State study finds new health hazards in drinking water

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PHOTO BY CHUCK WAGNER

A state study has found new contaminants in Kewaunee County wells. Above, an example of the yellow-brown well water that once came from the tap in the home of Chuck Wagner, who lives in rural Luxemburg in Kewaunee County. He said testing linked the contamination to cattle manure. It cost him $10,000 to drill a new well free of contaminants.

A state drinking water study has found signs of new contaminants that threaten human health in a Wisconsin county where a large number of wells were already tainted by pollutants linked to manure from large dairy farms.

Signs of salmonella and rotavirus were found in 11 of 30 private wells tested recently in Kewaunee County, the state Department of Health Services and Department of Natural Resources said.

No illnesses had been reported but property owners were told to stop using the water for drinking or bathing and have their wells chlorinated.

The tests were part of a DNR-funded study launched after years of protests against the growth of concentrated animal feeding operations that generate large quantities of manure.

Conservationists pointed to the findings as further evidence that state and federal regulators are moving too slowly.

Midwest Environmental Advocates, a Madison-based law firm, has challenged the DNR on its permitting of large dairy operations and was among six groups that petitioned the U.S. Environmental Protection Agency in 2014 for emergency action to ensure safe drinking water for Kewaunee County.

“The primary intent of the (petition) was to get impacted Kewaunee County residents immediate access to clean, safe water,” Tressie Kamp, an MEA attorney said Thursday. “Recent well tests show that the DNR’s work is not done and that their efforts must, if anything, ramp up to address this ongoing public health crisis.”

Last year, MEA, along with conservationists and retired DNR scientists, called on the EPA to strip the state of its authority to regulate water quality if it didn’t pass laws and provide enough staffing to keep pollutants out of lakes, streams and groundwater.

EPA and DNR representatives didn’t respond to requests for comment. The EPA has said it is still evaluating the DNR’s response to a 2011 letter on 75 state water quality deficiencies, which the petition cites.

Don Niles, who operates a 2,850-cow farm near Casco in the northern part of the county, said the new well tests concerned him.

“I care any time we have any indication there is impacted water in our area,” said Niles, who is president of Peninsula Pride Farms, an association of 40 farmers formed in January to seek voluntary ways to improve environmental practices, including hiring a consultant to review manure handling.

Cow manure has been linked to bacterial contamination of surface and ground water, unnatural weed and algae growth in lakes and streams, and widespread nitrate pollution in state drinking water.

As dairy production intensified over the last decade, Kewaunee County became a flashpoint with its 15 industrial-scale dairies.

Lynn Utesch, a Kewaunee County activist who operates a small farm, said the new test results were no surprise, just the latest indication of a critical need for federal intervention, funding, education and research.

“It is time for Gov. (Scott) Walker, the U.S. EPA, local officials, and our state and local health departments to declare a state of emergency for Kewaunee County’s ongoing health and water crisis,” Utesch said.

Voluntary water testing dating back to 2004 found about 30 percent of wells with unsafe drinking water but farmers questioned if the tests were representative and if cows were the source. In November, tests of 320 randomly selected wells found 110 exceeded standards for total coliform or nitrate, both of which can come from manure or other sources, such as faulty septic systems.

From those tainted wells, 30 were selected at random for further analysis last month, said Mark Borchardt, a U.S. Department of Agriculture microbiologist who is helping lead the current study.

Scientists are examining genetic material from contaminants to determine if they came from human or animal waste. Previous tests haven’t had that capability. When the analysis is done, the results will be delivered to the DNR, Borchardt said.

Genetic signs of salmonella could possibly be from dead bacteria, but there were other indications it came from live bacteria, Borchardt said.

He said he told the DNR on Monday that well owners must be contacted, and the next afternoon the agency posted a release on its website and allowed Borchardt to call owners.

Much of Kewaunee County has less than 5 feet of topsoil over shallow, porous bedrock. When pollutants are deposited on the soil, rain can wash them quickly into groundwater tapped by drinking water wells, said Maureen Muldoon, a UW-Oshkosh hydrologist leading the study with Borchardt.

The DNR said it would cover the cost of testing wells within a half-mile of those identified in the study.

The U.S. Centers for Disease Control says the vast majority of salmonella infections cause diarrhea, fever, and abdominal cramps that pass within a week. But salmonella causes 9,000 hospitalizations and 380 deaths a year nationally, the agency said.

“Early indications from the researchers suggest the rotavirus may be bovine,” the DNR said in a statement. “However additional analysis is needed to confirm. According to DHS, bovine rotavirus is typically not transmissible to humans. Salmonella is a bacterial illness with symptoms that range in severity.”