



Driftless Prairies: Native Ecosystems

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Lafayette County Well Testing Results

This year the Lafayette County Commissioners voted to subsidize well water testing for the county. They decided to begin with 2 townships at a time. The first of these were Wiota and Seymour. Testing was conducted by UW-Stevens Point Extension and in late August, Kevin Masarik with the Center for Watershed Science and Education presented the findings to a group of interested citizens.

The following is a synopsis of his presentation.

Groundwater is a local resource that generally comes from within a half to 1 mile of our wells. This means our activities affect our neighbors' and visa versa.

While well water testing is not required, it is a voluntary activity and something well owners should do on a 12-18 month cycle. Rotating on an 18 month basis gives us information on how our water is responding at different times of the year. Water is never 100% pure and many contaminants are undetectable without this test.

Kevin discussed each of the health concerns water tests assess. As he talked about these and their importance, he discussed the overall outcome of each for these two townships. While it is easy to discount because many of us live in other townships, what is imperative to remember is that everyone in Lafayette

County lives with the same fractured bedrock and relatively thin soil. Also, none of these health concerns is detectable without a test!

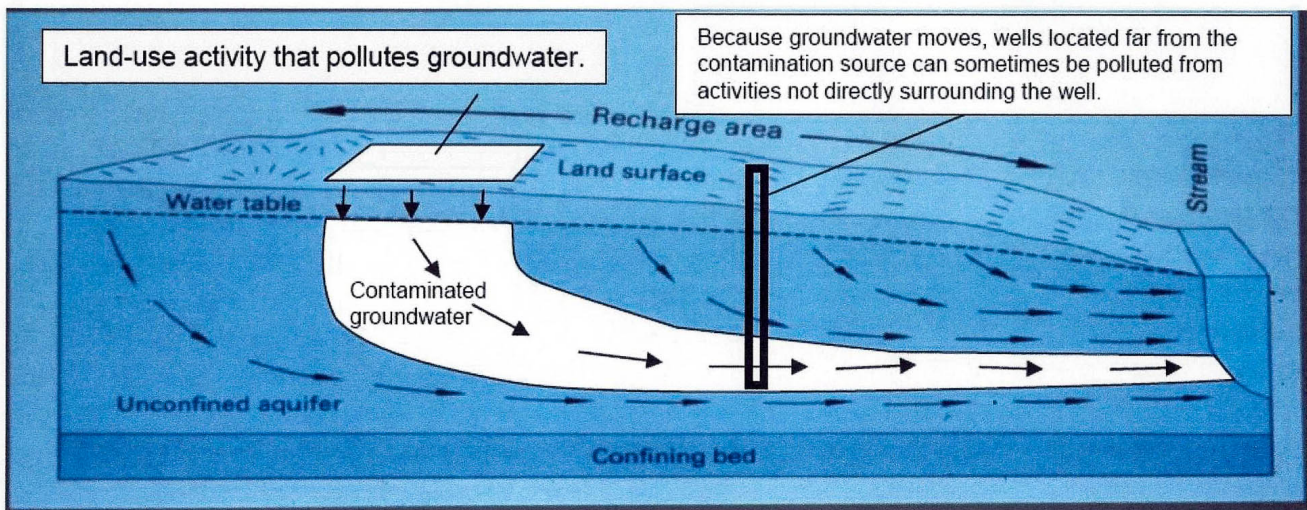
Of great importance is the test for coliform bacteria. A simple present or absent result is provided to the well owner. If coliform is present, "we generally encourage people to avoid using the water for drinking and cooking until sampling error is ruled out or steps are taken to ensure bacteria are no longer entering a well" Kevin explained. While the coliform is not the direct cause of disease, their presence could indicate a pathway for other pathogens to enter a well, including animal and human waste. Forty-six percent of the wells tested in Wiota and Seymour townships detected coliform bacteria; a few also had *E. coli*, a bacteria associated with human or animal waste and therefore a greater health risk. Kevin pointed out, "We expect to see 15% of all wells in Wisconsin with coliform and 1% with *E. coli*. It is rare to see almost half with coliform bacteria. While it's difficult to make conclusions from a small number of samples, the higher than typical bacteria positive results likely reflect the susceptibility of the area geology and reveals the soil may not always adequately filter the water."

Nitrate and nitrite levels are other important water quality indicators. These chemicals are found in fertilizers, both ag and lawn sources. Measured in milligrams per liter, anything 10 or above is unsafe to drink and is known to cause birth defects; numbers from 1-5mg/L reveal the human influence of fertilizer additions. "Across Wisconsin, we expect to see 10% with 10mg/L or above," Kevin noted "these two townships had 20% of the wells testing over 10mg/L, similar to other agricultural areas, but higher than the statewide average."

Arsenic was another test offered. The standard is for water to be below 10 parts per billion (ppb). Arsenic in Wisconsin's

groundwater is most often from naturally occurring sources found in soils or bedrock. Out of 26 samples, more than half detected some amount of arsenic, but only 1 was greater than the drinking water standard.

Another aspect testing analyzes is pesticide levels. Pesticides can be found in water as a result of their use on application on agricultural crops, spillage, and improper storage. The DACT screen looked for a breakdown component of the compound atrazine, a commonly used corn herbicide, and one that is commonly found in groundwater. Of the 28 households that performed the test, 43% of those had a small amount detected



Certainly, we wished all wells checked out safe, but that would not be realistic. In our fractured dolomite bedrock, our aquifers are generally more susceptible to contamination. This

vulnerability is increased each time it rains. Lafayette County residents must be cognizant that our groundwater – our drinking water – is very prone to contamination. “Being a good neighbor,” as Kevin emphasized, “means remembering that your actions affect everyone’s drinking water, including your own, within a mile diameter.” Acknowledging this, participating in conservation practices, and regular well testing will keep us healthy and safe. Testing is critical because none of these health concerns is detectable without a test!

Test Your Wells Every 18 Months

To get your well tested, contact UW-Stevens Point Water and Environmental Analysis Lab either by calling 715-346-3209 or emailing weal@uwsp.edu. They will send you a water testing kit with complete instructions. This will need to be returned via an overnight carrier.

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