

Groundwater Monitoring Council Meeting

April 22, 2025

Agency Updates

Eastern Nebraska Water Resources Assessment (ENWRA)

Katie Cameron

- Routine monitoring (<https://enwra.org/projects/water-quantity-monitoring> , <https://enwra.org/projects/water-quality-monitoring>) of Ashland Oakland and Firth ENWRA sites with transducer and monitoring well clusters:
 - mudjacking services conducted March 2025 for five Ashland site well cluster flushmount pads (subsidence from dry conditions caused pads to lower over time but well top of casings remained at survey height). Pads were raised with pressurized grout so lids could close properly, annulus with pump and transducer equipment remained in-tact and future monitoring will take note of further potential pad height changes.
 - a UNL student has been working on gravity measurements with ENWRA Oakland site groundwater level fluctuations (presented February 2025 at Nebraska Geological Society meeting)
 - one In-situ telemetry unit installed at the ENWRA Firth site (Lower Elkhorn NRD has units near Logan Creek at ENWRA's Oakland site). ENWRA has been communicating with NRD's on their telemetry efforts
 - trends on nitrates, selenium, arsenic, uranium, manganese, sodium & chloride (plus other routine parameters) evaluated for ENWRA wells and working on excel alternatives to the long term graphing displays
- Water Sustainability Fund (WSF) projects: Wrapping up the Recharge WSF #5312 project (planned close-out by June 30, 2025) and submitted new WSF application with the Conservation and Survey Division [CSD] and USGS in March 2025 (Jesse Korus's guided machine learning and hydrogeologic modeling technique on the regional framework with scaled tools for six community areas with additional ground geophysical surveys planned). Lower Big Blue and Little Blue NRDs have AEM surveys planned.
- Biennial ENWRA Updates to six NRD boards conducted fall 2024 and spring 2025 (May 8, 2025, will be the final NRD update planned for this round)
- ENWRA's annual budgeting process for fiscal year FY2026 through Lower Platte South NRD's financial handling begins April 2025
- Coordinator's dual position with UNL CSD is planning on partner agency test holes in eastern Nebraska in summer and fall 2025 (two ENWRA NRDs and two neighboring NRDs, Upper Big Blue and Lower Big Blue NRDs) and cooperative efforts with NRCS and Lower Platte South on an aquifer testing video demo at Antelope Park in Lincoln summer 2025. Jesse Korus recently streamlined the new tTEM (like AEM but a tow system behind an ATV for field scale surveys) equipment survey and results procedures as a service center for cooperative agreements (similar to how test hole drilling with NRDs is handled). CSD is hopeful to fill the open position in North Platte, Nebraska by summer 2025.

United States Geological Society (USGS)

Ginny McGuire

National Water Quality Network: USGS will be sampling 30 domestic and 30 monitoring wells, which are screened in the High Plains aquifer and located in the eastern part of Nebraska. The samples will be analyzed for the concentrations of nutrients, major ions, trace elements, pesticides, VOCs, PFAS, tritium, and dissolved organic carbon. The analysis results will be available on the USGS NWIS site.

Sampling for Lincoln Water system (LWS): In December 2024, USGS sampled three LWS monitoring wells and analyzed the samples for VOCs and explosives. In both Spring and Summer, 2025, the USGS will be sampling 6 LWS monitoring wells in the well field and analyzing the samples to determine the concentrations of nutrients, major ions, and trace elements.

Sampling for Papio-Missouri River Natural Resources District: USGS will be sampling 54 wells for the Papio, including 12 domestic wells and 22 monitoring wells screened in the Dakota aquifer. The samples will be analyzed to determine the concentrations of nutrients, major ions, trace elements, and pesticides. The pesticide samples will be screened using an atrazine Eliza kit; samples with pesticide detections will be sent to the lab for pesticide analysis.

Lower Loup Natural Resources District (LLNRD) soil nitrate project: LLNRD is doing a second year of soil core sampling for the soil nitrate project at the same fields as the first year. The project is looking at different fertilizer practices and their impact on soil nitrate concentrations. LLNRD and USGS staff developed the sampling plans; LLNRD staff collect and process the samples; LLNRD and USGS staff analyze the sample results.

Lower Platte South NRD

Dick Ehrman

The Lower Platte South NRD is in the process of updating its Ground Water Management Plan (GWMP). The Board of Directors authorized the update in mid-2024, and a team lead by HDR, Inc. was selected to facilitate the update. Initial meetings and data gathering are underway, and a schedule of public input sessions and other methods of gathering public opinion has been developed. This will include the required input from NeDNR and NDEE, as well as other input from government and private partners. The current schedule anticipates that the revised GWMP will be ready for Board approval around July of 2026, after which the NRD will revise its Ground Water Rules and Regulations to reflect the updated GWMP.

Nebraska Department of Agriculture

Craig Romary

- The NRD immunoassay analysis project for pesticides has stalled somewhat for various reasons but I'm still available to assist with training for the equipment and trying to arrange a cost-effective way to obtain the kits. If NRD offices don't plan to use the NDA equipment, I can arrange to pick it up.
- As always, if there are monitoring data for pesticides (new or historical) that are not already in a publicly available database, please let me know and I can help you submit them to EPA for use in future risk assessments.
- Atrazine registration review. The public comment period recently closed for the atrazine interim registration review decision and EPA will be reviewing those comments for issuing a final decision soon. The main changes over current labels in this proposed interim decision (my brief interpretation) were a reduction in the annual application rate of 0.5 pounds active ingredient per acre and the inclusion of label restrictions requiring drift and runoff mitigation measures (think BMPs) when the application is within a specified distance of non-managed land (there is a definition of managed land). This language is similar to the language EPA is rolling out as part of its endangered species protection program (more below), which is being implemented to satisfy court agreements under the endangered species act. The atrazine registration is not fully a part of this rollout because of the timing of registration decision (It was started before the endangered species agreement was finalized). In addition, the level of restrictions that may be required is dependent on where you are located – watersheds with higher potential for atrazine in runoff will require more mitigation. Much of southeast Nebraska is in the higher risk watersheds and the rest of eastern Nebraska is in the medium level. There is a high-quality national map available that I can send if desired.
 - I can send an overview of the water quality level of concern that was used for this assessment and background on the cycle of ups and downs in the last few years as administrations changed. It's hard to connect these levels to water quality standards, but the value used in this assessment is somewhat in line with the Nebraska aquatic life standard of 12 ppb.
 - Atrazine Registration Review [Regulations.gov](#)
- EPA's Endangered Species Protection Program and ecological mitigation measures. As mentioned above, EPA finalized a workplan and is rolling out strategies to address the court agreement that was signed. I have a (long) article at [Endangered Species Protection: Coming to a Label Near You | CropWatch | Nebraska](#) that should help explain it if you are interested (and have some time).
 - State pesticide agencies and many, many partners are trying to develop outreach and guidance to applicators to ensure compliance with these label restrictions.
- [Nebraska Buffer Strip Program](#) – the program is still in place and there are funds available for filter strips and riparian forest buffer strips, the two practices allowed on eligible acres. There is a fairly recent summary by NRD at this link, but I can provide a current one at any time.

Nebraska Association of Resources Districts (NARD)

Jennifer Swanson

Washington D.C.: NARD and NRD directors, managers, and staff just returned from Washington DC where we met with federal partners and state delegation to discuss various natural resources programs and funding. Below are some key points from our discussion:

- **Government Funding:** A Continuing Resolution (CR) has been passed to fund the government through September 2025, maintaining 2024 funding levels.
- **Farm Bill:** The Farm Bill is expected to be extended through September 2025. There is bipartisan support for retaining the \$20B allocated to conservation programs, which may be incorporated into a reconciliation bill focused on tax changes.
- **IRA Funding:** IRA funding has significantly increased state allocations, particularly for Climate Smart initiatives. Although IRA funding is currently in a holding pattern, we are moving forward with Farm Bill funding, making payments on existing contracts, and signing new contracts.
- **USDA-NRCS Staffing:** The USDA-NRCS is currently under a hiring freeze, with staffing reviews underway. While some nonessential positions are being eliminated, the agency is working to streamline operations, reduce paperwork, and ensure continued support for producers. Payments are expected to unfreeze soon, and efforts to simplify processes are ongoing.

NRD Basin Tour: The NRD Basin Tour is June 9-10th touring projects in the Niobrara Basin. Registration will be available on our website once details are finalized. [2025 NRD Basin Tour | Nebraska's Natural Resources Districts](#)

Groundwater Technician Training: The online Groundwater Technician Training is LIVE! New hires can now access the online training and take their examination throughout the year instead of only in March. This should help improve efficiency in hiring and training new employees.

Producer Connect: Phase 1 of Producer Connect is complete. Producer Connect, a web and mobile application suite, allows producers to access their crop reporting data and includes a fertilizer recommendation. This collaborative effort aims to empower agriculture producers to optimize inputs, which will enhance agricultural profitability, water quality and irrigation efficiency.

NRDs will be working with producers over the next few months to get them signed up to use the online platform. Producer Connect will be utilized to submit crop report forms in Phase 2 and higher water quality areas this fall.

This is a collaborative project with 17 NRDs, the Nebraska Corn Board, NRCS, Corteva, Central Valley Ag, and the Nebraska Cooperative Council.

Lower Elkhorn NRD

Doug Hallum

- Completed spring water levels earlier this month.
- Working to upgrade telemetry hardware on our real-time monitoring wells (using funding from NDNR, ~50 wells). Telemetry hardware has been installed, installing conduit and cable to connect additional transducers at nested well locations.
- Starting a NET project, Groundwater Monitoring for Public Health, in collaboration with Drs. Rhoades and Gilmore from UNL. We hope to analyze water samples from 561 domestic groundwater wells for nitrate, nitrite, and other agrichemical compounds, as well as a subset (<20 wells) for tritium.
- Continuing our domestic well testing (nitrate and agrichemicals) with cost share for RO treatment. We've tested ~180 wells since 2023 with paid/pending cost share on 10 so far.
- Summer sampling of irrigation water for nitrate is focused on Cedar and Wayne Counties this year.

Nebraska Groundwater Quality Clearinghouse

Colleen Steele

- Since the first of the year, the Nebraska Groundwater Quality Clearinghouse has been updated with over 10,000 water quality results submitted by NRDs.
- The Data Coordinator is reaching out to and working with collaborators one-by-one to resolve issues with previously submitted results that are pending approval.
- NRDs are encouraged to begin preparing additional results to submit to the clearinghouse and to contact the Data Coordinator with any questions.
- Work has begun on phase 3 enhancements for the clearinghouse.

Bazile Groundwater Management Area

Lisa Lauver, LENRD

2024 was a busy year. The group was involved with lots of activities, outreach programs, and ended with our very 1st annual Northeast Nebraska Ag Conference (NNAC) on December 17, 2024.

This conference was a joint venture between the Bazile Groundwater Management Area (BGMA) and the Bow Creek Watershed Project (BCWP) and was well attended with just under 300 participants. There has been quite a bit of positive feedback, and we are just in the process of starting the planning...so save the date of December 16, 2025 for our second one.

We also began a new In-Classroom Water Education Opportunity where we help the teachers meet certain Nebraska curriculum standards. To date, we have presented to 3 separate BGMA schools for a total of 6 classrooms.

For the implementation of Best Management Practices (BMPs), working with the three-area county Natural Resources Conservation Services (NRCS), we had so many applications from the November 2023 signup that currently, we still have applications being rolled over to next year. For the FY2025, NRCS has awarded five (5) NWQI EQIP Contracts in the BGMA totaling approximately \$708,000.00. Hopefully, we will receive additional funding in June of this year.

Please see the attached fact sheets for additional details:

- 2024 Annual Activity Factsheet regarding our outreach efforts
- 2024 BGMA EQIP Cost Share BMPs in NWQI Area, denoting implemented BMP practices

Working with Nebraska Department of Environment and Energy (NDEE), we successfully updated the BGMA Plan from 2016 at the end of December 2023, which was approved by the EPA in February 2024. We also submitted a new Project Implementation Plan (PIP) for Phase III to NDEE, to be able to receive funding to continue our outreach within the BGMA. This new PIP also contained a new table derived from the New EPA Pollutant Load Estimation Tool (PLET) for showing load reduction based on the efficiencies of the priority BMP practices implemented for the last phase period. I have this as an annual report for the NRDs General Managers to track improvements.

If you have any questions, please reach out to me at the Lower Elkhorn NRD 402-371-7313.

Notes from Roundtable Discussion

Dave Miesbach, NDEE

Visiting the NioCorp site near Elk Creek soon. Contact Dave or Daniel Kroll if interested in watching the drilling when that begins in May.

Revised Water Well Standards are nearly ready to go to the governor, then to the board. Changing from Title 178 to 134, and from chapters 10 through 13 to 1 through 5.

Ginny McGuire, USGS

Retiring May 2025

Dick Ehrman, LPSNRD

Retiring October 2025

Crystal Powers, Statewide Water Extension Educator, UNL

2025 Great Plains Water Conference: Securing Water Resources for Tomorrow

Milo Bail Student Center, University of Nebraska Omaha

September 18 – 19

<https://watercenter.unl.edu/news/2025-great-plains-water-conference-securing-water-resources-tomorrow/>

Philip Paitz, Papio NRD

Updating GW management plan.

Troy Gilmore, UNL-CSD

If anyone is interested in recording rusty pivot observations, we are testing an app for that!

<https://go.unl.edu/rp-app> More info on Rusty Pivot Project: <https://go.unl.edu/rustypivots>

Laura Johnson, NDEE

EPA Region 7 is taking over public water systems within tribal boundaries.

Tom Buell, NDEE

Superfund was previously funded with general funds in 2017. Proposed legislation is requiring NDEE to transfer money from the petroleum remediation fund. Raised the tipping fee on solid waste from \$1.25 per ton to \$2.34 per ton.

Originally the funds were split 50% to grants and 50% to the IWM program. Changed to, 65% going to program, 35% going to grants. Even though the grants program is getting a smaller percentage, they're actually still getting ½ million dollars more. That really helped Keep Nebraska Beautiful and others in support of the legislation.

Jason Moudry, LLNRD

Work on legacy nitrate project that partnered with Lower Platte North NRD.

Working with Nance County on a new model, doing some test holes.

We have 3 drought areas that now have a meter stipulation so everything in Buffalo County east, south of Columbus.

Working with Greg Michl (NDEE) on the basin rotation for surface water this year



Bazile Groundwater Management Area 2024 Summary

Outreach Activities & Education for area Schools

March—H2O Daze for water education of 5th graders.

May—Aqua Fest for 5th graders.

May—Life on the Farm partnered with UNL Extension Educators.

September—Wonderful World of Water for 9th & 10th graders area competition.

Sept/Oct—Know Your Well Program partnered with UNL Extension Educators.

October—Conservation Day for 8th graders.



New for 2024 In-Classroom Opportunities for area schools - targeting specific State of Nebraska Educational Curriculum as required for meeting science standards for specific grades.

1st Annual Northeast Nebraska Ag Conference

Co-hosted by the BGMA and Bow Creek Projects

- Held at the Life Long Learning Center on the Northeast Community College campus.
- We had close to 280 people in attendance—that included 22 Speakers, 24 Staff, and 16 Vendors
- Theme was focused on Soil Health & Regenerative Ag





- Keynote Speaker was Rick Clark, Farm Green: Increasing Farm Profits with Conservation
- There were 15 separate breakout sessions including: #Farm Weird Jason Mauck of Constant Canopy: Relay Cropping Systems; Nathan Mueller of NRCS: Erosion and Soil Health; Roy Thompson, a South Dakota Farmer: From Dis-ease to Abundant Life; Dr. Bob Noonan, NECC: Changing Soils; Paul Jasa, UNL: Practical Application Tips: John Heerman, Green Cover Seed: Biological Farming; Dr. Caro Cordova, UNL: Measuring Soil Carbon; Jim Williams, Wildlife Biologist: Biology Made Easy; Keith Berns, Green Cover Seed: Profit Partners; Jackson Stansell, Sentinel Fertigation: Nitrogen Management; and an 'Value Added' Panel with producers speaking about added products and marketing them
- Conference ended with a Farmer to Farmer Session 'Making it work here' - local producers from each NRD spoke about how regenerative ag practices they have adopted are working for them.

(new forum for the annual BGMA Winter Meeting)

(Funding for the Conference was from LCNRD, LENRD, LNNRD, UENRD, NeDNR and Vendor Sponsors. With contributions from NECC, UNL, and NRCS)

Contact us at: 402-371-7313 Website: <https://bgma.nebraska.gov/>

Email: llauver@lenrd.org

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**Lower Niobrara
Natural Resources District**



**Upper Elkhorn
Natural Resources District**



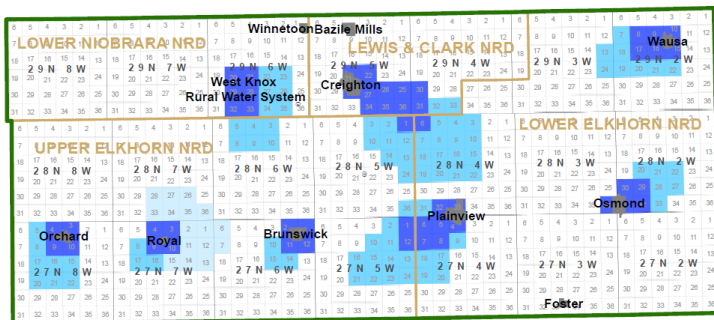
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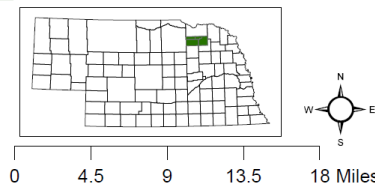
BGMA Funding (made possible by)

- Section 319 Grant through Nebraska Department of Environment and Energy (NDEE) and the Environmental Protection Agency (EPA).
- All 4 Natural Resources Districts: The Lewis and Clark, Lower Elkhorn, Lower Niobrara, and Upper Elkhorn NRDs.
- USDA NRCS National Water Quality Initiative (NWQI) Funding on EQIP, including additional Inflation Reduction Act Funds (IRA), and including contribution for the BGMA Coordinator position.



Legend

- NRCS National Water Quality Initiative (NWQI) Area
- NRD Bazile Area Boundaries
- Tier 1 Costshare Available (20 year time of travel)
- Tier 2 Costshare Available (50 year time of travel)
- Tier 3 (East Branch Verdigris Creek)



NWQI/EQIP Status

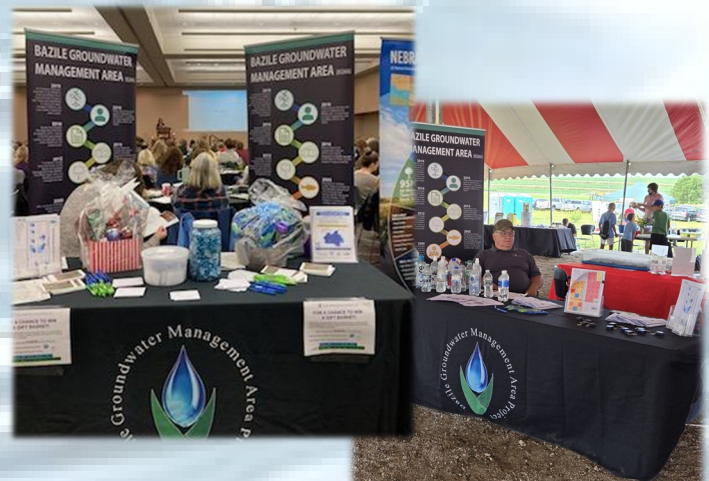
**Total acres within the BGMA
Practice Implemented in 2024 /
Total # of Acres**

- Conservation Crop Rotation/ 7,764 ac.
- Residue & Tillage—No Till / 7,771 ac.
 - Cover Crops / 13,616 ac.
- Irrigation Water Management—IWM / 3,913 ac.
- Nutrient Management— NM / 5,789 ac.

**Total number of producers practicing BMPs within the
BGMA in 2024 = 131
Total cost = \$1,906,369**

Community Outreach & Events

- June 2024—Sandhills Ranch Expo at Bassett, NE.
- August 2024—Science and Ag Family Field Day at Haskell Lab, Concord, NE.
- November 2024— 16th Annual AgCeptional Women's Conference held at Northeast Community College.
- All 4 NRD's held Nitrogen Certifications classes for area producers.
- Check out the videos on our website.





2024 BGMA EQIP Cost Share BMPs in NWQI Area

Total acres in the BGMA		Numbers by Tier Areas				
Practice Implemented	Total # of Acres	# of Produc-	Acres in Tier 1	Acres in Tier 2	Acres in Tier 3	Acres in Tier 4
(328) Conservation Crop Rotation	7764	19	200	1526	0	6039
(329) Residue & Tillage—No Till	7771	19	200	1526	0	6046
(340) Cover Crops—Basic	10854	40	1481	1036	0	8337
(340) Cover Crops—Multi-Species	2762	7	56	521	0	2185
(449) Irrigation Water Management—Advanced Technique	3913	17	319	87	0	3507
(587) Flow Meter with Mechanical Index (Number installed)	1	1	0	146	0	0
(590) Nutrient Management—Prescription Nutrient Efficiency	3885	5	0	443	0	3442
(590) Nutrient Management—Precision Nutrient Application	1904	8	702	0	0	1202

*The most common
EQIP Cost Share
Practice of 2024
was
(340) Cover Crop*

Types of Practices Implemented for Cost Share

For 2024, there were again slight revisions to some of the practice rankings for cost share. Both Crop Rotation and No-Till practices were still being considered secondary practices and were not in the category for Financial Assistance on the EQIP contracts, and so were considered only Technical Assistance.

Of the 9 Best Management Practices (BMPs) commonly implemented within the Bazile Groundwater Management Area (BGMA), in 2024, (340) Cover Crop—Basic became the most common. For this year, NRCS opened up the BMP (normally closed to anyone that had previously practiced it) to all producers within the BGMA for further implementation of this practice for up to 6 years.



Numbers above derived from NRCS reported 2024 contracts