Sunsetting Continuing Operation For Transient Non-Community PWS
Drinking Water & Groundwater Program

The Drinking Water & Groundwater program works to protect the quality and quantity of the state’s water resources and ensure the safety of drinking water

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Nitrate Drinking Water Standard

• Nitrate is one of two acute contaminates

• 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
- Roughly 800,000 served by private wells
- 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

• DHS associated at least three cases of suspected blue-baby syndrome in Wisconsin with nitrate contaminated drinking water

• In children, growing evidence of a correlation between nitrate and diabetes

• Nitrate exposure linked to birth defects

Blue Babies and Nitrate-Contaminated Well Water

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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
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

Non-Transient Non-Community Systems (NNs)

- 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”
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

$\approx 11,146$ PWS meet nitrate standard
Continuing Operation

Bad News

284 TNs exceed the standard of 10 ppm

Highest number among EPA region 5 states
Ohio: Does not utilize Continuing Operation. Systems required to return to compliance.

Indiana: Continuing Operation allowed in restricted situations.


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 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

![Map of Wisconsin showing locations of TNs on Continuing Operations and TNs with a new MCL.](image-url)
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 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
County Health Departments
- Conduct sampling
- Sanitary surveys
>6,500 TNs
Comments
Communication Needs

- Fact Sheets
- Letters
- Updated corrective action worksheet
Comments

What are your concerns?
What resources are needed?
Officials warn of high nitrate levels in drinking wells around Armenia

Karen Madden, Wisconsin Rapids Daily Tribune  Published 10:47 a.m. CT June 18, 2016 | Updated 10:50 a.m. CT June 18, 2016

ARMENIA - High nitrate levels in private wells in Juneau and Wood counties have caused health departments to issue a warning.

The high nitrate levels have been found in private drinking water wells in the Armenia area, according to a news release from the Wood County Health Department. High nitrate levels are a health risk particularly for babies less than 6 months old and women who are pregnant.

The Wood and Juneau County health departments are advising women who may be pregnant to stop using the high-nitrate water for drinking or preparing foods.

La Crosse County task force urges action on nitrate pollution in groundwater

Randy Erickson La Crosse Tribune  Oct 15, 2018  8