Wisconsin
Department of Natural Resources

Drinking Water and Groundwater Study Group Meeting

Madison

July 18, 2018

WISCONSIN
DEPT. OF NATURAL RESOURCES

Nitrate Sunsetting Continuing Operation

Adam DeWeese – Public Water Supply Section Chief
Beth Finzer – Public Water Supply Section
Sarah Yang – Department of Health Services

Wisconsin
Department of Natural Resources

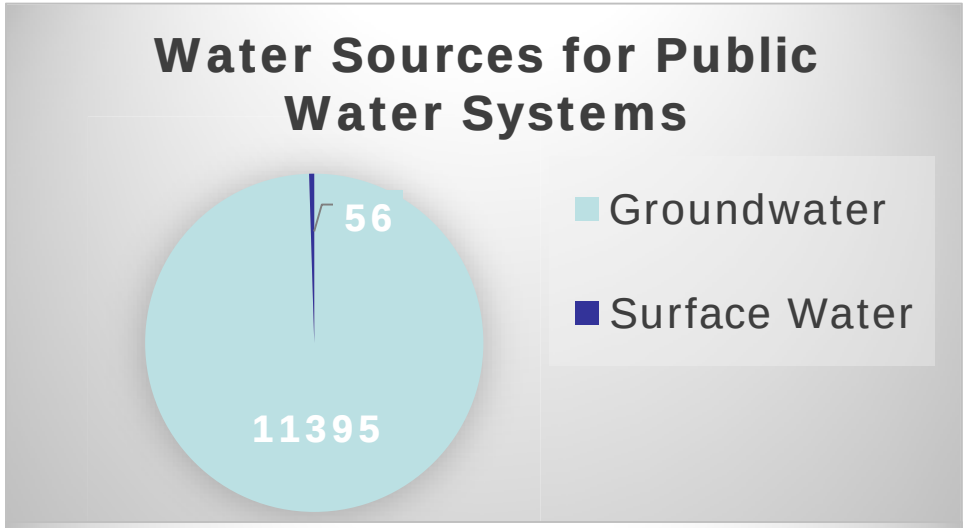
Nitrate in Wisconsin Drinking Water

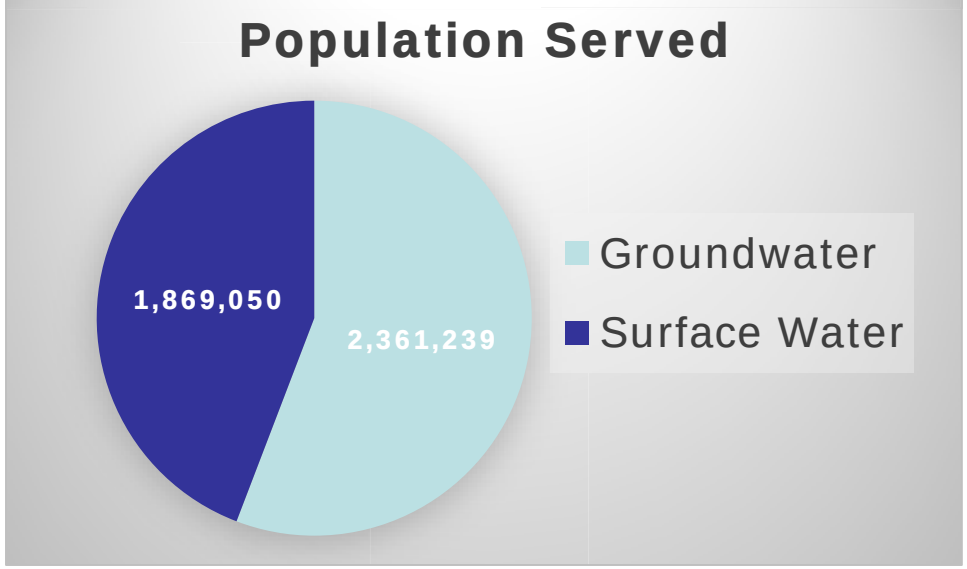
Nitrate Drinking Water Standard

- Nitrate is one of two acute contaminants
- Maximum contaminant level is 10 milligrams per liter
- All PWS monitor for nitrate at least annually

Source Water

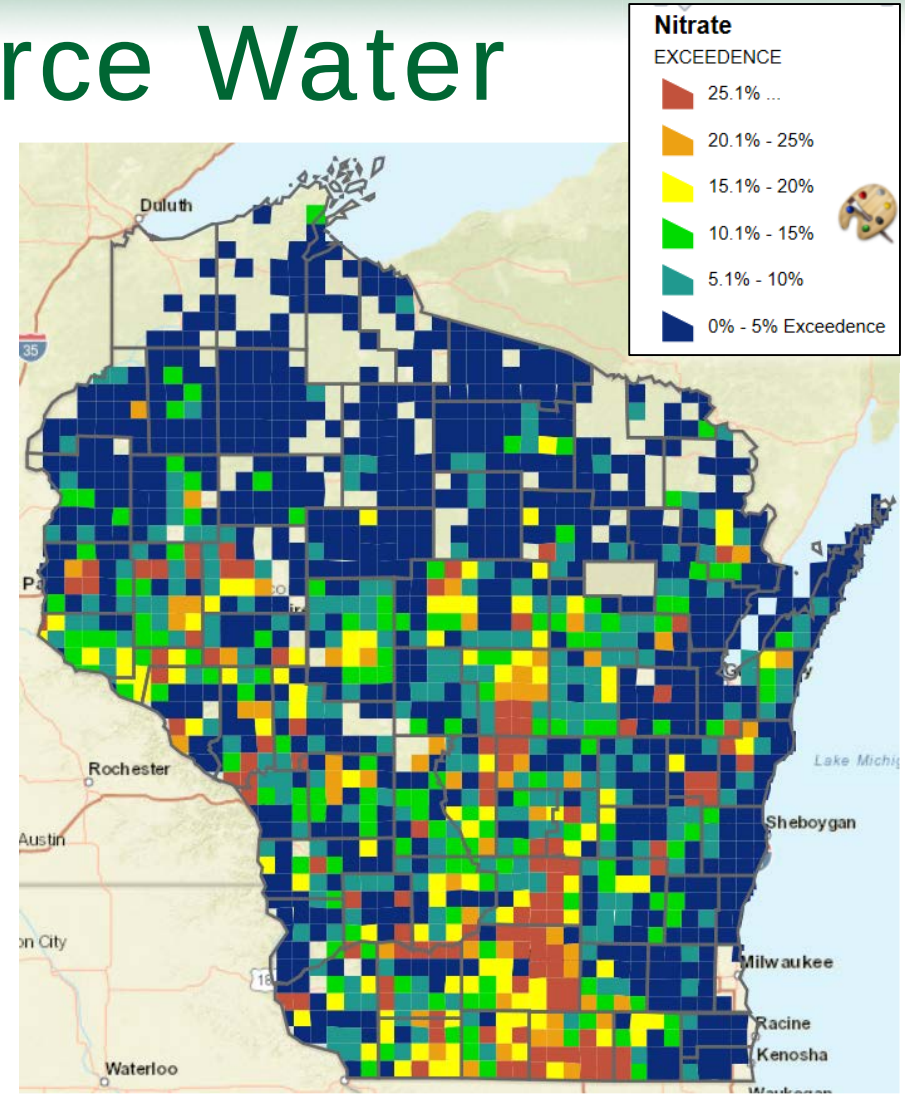
- 11,395 of the 11,451 PWS use groundwater
- More people drink groundwater





Nitrate in Source Water

- Nitrate is most common groundwater contaminant



Private drinking water nitrate exceedances by townships. Source: UW Stevens Point Center for Watershed Science and Education

Health Concerns

- Nitrate can cause methemoglobinemia
  - Also known “blue baby syndrome”
  - Main concern
    - Infants (< 6 months)
    - Pregnant women
- Also concern that nitrate may cause:
  - Birth defects
  - Thyroid problems
  - Certain types of cancer

Problem

- Approximately 300 small PWS exceed the nitrate standard
- DNR is working to address health concerns by developing a plan to return systems to compliance
- Plan development is in early stage. Any proposed process will be vetted with stakeholders – i.e. PWS owners and other groups

Speakers

- Dr. Sarah Yang – DHS
- Beth Finzer - WDNR

Sarah Yang – Department of Health Services

Sunsetting Continuing Operation For Transient Non-Community PWS

Terms to Know

Transient Non-Community Systems (TNs)

- Serves 25 people at least 60 days a year, not the same 25 people

Examples:

Campground

Church

Motel/Resort

Tavern

Terms to Know

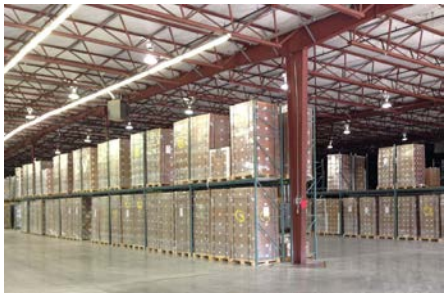
<u>Non-Transient Non-Community Systems (NNs)</u>

- Serves at least 25 of the same persons over 6 months per year

Examples:

School

Daycares



Small Businesses

Terms to Know

Continuing Operation

- Provision of NR 809 and the Safe Drinking Water Act
- Applies to Non-Community Systems
- “Continue to Operate” with nitrate concentrations above 10 milligrams/liter (mg/L) but not to exceed 20 mg/L
- At department’s “discretion”

Continuing Operation

NR 809.11(3)

OPERATION WITH NITRATES NOT EXCEEDING 20 MG/L. At the **discretion of the department**, nitrate as nitrogen levels not to exceed 20 mg/l may be allowed in a non-community water system if the water supplier demonstrates all of the following to the satisfaction of the department:

- **(a) The water will not be available to children under 6 months of age or any female who is or may become pregnant.**
- (b) The water supplier meets the public notification requirements under s. NR 809.958, including continuous posting of the fact that nitrate as nitrogen levels exceed 10 mg/l and the potential health effects of exposure.
- (c) Local and state public health authorities will be notified annually of nitrate as nitrogen levels that exceed 10 mg/l.
- (d) A supply of bacteriologically safe drinking water, containing less than 10 mg/l nitrate as nitrogen, is provided for infants less than 6 months of age and any female who is or may become pregnant.
- (e) **No adverse health effects will result**.

Department's Discretion

- In 2010, DHS recommends all consumers avoid long-term consumption of water with high nitrate
- In 2011, NN systems no longer allowed option of Continuing to Operate above nitrate maximum contaminant level (MCL)
- NN systems given 3 years to return to compliance

Department's Discretion

- In 2013, DHS recommends women who are or may become pregnant not drink water with Nitrate above MCL; all consumers avoid long-term exposure

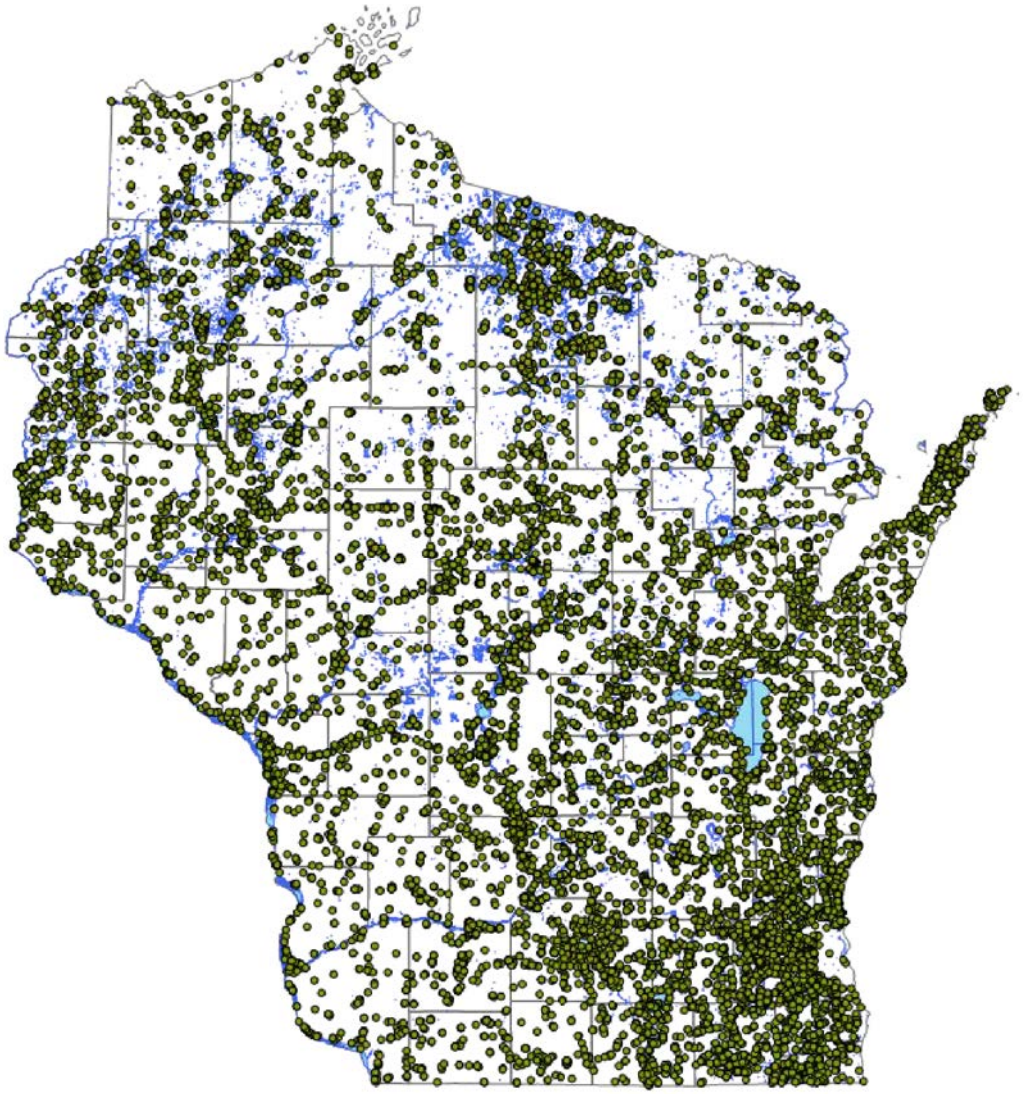
- No adverse health outcomes is requirement

- TNs unable to meet NR 809.11(3) requirements

Continuing Operation

Good News

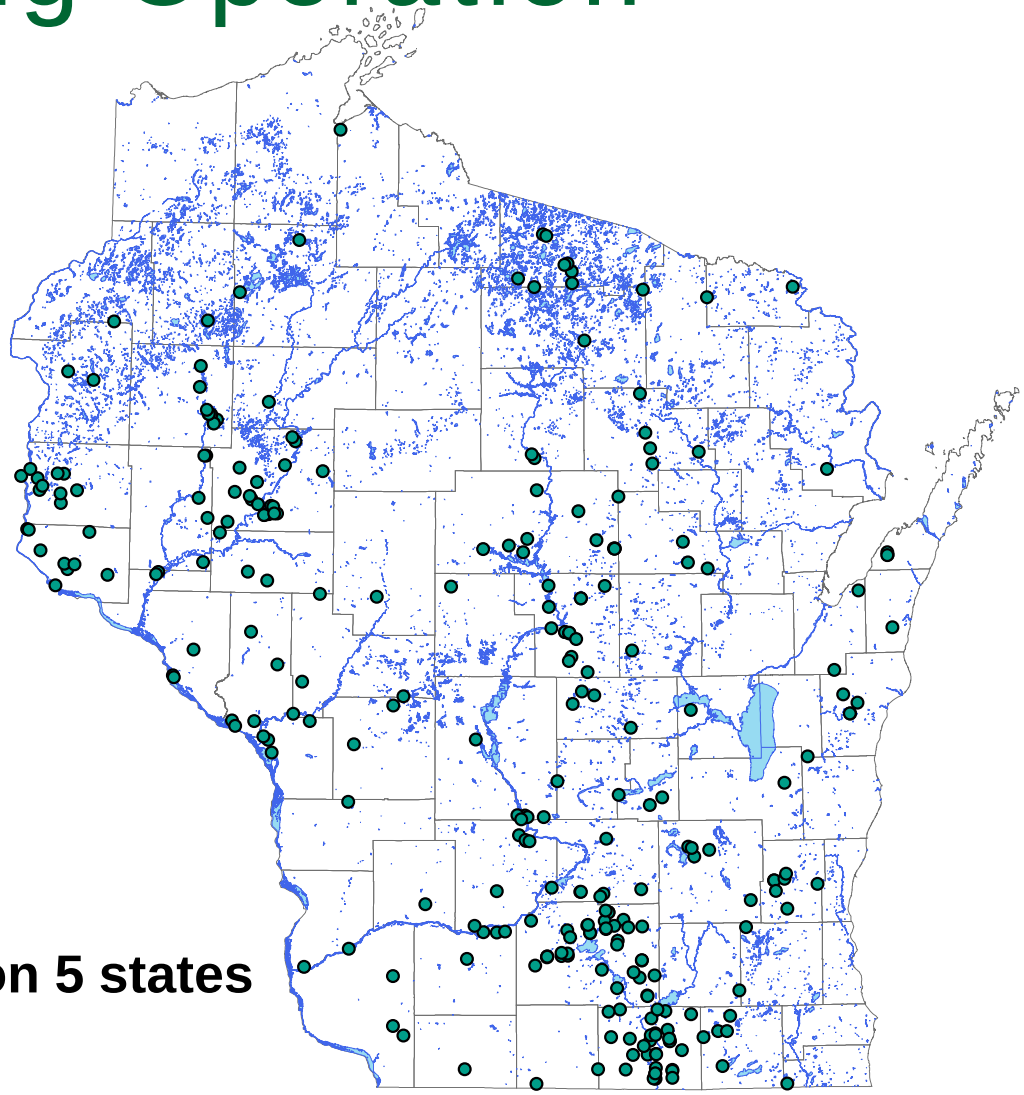
≈ 11,151 PWS meet nitrate standard



Continuing Operation

Bad News

284 TNs exceed the standard of 10 mg/L



Highest number among EPA region 5 states

Other Region 5 States

Ohio	Does not utilize Continuing Operation. Systems required to return to compliance
Indiana	Continuing Operation allowed in restricted situations
Michigan	Provision available to certain businesses. Systems must sign a consent agreement.
Minnesota	Continuing Operation is not an option for restaurants, resorts, campgrounds, and other licensed facilities.

EPA Expectations, Comments

- **Comments to DNR's Drinking Water Program**
  - What steps are taken to ensure systems meet conditions of the provision

DNR is only able to verify posting of public notice during site visits. It's not possible to verify other requirements

  - How long do systems continue to operate over the MCL

DNR does not have a time limit for these systems

- "Scrutinize closely WI DNR discretion to use the 20 mg/L alternative nitrate MCL ensuring public health protection at TNs"

Wisconsin Considerations

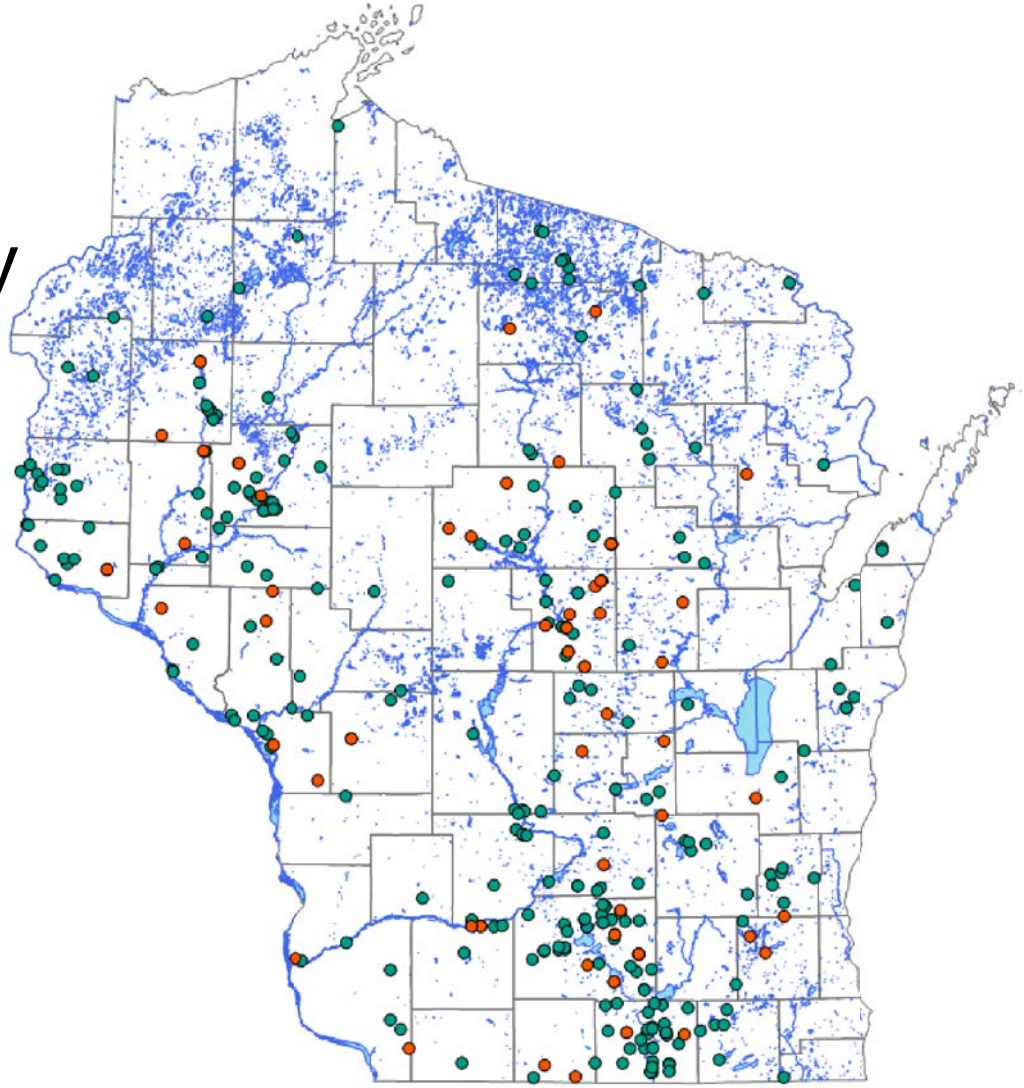
- Is public health being protected?
- What are the impacts to TN owners?
- Is there a process that gives system owners time to plan and provides some flexibility?

Proposed Timeline

- ✓ January 2018- First DNR Workgroup meeting
- ✓ April 2018 – Second Workgroup meeting
- ✓ July 2018 – DG Study Group
- Fall 2018 - Stakeholder Input
- Winter 2018 – Finalize Plan
- 2019 – Possible implementation

Proposed Plan for Sunsetting

- TNs on Continuing Operation given 3 years to voluntarily comply
- TNs with a new nitrate MCL also given 3 years; required to sign a consent order

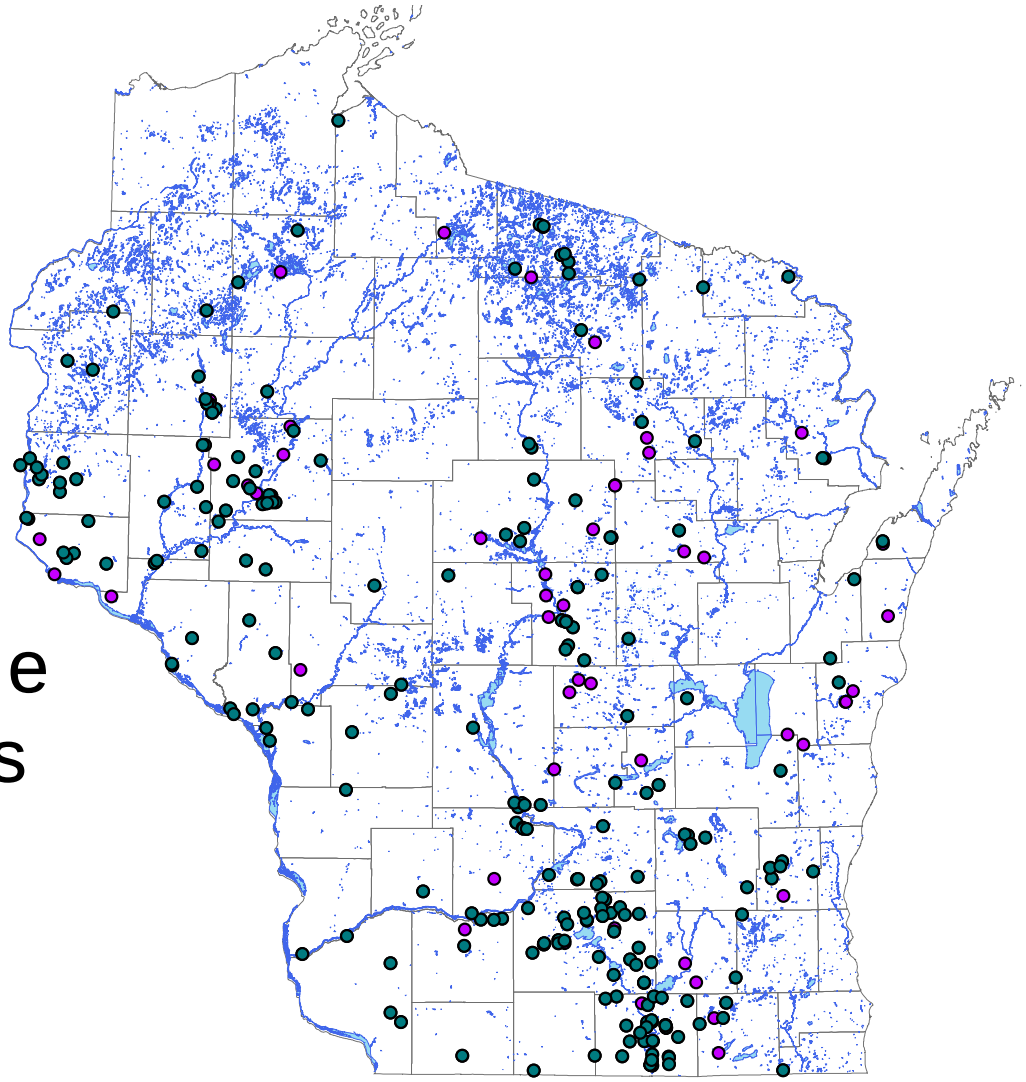


TNs on Continuing Operations

TNs with a new MCL

Proposed Plan for Sunsetting

- End of 3 years, remaining TNs prioritized for consent orders
- Department will create a timeline for dealing with the remaining systems



TNs above MCL

TNs returned to compliance

Plan Development for Sunsetting

- Prioritizing Systems for Sunsetting
  - Issues to consider:
    - Population served
    - Length of time in violation
    - Nitrate concentration
- Develop a timeline (5 to 10 years possible)
  - Issues to consider:
    - Department staff time
    - Owner resources
- Goals, timeline evaluated annually

Options for TN owners

1

- New well or connect to an alternate safe source

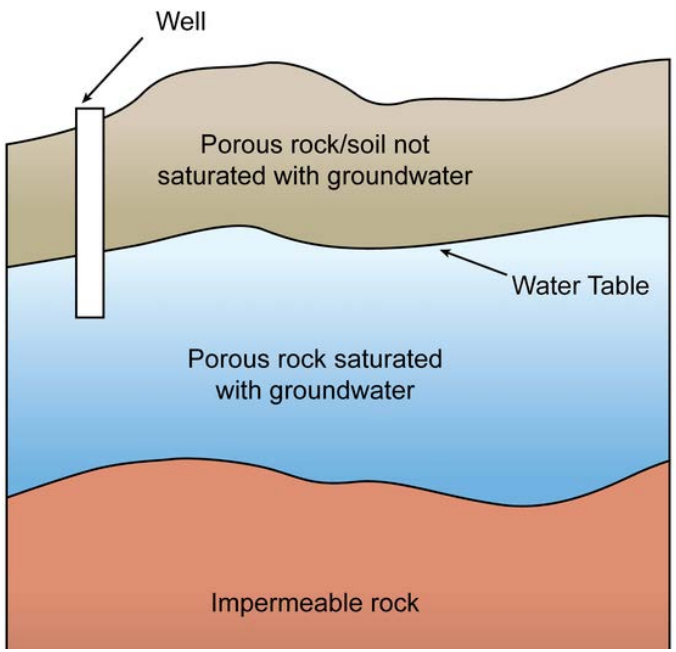
2

- Treatment considered if unable to drill a new well or connect to an alternate safe source

Options for TN owners

- Owners must work with Department to determine corrective action

- Treatment must be DSPS and Department approved



A well or treatment represent a cost to owner. Maintenance costs for treatment could be more than cost of a new well.

Public Input Opportunities; Next Steps

- Meet with external stakeholders
- Collect comments, suggestions
- Modify and finalize plan
- Decide to implement and notify TN owners

Comments

Break

Lead Drinking Water Testing in Rock County Schools

Rick Wietersen – Rock County Public Health Department

NR 140

Sarah Yang – Wisconsin Department of Health Services

Internal Updates

Kyle Burton – Field Operations Director

Addressing Vacancies

- New Hires 2018
  - Holly Harpster – Field Public Water Supply Specialist
  - Elaine Johnson – Field Public Water Supply Specialist
  - Adam Scheunemann– Field Private Water Supply Specialist
  - Sara Fry – Field Private Water Supply Specialist
  - Kathy Mooney – IS Business Automation Specialist
  - Chris Hartwig - IS Business Automation Specialist
  - Nicholas Bertolas – Capacity Development/Op Cert Specialist
  - RJ Pire – Water Use Intake Specialist
- 5 Remaining Vacancies

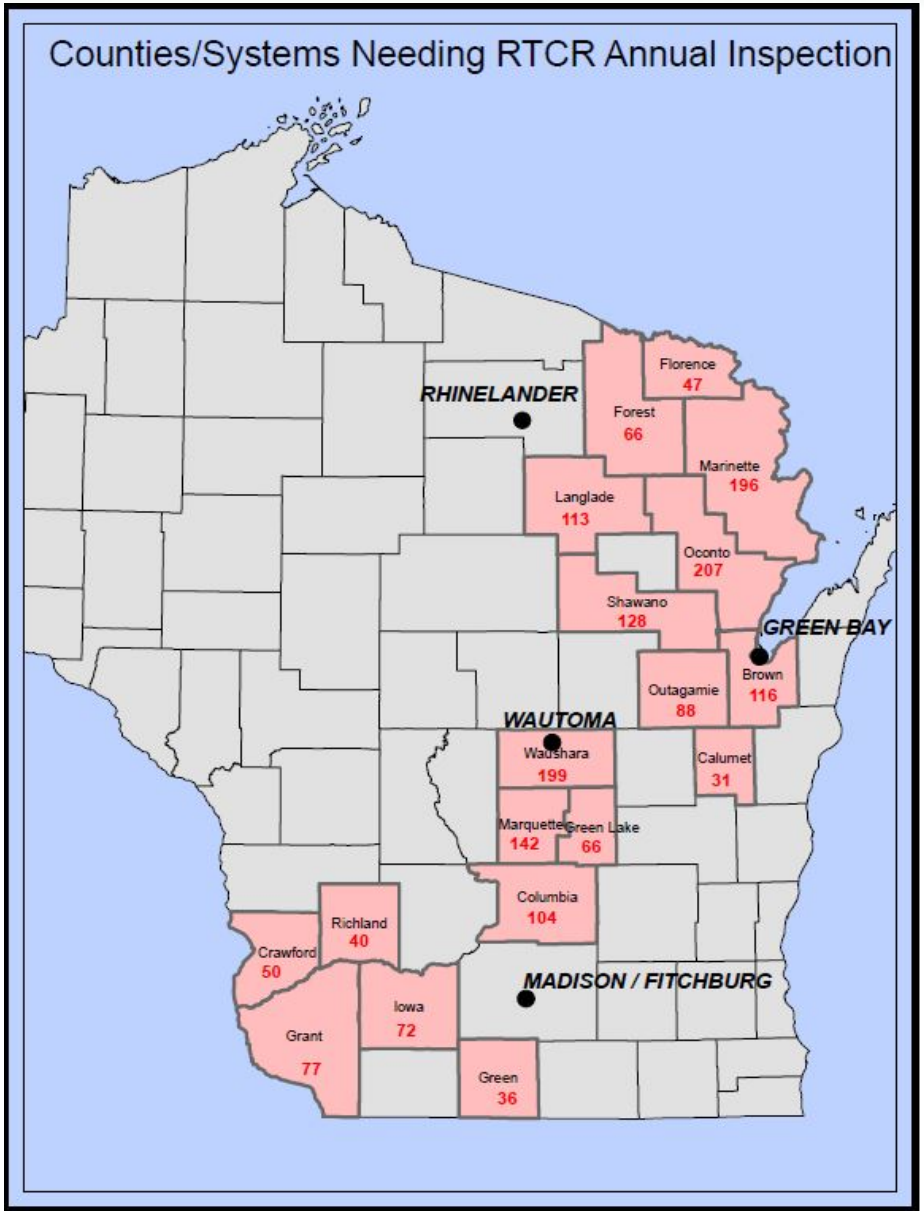
Annual Site Visits

- Revised Total Coliform Rule (RTCR) requires annual site visits for systems to remain on once annual bacteria monitoring.
- In Wisconsin Transient Non-Community (TN) systems have historically and continue to monitor annually.

Annual Site Visits

- WI has the most TN systems in the US.
  - ~ 10,000 (!)

- How we manage it all…
  - Partnering with counties
  - Seasonal Interns


Counties/Systems Needing RTCR Annual Inspection
RHINELANDER
Florence
47
Forest
66
Marinette
196
Langlade
113
Oconto
207
Shawano
128
GREEN BAY
Brown
116
Outagamie
88
WAUTOMA
Waushara
199
Calumet
31
Marquette
142
Green Lake
66
Columbia
104
Richland
40
Crawford
50
MADISON / FITCHBURG
Iowa
72
Grant
77
Green
36

PB/CU Rule Water Quality Sampling Follow up

- “Big 12” Meetings
  - Working with systems to identify strategies to demonstrate optimization of corrosion control treatment.

- Monitoring Site Plan Form Finalized
  - Tool for systems to use when proposing new monitoring sites.

Seasonal System Start-Up

Bureau of Drinking Water and Groundwater

WISCONSIN DEPT. OF NATURAL RESOURCES

Response Required

Within 10 days of opening to the public

Seasonal Public Drinking Water System

Start-Up Procedure

IMPORTANT:

Failure to complete this procedure before serving water to the public will result in monthly water sampling requirements for bacteria.

Why am I getting this?

Owners/operators of seasonal public water systems must perform a yearly "Seasonal Start-Up Procedure" to be in compliance with the Federal Safe Drinking Water Act. If you are receiving this booklet, your facility has been identified as a **seasonal public water system**. If you believe this information is incorrect, please contact your DNR Water Supply Specialist.

A "**seasonal public water system**" starts up and shuts down at the beginning and end of each operating season, and depressurizes at least part of the water system at some point during the year.

Examples include: Ski chalets, summer resorts, camp grounds, and restaurants that are only open during part of the year.

What do I have to do?

1. Complete all the steps described in this booklet **before** serving water to the public.
2. Return completed checklist within 10 days of opening to the public.

Failure to complete this start-up procedure before serving water to the public will result in a violation, and increase your water sampling requirements for bacteria to monthly. Failure to report completion of the procedure within 10 days of opening to the public will result in a violation.

Seasonal System Start-Up

- WI 2018 completed 2,194 seasonal start (SS)up certifications
- Only 22 violations statewide
  - 1%
- Nationally, failing to complete a SS comprises the highest % of RTCR violations (45%)
- 9% of all TN systems nationally incur a violation regarding SS

Member roundtable

Hot Topics

Wrap–up and adjourn

Next Meeting Date:

October 16, 2018

GEF 2, State Natural Resources Building, Madison, 9:30a.m. – 12:30 p.m.

Meeting minutes will be posted on the Drinking Water & Groundwater Study Group website