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SWIGG Study Update – Well sampling completed, analysis still ongoing

MADISON — The Southwest Wisconsin Groundwater and Geology Study (SWIGG) of Grant, Iowa, and Lafayette Counties completed its fourth and final round of private well sampling to identify fecal sources of contamination. The study began in late 2018 to assess private well water quality in southwest Wisconsin and determine probable sources of any contamination found.

In March 2020, scientists randomly selected 35 private wells after earlier sampling found they were contaminated with coliform bacteria or nitrate levels above the drinking water standard. The latest phase of the study found fecal contamination in 21 of those 35 wells.

The three County Conservation Departments are grateful to area residents for their participation. “We want to thank all the well owners that made this study possible,” said Katie Abbott, County Conservationist with the Iowa County Land Conservation Department. “We look forward to working with stakeholders further once the study is complete.”

The SWIGG scientists analyzed the samples for specific viruses and bacteria that indicate fecal contamination from human wastewater or livestock manure. Not all of these viruses and bacteria can cause illness. Scientists found evidence of human, cattle, and swine contamination sources.

In 17 of the 35 sampled wells, the scientists found pathogens associated with gastrointestinal illness in humans. However, researchers have not calculated the health risk for these results, which depends on the specific pathogen, its concentration, and the health of the person who drinks the water.

The researchers emphasize it is too soon to draw study conclusions. Although the well sampling is completed, comprehensive data analysis is still ongoing.

Researchers also emphasize that the percentage of contaminated wells from this sampling event do not represent the entire region because they were chosen from wells already shown earlier in the study to be contaminated.

The study team will look for correlations between water quality, geology, and well construction. The study’s final report should be complete in 2021.

The study was initiated by Grant, Iowa, and Lafayette Counties in collaboration with researchers from the U.S. Department of Agriculture, the Wisconsin Geological and Natural History Survey-UW-Madison Division of Extension, and the U.S. Geological Survey. Support for the study comes from the counties and agencies involved, the Lafayette Ag Stewardship Alliance, the Iowa County Uplands Watershed Group and donations from Lafayette county citizens.

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