
2024 Groundwater Sampling Summary Report

February 2025

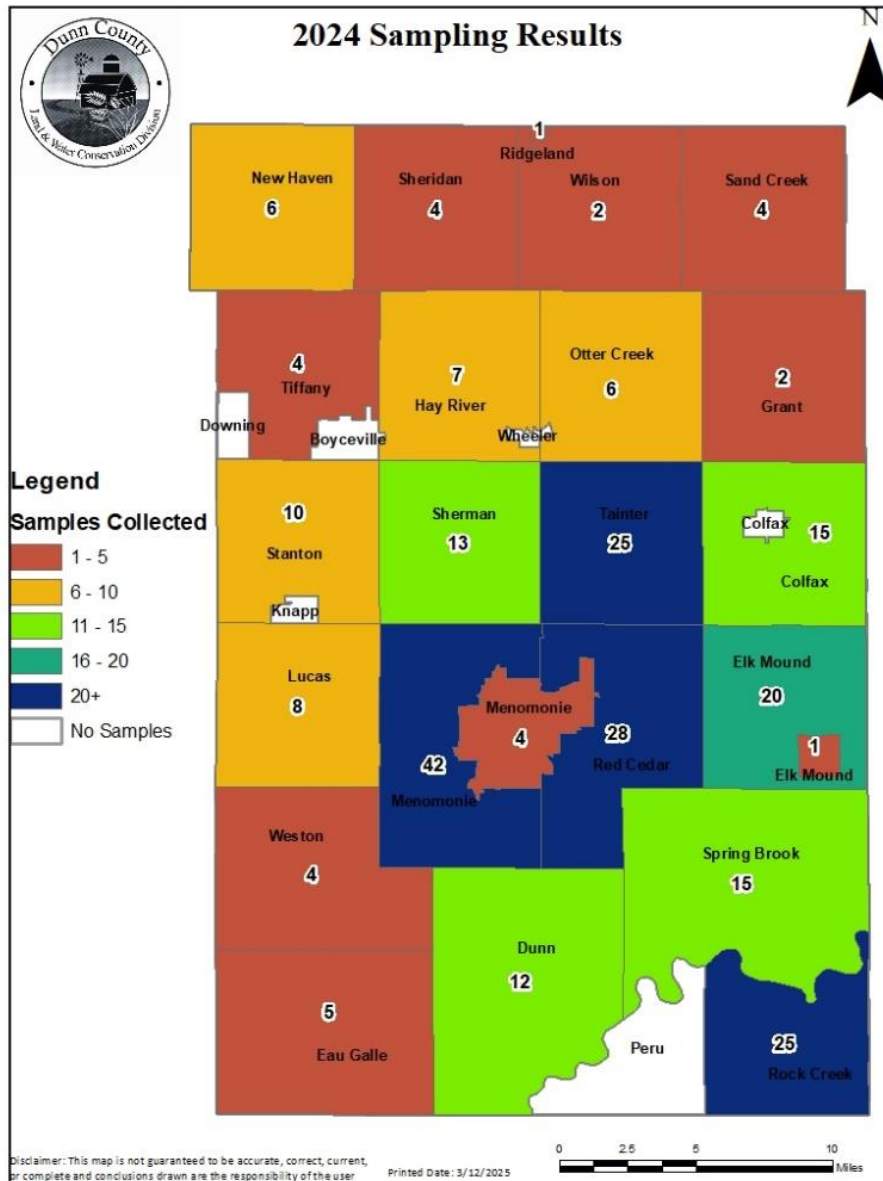
Background

In early 2022, funding was allocated by the full County Board for a groundwater testing program as a part of the American Rescue Plan Act (ARPA) money. The County Board allocated \$175,000 of ARPA funds to this program. In January of 2023, Land and Water Conservation Division (LWCD) staff conducted the first phase of this program collecting samples from all town halls or proxies in all of the unincorporated towns across the county. The second phase was conducted from late May through early July of 2023 with nearly 1,000 well samples from private wells. After this second phase was completed, approximately \$28,000 remained to be rolled into a third phase which was 2024 continuation of a similar program.

In early 2024, LWCD staff, with the assistance of Dunn County Health Department staff submitted a summary of the communications aspect of the 2023 project to the Small Communities, Big Challenges competition through the Environmental Protection Agency (EPA) as an unconventional means to obtain funding to continue the groundwater sampling efforts beyond the ARPA funding. This submission was selected as a winner, and LWCD was awarded \$35,000 to continue groundwater efforts.

2024 Sampling

In early 2024, LWCD staff connected with groundwater staff from the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) to collaborate groundwater work being completed by the State in Dunn County. Between this partnership, and the new funding from the EPA award, everyone who had signed up with LWCD in early 2024 was able to be sampled by County or State staff, including those who were originally placed on a waitlist. In total, LWCD collected samples from 263 wells and an additional 36 were referred to DATCP from the LWCD list. This report will focus on the LWCD collected samples which included participants from all townships except the Town of Peru. All individuals in Peru who had originally signed up to participate in the LWCD program opted into the DATCP program when this was offered. Information on the DATCP study can be found at <https://datcp.wi.gov/Documents2/2024TargetedSamplingReport.pdf>. A map of the number of samples collected by LWCD from each municipality is shown below.

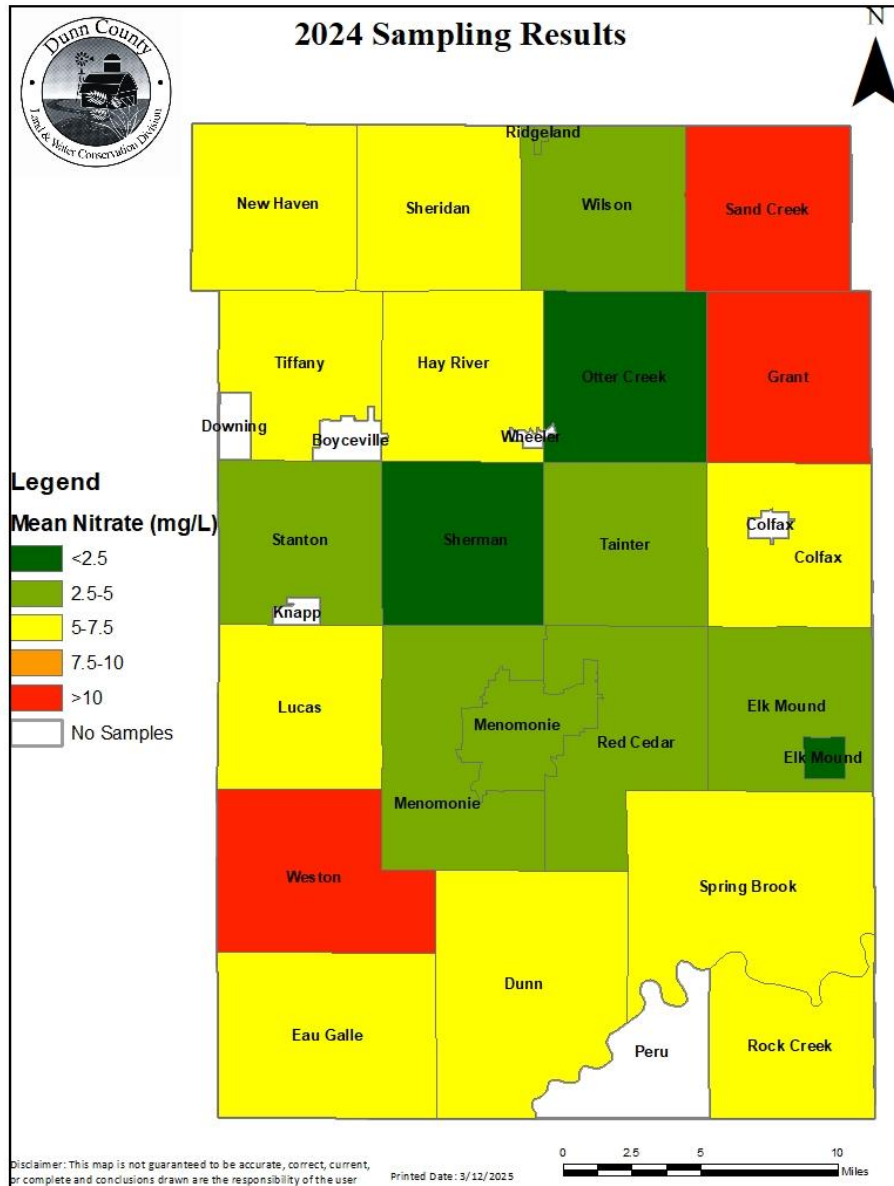


For the 2024 program, LWCD chose to partner with the Eau Claire City-County Health Department for laboratory analysis. The lab analyzed the samples collected for a variety of metals as well as nitrates. Below is a summary of all compounds that samples were analyzed for with the associated health standards and the number of samples that were in exceedance of these standards.

Compound	Health Standard	Health Exceedances
Arsenic	10 ug/L	5
Cadmium	5 ug/L	0
Chromium	100 ug/L	0
Cobalt	40 ug/L	1
Copper	1300 ug/L	0
Hardness	NA	NA
Iron	NA	NA
Lead	15 ug/L	8
Manganese	300 ug/L	22
Nickel	100 ug/L	2
Nitrate	10 mg/L	43
Zinc	2000 ug/L	3

Similar to the 2024 sampling project, the compounds with the highest number of health advisory exceedances was nitrates followed by manganese. Nitrates are typically considered to be caused by human activities while manganese is primarily introduced to groundwater through bedrock interactions.

Nitrate levels were found to be elevated in 43 samples or 16.3%. The map below shows the mean nitrate level by municipality from this sampling effort. While this is a higher percentage than was seen in 2023 (11.7%), it should be noted that there were significantly fewer samples collected in 2024. Additionally, there was a spatial bias in play with more participants coming from the areas of Dunn County which are more prone to groundwater contamination. While this is cause for concern in and of itself, it does not accurately reflect the average groundwater chemistry for Dunn County in its entirety. While the exceedances were not limited to the southeastern quadrant of the county, this area is where the heaviest concentration of exceedances were found. This was expected, so this is also the area where DATCP samples were collected.



Manganese results were very similar to 2023 with 22 samples or 8.4% being above the health advisory level. This is slightly higher than was seen in 2023 (5.1%), but like nitrate, this appearance of an elevation is likely to have been caused, at least in part, by a higher proportion of samples taken in 2023, in the area that appears to be predisposed to manganese contamination. Like 2023, elevated manganese was seen primarily in samples taken near the channel connecting Lakes Tainter and Menomin with a small number of elevated values being scattered around the rest of Dunn County.

2025 and Beyond

Currently, there is approximately \$33,500 remaining from the EPA award. LWCD staff is planning to use this to continue sampling in 2025 and beyond. Preliminary planning is

currently underway for the 2025 program, and sampling beyond will be dependent on what funding remains. To maximize data collected, it is likely that future sampling efforts will focus on nitrate contamination. While the metals analysis is beneficial for individuals using these wells, these values tend to be somewhat static, making repeat testing redundant.