Fall/Winter 2008

The Network News

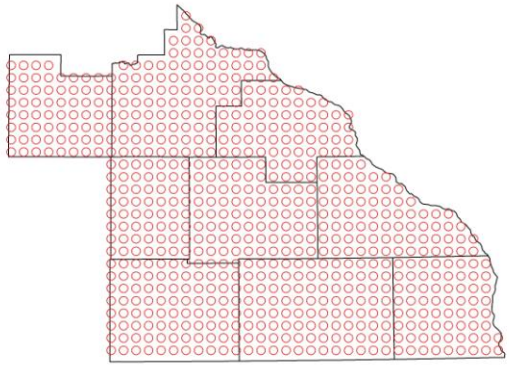
A Newsletter for Nitrate Monitoring Network Volunteers

SE MN Water Resources Board ▪ Winona State University, Winona, MN 55987 ▪ 507-457-5223
http://www.winona.edu/geology/WRB/WRB

Volunteers are the Bedrock of the Nitrate Study

Thank you to all our volunteers! Your continued participation in the Volunteer Nitrate Monitoring Network is vital to obtaining valid and long-term nitrate data.

If you are a volunteer for the Nitrate Monitoring Study, your well was one of 675 randomly selected wells in a 9-county region of southeast Minnesota.



NINE-COUNTY STUDY AREA WITH WELL LOCATIONS

The study results will give us the region's first overall picture of nitrate levels in drinking water. Two nitrate rounds are now complete. Results vary by county (see chart). The chart shows the percentage of wells in each county in which nitrate concentration exceeded the state Health Risk Limit of 10 parts per million (ppm) in the February 2008 sampling round. Water above 10 ppm nitrate is unsafe for infants.

County	Percent of total wells that tested greater than 10 parts per million (ppm) nitrates
Dodge	6%
Fillmore	25%
Goodhue	12%
Houston	9%
Mower	5%
Olmsted	10%
Rice	5%
Wabasha	33%
Winona	22%
AVERAGE	**14%**

Two more sampling rounds are scheduled for 2009 (**February 25** and August **25)** so please be alert to the arrival of your water sample bottle in the mail just before those dates.

The results from this study will give us the first picture of the overall quality of the drinking water in the region as it relates to nitrates.

WHY TEST FOR NITRATES?

County Water Resource Managers Weigh In

In a 2004 survey, county water professionals identified nitrate in ground water as the contaminant of greatest concern. Asked "Why nitrate?" they listed many reasons for their concern.

HEALTH EFFECTS

Ingested at high levels, nitrate may cause acute health effects in infants. Chronic health effects may also occur.

NITRATE IS AN INDICATOR

Nitrate is an indicator compound. When nitrate is present, other contaminants are commonly present too, especially in older, poorly constructed wells located in sensitive areas. **One half to two-thirds of the wells in southeastern Minnesota were constructed prior to the 1974 well code.**

WIDESPREAD OCCURENCE

Nitrate is the most common ground water contaminant in our region. Nitrate renders our shallowest, most accessible aquifers unusable. Nitrate in ground water often means drilling to deeper aquifers, raising drilling costs. Ground water from deeper aquifers sometimes has unpleasant tastes or odors, leading to increased treatment costs. Nitrate sometimes occurs in deeper aquifers too.

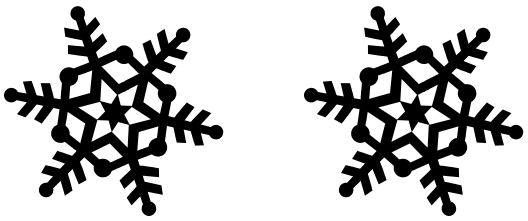
GROUND WATER AND SURFACE WATER

Ground water and surface water are usually connected, especially in a karst landscape. This fact can cause elevated nitrate in streams and adverse effects on aquatic populations. And high nitrate in surface waters washes down the Mississippi River and contributes to the "Dead Zone" in the Gulf of Mexico.

VOLUNTEER RESPONSE WAS EXCELLENT

Your continued participation in the Volunteer Nitrate Monitoring Network is vital to obtaining valid and long-term nitrate data.

In our first round of testing in February 2008, volunteer response was excellent in all participating counties. Ninety-six percent of volunteers returned ground water samples for nitrate testing.



THE IMPORTANCE OF FREEZING SAMPLES BEFORE MAILING

Sampling instructions require you to freeze the sample before mailing. This is necessary so the sample stays cool as long as possible during its journey from your mailbox to your county offices. If the sample warms to above 39 degrees Fahrenheit, the nitrate level may be affected. If nitrate in your well is near 10 ppm and there is an infant or elderly person in the home, we strongly recommend you ask a certified water testing laboratory to test your water.

Your continued participation in the Volunteer Nitrate Monitoring Network is vital to obtaining valid and long-term nitrate data.