ By Mail ☐ In-person delivery
2. Date Notices were delivered: Click or tap to enter a date.

Part B. Notifications of Known or Potential Service Line Containing Lead

In the table below, please indicate how many of each notice type were delivered to applicable consumers. If no service lines under a category exist in your distribution system, select "N/A". *You must provide the Department with one copy of each type of notice delivered to consumers.*

	Yes	N/A	Number Delivered
3. Copy of consumer notice delivered to persons served by confirmed lead service line is attached.	☐	☐	
4. Copy of consumer notice delivered to persons served by confirmed galvanized requiring replacement service line is attached.	☐	☐	
5. Copy of consumer notice delivered to persons served by unknown service line materials is attached.	☐	☐	

[1] In lieu of a signature, an electronic copy of the completed form can be emailed to your DNR Representative if:
- it is attached to an email that comes directly from the person certifying the form; and
- the email includes the signature block (name, title, affiliation, phone) of the person certifying the form.

LCRR CN Reporting Requirements

By **July 1, 2025**, PWS must:

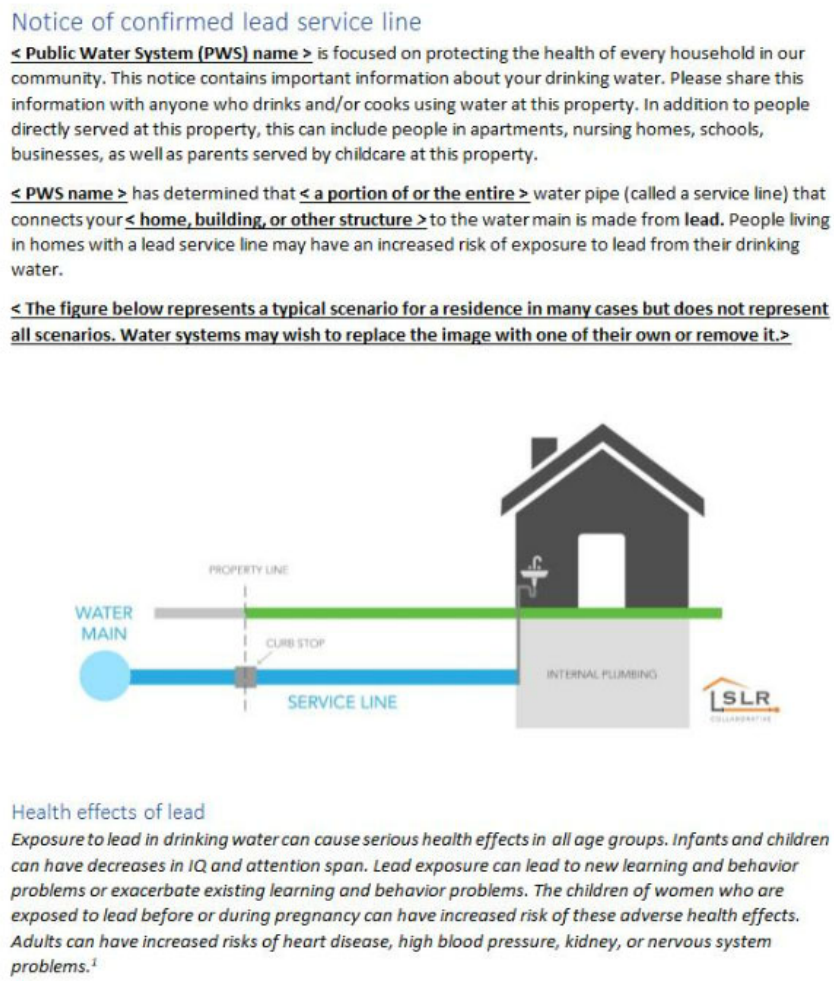
1. Demonstrate to the DNR that they delivered the required consumer notifications to affected consumers
2. Provide a copy of the notification(s) sent to consumers and the associated information materials to the State. 40 CFR 141.85(e)

LCRR CN Annual Reporting Requirement

PWS must repeat notifications **annually until only non-lead remains**, and continue to report to DNR by July 1st.

EPA Templates for Notifying Consumers of Known or Potential LSLs

EPA has provided Consumer Notification templates for each notification type.



Notice of confirmed lead service line

< Public Water System (PWS) name > is focused on protecting the health of every household in our community. This notice contains important information about your drinking water. Please share this information with anyone who drinks and/or cooks using water at this property. In addition to people directly served at this property, this can include people in apartments, nursing homes, schools, businesses, as well as parents served by childcare at this property.

< PWS name > has determined that **< a portion of or the entire >** water pipe (called a service line) that connects your **< home, building, or other structure >** to the water main is made from **lead.** People living in homes with a lead service line may have an increased risk of exposure to lead from their drinking water.

< The figure below represents a typical scenario for a residence in many cases but does not represent all scenarios. Water systems may wish to replace the image with one of their own or remove it.>

Health effects of lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.[1]

https://dnr.wisconsin.gov/topic/DrinkingWater/LSLInventoryRequirements.html

How will DNR Review CN Requirements?

- ❑ Was an acceptable method used to deliver consumer notices? (Mail or In-Person Delivery) *NOTE – WDNR has not approved alternative methods of delivery
- ❑ Were notices delivered to consumers on-time?
- ❑ How many L, GRR, and LSU notices were delivered to consumers? Does the number of each notice type delivered match the number of each service line type reported?
- ❑ Was a copy of each notice type provided to DNR for review? Did the notice(s) include all federally mandated language?

How will DNR Review CN Requirements?

- ❑ Did the notice(s) include the required lead health effects language exactly as written?

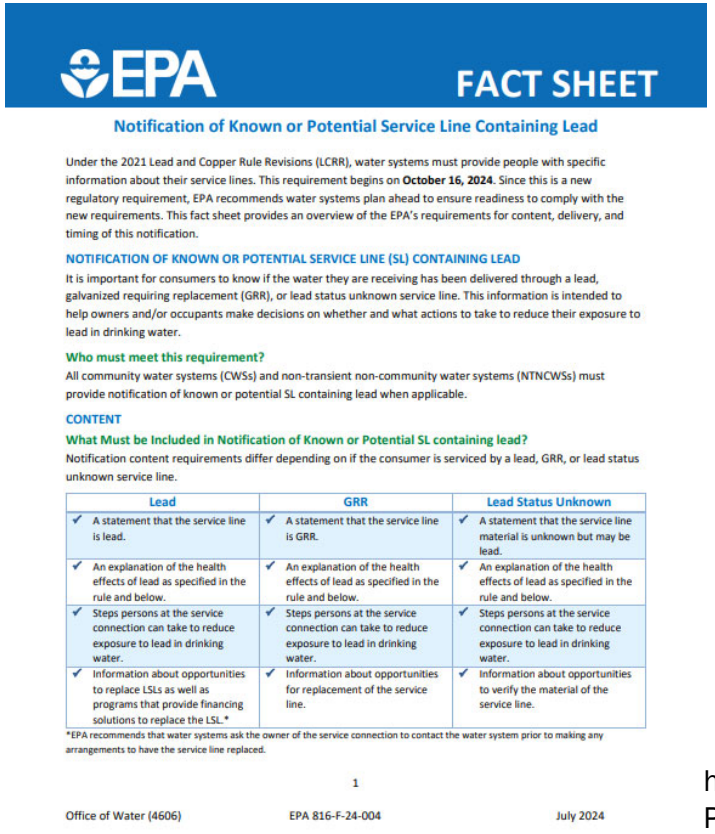
Health Effects Language: *Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.*

How will DNR Review CN Requirements?

❑ Did the notice(s) include the information below for each applicable notice type?

Lead	GRR	Lead Status Unknown
✓ A statement that the service line is lead.	✓ A statement that the service line is GRR.	✓ A statement that the service line material is unknown but may be lead.
✓ An explanation of the health effects of lead as specified in the rule and below.	✓ An explanation of the health effects of lead as specified in the rule and below.	✓ An explanation of the health effects of lead as specified in the rule and below.
✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.	✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.	✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.
✓ Information about opportunities to replace LSLs as well as programs that provide financing solutions to replace the LSL.*	✓ Information about opportunities for replacement of the service line.	✓ Information about opportunities to verify the material of the service line.

EPA Fact Sheet for Notifying Consumers of Known or Potential LSLs



EPA FACT SHEET

Notification of Known or Potential Service Line Containing Lead

Under the 2021 Lead and Copper Rule Revisions (LCRR), water systems must provide people with specific information about their service lines. This requirement begins on **October 16, 2024**. Since this is a new regulatory requirement, EPA recommends water systems plan ahead to ensure readiness to comply with the new requirements. This fact sheet provides an overview of the EPA's requirements for content, delivery, and timing of this notification.

NOTIFICATION OF KNOWN OR POTENTIAL SERVICE LINE (SL) CONTAINING LEAD

It is important for consumers to know if the water they are receiving has been delivered through a lead, galvanized requiring replacement (GRR), or lead status unknown service line. This information is intended to help owners and/or occupants make decisions on whether and what actions to take to reduce their exposure to lead in drinking water.

Who must meet this requirement?

All community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) must provide notification of known or potential SL containing lead when applicable.

CONTENT

What Must be Included in Notification of Known or Potential SL containing lead?

Notification content requirements differ depending on if the consumer is serviced by a lead, GRR, or lead status unknown service line.

Lead	GRR	Lead Status Unknown
✓ A statement that the service line is lead.	✓ A statement that the service line is GRR.	✓ A statement that the service line material is unknown but may be lead.
✓ An explanation of the health effects of lead as specified in the rule and below.	✓ An explanation of the health effects of lead as specified in the rule and below.	✓ An explanation of the health effects of lead as specified in the rule and below.
✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.	✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.	✓ Steps persons at the service connection can take to reduce exposure to lead in drinking water.
✓ Information about opportunities to replace LSLs as well as programs that provide financing solutions to replace the LSL.*	✓ Information about opportunities for replacement of the service line.	✓ Information about opportunities to verify the material of the service line.

*EPA recommends that water systems ask the owner of the service connection to contact the water system prior to making any arrangements to have the service line replaced.

1

Office of Water (4606) EPA 816-F-24-004 July 2024

More information about LCRR Consumer Notification Requirements can be found here: [Notification of Known or Potential Service Line Containing Lead Fact Sheet]

https://dnr.wisconsin.gov/sites/default/files/topic/DrinkingWater/LCR/FactSheetNotificationOfKnownOrPotentialLSLS.pdf

Questions?

Internal Updates

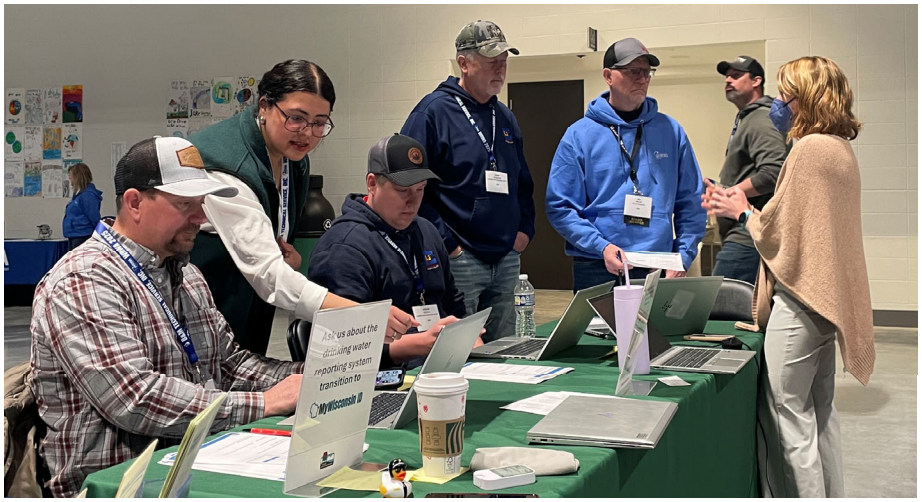
Rebecca Wallace Award

Shaili Pfeiffer received the 2024 Rebecca Wallace Award at the April Natural Resources Board Meeting

Natural Resources Magazine: Well Drilling Summer Feature

MyWisconsin ID Update

- May 12th – Public Water first to switch
- continued extensive outreach
- summer switches:
  - Pump Installers
  - Well Drillers
  - Laboratory Staff

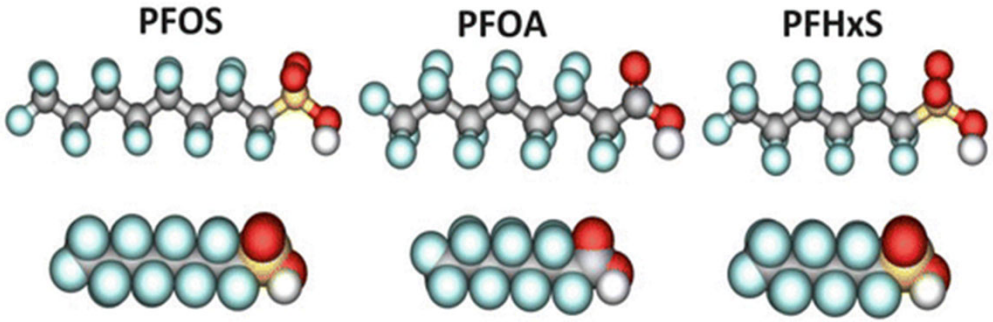


ARPA Well Compensation Update

- An additional $5,000,000 allocated from ARPA (Cycle B)
- Contaminated wells and well filling and sealing
- Applications continually through **August 31, 2025**
  - Or until funds are exhausted
- 76 applications totaling $1.6 mil waiting for hydro review
- 32 awards issued totaling $640K
- 7 in intake

PFAS Funding for Public Water Systems

- Last chance at BIL EC money coming up
- October 31, 2025 – ITA
- June 30, 2025 – Full application due



Environmental Loans | Clean Water Fund Program and Safe Drinking Water Loan Program | Wisconsin DNR

Consumer Confidence Reports

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

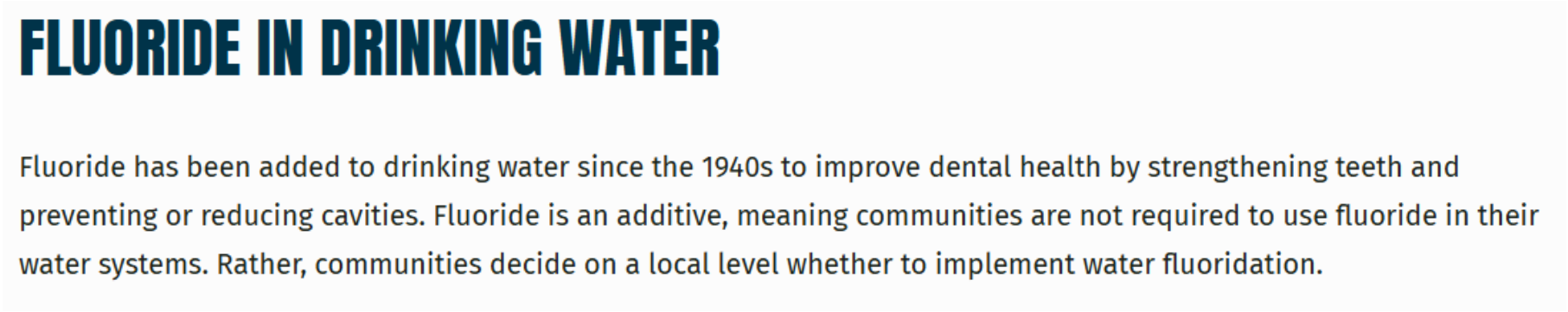
CWS required to deliver CCR biannually, develop translation/communication plan

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

New Web Page



FLUORIDE IN DRINKING WATER

Fluoride has been added to drinking water since the 1940s to improve dental health by strengthening teeth and preventing or reducing cavities. Fluoride is an additive, meaning communities are not required to use fluoride in their water systems. Rather, communities decide on a local level whether to implement water fluoridation.

Fluoride in Drinking Water | | Wisconsin DNR

Administrative Rules Update

Drinking Water and Groundwater Administrative Rules Update

NR 812 and NR 146 Edits

- Finalized the economic impact analysis
- Rule language comment periods closed on 4/22/25
- Rule changes expected to have minimal economic impact
- Rules are expected to be finalized later this year

NR 146/NR 812 Rule Revision Advisory Committee | | Wisconsin DNR

Drinking Water and Groundwater Administrative Rules Update

NR 809: PFAS Standards & Technical Edits

- Oct. meeting, Natural Resource Board (NRB) approved Scope to proceed with Federal PFAS MCL rule development in NR 809
- Oct. meeting, NRB approved Scope to proceed with technical edits in NR 809
- Drafting rule language and Economic Impact Analysis

Federal PFAS Maximum Contaminant Levels | NR 809 SAFE DRINKING WATER STANDARDS UPDATE | Wisconsin DNR

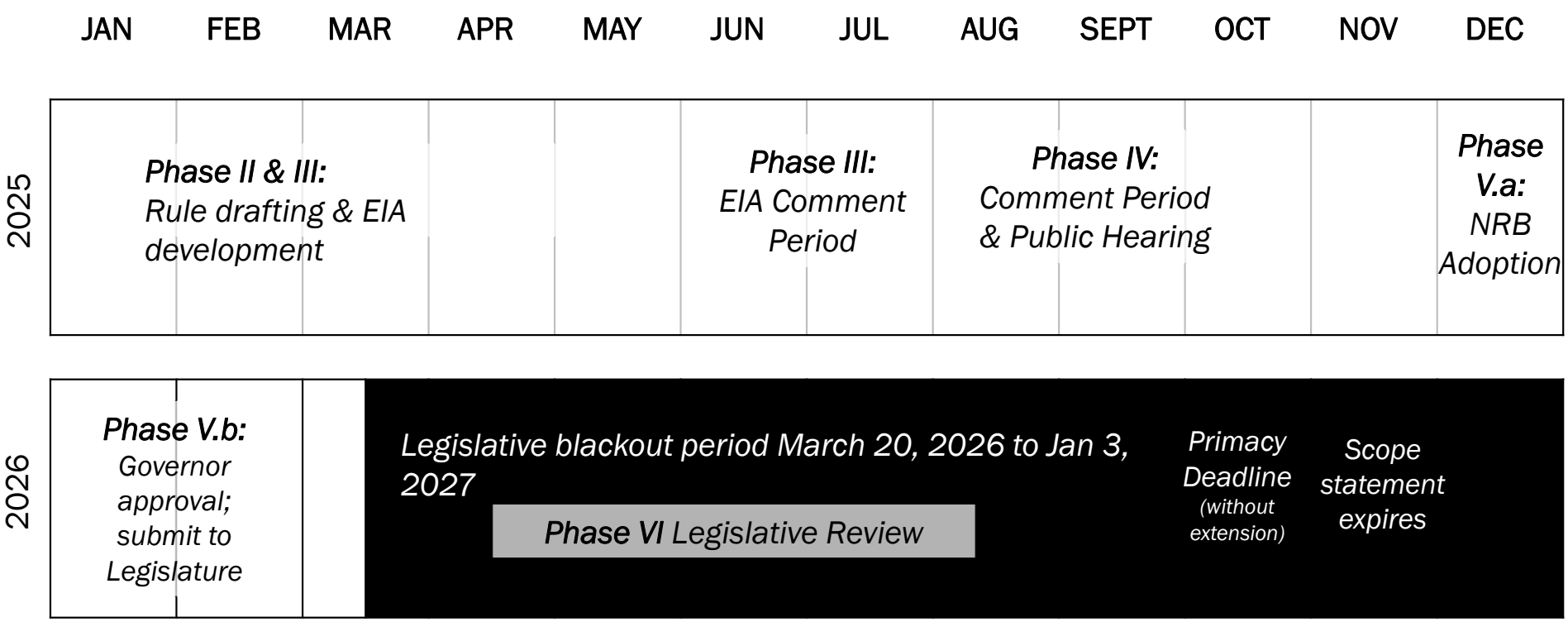
Drinking Water and Groundwater Administrative Rules Update

- NR 809: LCRR/LCRI - Lead and Copper Rule

- Approved scope statement
- Technical advisory group met on January 30th, March 14th, and April 28th
- Drafting rule language based on the federal rule
- Drafting Economic Impact Analysis

Lead and Copper | NR 809 safe drinking water standards update | Wisconsin DNR

General Timelines for LCRR/LCRI and PFAS Drinking Water Rules



Drinking Water and Groundwater Administrative Rules Update

NR 140 – Groundwater Standards

- Approved scope statement to incorporate new DHS recommendations for 6 PFAS groundwater standards

- Drafting rule language and Economic Impact Analysis

NR 140 Groundwater Quality Standards Update | | Wisconsin DNR

CONNECT WITH US

Next Meeting | Aug. 7, 2025

The meeting recording will be posted on the Drinking Water and Groundwater Study Group webpage.

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"WILD WISCONSIN: OFF THE RECORD"