

The Network News

A Newsletter for SE MN Domestic Well Network Volunteers

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<http://www.semnwrw.winonastatenews.com>

Changes Underway

The Volunteer Nitrate Monitoring Network has focused on measuring nitrate in private drinking water wells, but the long term goals include sustaining the network as infrastructure for future, expanded groundwater sampling projects. Sustaining and capturing the full potential of the network can be obtained through the measurements of additional analytes, such as major ions, trace metals, radionuclides, and pollutants. Data generated would be useful to agricultural chemical management, pollutant studies and drinking water quality projects.

Starting this August we will be utilizing the network for expanded studies of groundwater quality. This August, homeowner volunteers will be given the opportunity to test for additional parameters and targeted pollutants in their well water samples; namely chloride, bromide, sulfate, nitrate, nitrite and ammonia.

Based on the results of this August's monitoring, a subset of 100 – 200 wells

will be selected for monitoring of additional parameters in the spring of 2014.

With this August monitoring round, homeowner volunteers will be given the opportunity to test for additional parameters and targeted pollutants in their well water samples.

All wells in the network will continue to be monitored for nitrates as usual, but on a reduced schedule of once every 3-5 years. This will allow us to continue to obtain long-term trend data for nitrate occurrence in private drinking water supply wells and more fully utilize the network's potential.

Statistical Analysis

Tisha Hooks, Professor of Statistics at Winona State University, along with student Corey Smith, analyzed our first five years of data; from 2008 through 2012. The analysis revealed that geologic protection and adhering to the well code offer protection that leads to significantly lower chances of encountering elevated nitrate levels. The analysis is available on the SEMWRB web site:

www.semnwrw.winonastatenews.com

To reflect changes to the network, the project name has been changed from the Volunteer Nitrate Monitoring Network to the Southeast Minnesota Domestic Well Network

Dodge County Targeted Monitoring

Dodge County was one of four counties in the region to conduct targeted monitoring within the Volunteer Nitrate Monitoring Network. In order to better understand the quality of domestic well water in different settings, Dean Schrandt, Dodge County Water Program Manager, conducted targeted monitoring of wells in the following settings:

- On the Decorah Edge (a geologic layer of shale that protects and filters water as it infiltrates)
- Near karst features, and
- In Close proximity to known high-Nitrate Galena Wells.

Below is a graph of his results depicting the differences between wells in these geologic settings.

