

Groundwater Management Update

Amid ongoing drought conditions, the Lower Big Blue NRD (LBBNRD) is still operating under a moratorium on both the drilling of new high-capacity wells and the expansion of irrigated acres. The Board has always intended for the districtwide moratorium to be temporary and provide time to update its *Groundwater Quantity Rules and Regulations*. The chief question on everyone's mind is *when will the moratorium end?* Unfortunately, that is not a simple question to answer. The Board of Directors continue to discuss the best way to manage the diverse aquifer system underlying the NRD. Olsson engineers have worked with the Board to better understand and delineate subareas based on aquifer characteristics, geology, and development. In addition, the NRD has applied for and received state Water Sustainability Funding (WSF) to aid in the acquisition of Airborne Electromagnetic Hydrogeologic Mapping (AEM) data to further define the subarea boundaries. Groundwater management strategies incorporate the District's water level monitoring network with tools to manage groundwater that include flow meter installation on all high-capacity wells and groundwater use reporting, a phased subarea approach based on water level data, defining historically irrigated acres, and alterations to the District's well permitting process.

Following board action, the rules and regulations will be sent to the Nebraska Department of Natural Resources for comment. A hearing will also be held to receive public comment. That entire process may take up to 90 days, however, it is anticipated to take less time. If you have questions or comments on this effort, please reach out to the NRD office or your area representative on the Board.

The LBBNRD encompasses 1,054,000 acres in Gage, Jefferson, Pawnee and Saline Counties, and has monitored District groundwater levels since 1982. It currently does so through a network of 172 wells wherein drawdown is measured in the Fall and recharge is measured in the Spring. The Spring readings are those upon which any phase designations are based and management tools enacted. The Spring 2024 readings can be found in the table below.

Spring 2024 Groundwater Level Measurements

The Lower Big Blue NRD measures the static water level of 172 irrigation and dedicated monitoring wells around the District every Spring (usually the first week in April) and Fall (usually the first week in November). Spring 2024 county average readings are listed below.

| County             | No. of Wells | Change Spring '23<br>Spring '24 | Change From Baseline |
|--------------------|--------------|---------------------------------|----------------------|
| Gage               | 27           | -0.60'                          | -2.97'               |
| Jefferson          | 24           | -1.93'                          | -7.53'               |
| Saline             | 42           | -1.53'                          | -2.20'               |
| Monitoring Wells   | 46           | -1.37'                          | -2.25'               |
| Blue River Compact | 32           | - 1.22'                         | -3.27'               |

The Overall District Average water level was down 1.33' from Spring '23 to Spring '24, and down 3.64' from baseline

Chemigation Inspections

Chemigation is the application of fertilizer, pesticides, herbicides, insecticides, and other chemicals through an irrigation system. In 2016, the Lower Big Blue NRD transitioned from annual inspections of chemigation sites and equipment to a county-based three year rotation. The inspection year is noted on the renewal applications which have been mailed out. Any new permit must also be inspected regardless of county location. Completed applications are due **June 1**. Fees are \$60 for new permits and \$20 for renewals. Please call the office to schedule your inspection. Inspections must be completed in the year shown on the permit before any chemigation may take place.

Lower Big Blue NRD Newsletter

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Questions or comments regarding the newsletter may be directed to the office of the Lower Big Blue NRD by phone at (402) 228.3402; by fax at (402) 223.4441; by email at [kimmerling@lbbnrd.net](mailto:kimmerling@lbbnrd.net); or by mail at:

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**Vacant**

NRCS District Secretary— Jefferson County

THE

BLUE BUZZ

LOWER BIG BLUE NRD

Recreation Areas Open for the Season

Recreation areas managed by the Lower Big Blue NRD officially opened for the season April 1st. If relaxing outdoors is on your spring to-do list, we at the Lower Big Blue NRD hope you'll take advantage of all the things our ten recreation areas offer. As always, no park permit is required at any of our recreation areas. Current camping fees are \$5/night per tent, and \$20/night for electrical hookups. Stays are limited to 14 days in any 30-day period. No vehicle traffic is allowed off of rocky or hard surfaced roads (this includes ATV's, UTV's and golf carts). Pets must be kept on a leash at all times.

The NRD Recreation Exploration campaign challenges participants to visit as many Natural Resources District (NRD) recreation areas as they can between March 1, 2024, and Sept. 16, 2024. Visitors are invited to submit a photo at [www.nrdnet.org/recreation](http://www.nrdnet.org/recreation). Your photo submission will enter you into a monthly prize drawing.

Monthly Drawings: March-September 2024 \$100 Scheels gift card

Grand Prize drawing \$1,500 Scheels gift card

Runner up: \$500 Scheels gift card

2nd runner up: \$300 Scheels gift card

Cody from Beatrice was drawn as the winner for March. Cody's photo, featured above shows his Kayak on the shore of Big Indian. Congratulations Cody!

Protecting Lives. Protecting Property. Protecting the Future.

Lower Big Blue

Natural Resources District

Watershed Capital of Nebraska

“Protecting Lives, Protecting Property, Protecting The Future”

805 Dorsey Street

Beatrice, NE 68310

Phone: (402) 228.3402

Fax: (402) 223.4441

[www.lbbnrd.net](http://www.lbbnrd.net)

May 2024

NRDNET.ORG/RECREATION

WIN PRIZES!



## NDEE Beachwatch

Every summer, from May through September, officials with the Nebraska Department of Environment and Energy sample the water at 51 recreation areas across the state. They are testing for blue-green algal blooms and high levels of bacteria which can pose health risk to swimmers. Tests are conducted on a weekly basis. Typically, tests are conducted on Monday with online results available on Fridays. Within the Lower Big Blue NRD, beaches at Rockford Lake, Big Indian Recreation Area and Willard L. Meyer recreation are sample sites. Weekly results can be found at: <https://deq-iis.ne.gov/zs/bw/>. Users may also sign up to receive weekly alerts from the site.

### How we Respond:

If a high concentration is found, the lake will be placed on health alert until tests register acceptable levels for one week. During this time, swimming beaches are closed and full body contact with the water is not advised.

### What to Watch For:

- Water that has a neon green, pea green, blue-green or reddish-brown color.
- Water that has a bad odor.
- Foam, scum or a thick paint-like appearance on the water surface.
- Green or blue-green streaks on the surface.
- Areas with algae that look like grass clippings floating in the water.

### What To Do:

If you suspect contact with algae, you should wash off with soap and fresh water as soon as possible. Special attention should be paid to young children as they are more apt to swallow water during swimming activities. Additionally, they often take in a greater percentage of water than adults. Symptoms of skin exposure can include a rash or other skin irritation. Symptoms of ingestion can include headaches, nausea, vomiting and diarrhea. If any of these symptoms occur, contact your physician for treatment advice.



## Producer Connect App

Producer Connect is a groundbreaking web and mobile application suite, designed to empower agricultural producers with the tools they need to optimize inputs, enhance agricultural profitability, improve water quality, and increase irrigation efficiency. Producer Connect will be free to producers and offer a wide range of features designed to simplify nitrogen and water management. The app is expected to launch in summer 2024. In order to facilitate signups, producers are invited to provide their email by scanning the QR code below, visiting [www.lbbnrd.net](http://www.lbbnrd.net) or emailing [schroder@lbbnrd.net](mailto:schroder@lbbnrd.net).

Ag producers will have a password-protected log in and only be able to see their own data. Features include:

**Producer-specific data:** Ag producers will have access to their reported data, which includes previous crops grown, actual yield, fertilizer applied, water usage, crops to be grown, expected yield, soil and water test results, and legume or manure credits.

**Protected data:** All data will be held by the local NRD, and individual producer data will not be shared. Aggregate data may be used by the NRD for educational activities, certified applicator training and producer meetings.

**Customizable recommendations:** The dashboard will provide a personalized nitrogen recommendation based on yield goals. The nitrogen efficiency of bushels per pound of applied fertilizer will be displayed and compared to the average of producers within the area. An economic analysis could show cost savings using the calculated nitrogen application versus a typical fertilizer application.

**Irrigation efficiency:** The dashboard will also include the ability to track water-use data.

**Historical data analysis:** By analyzing past nitrogen usage and crop performance, the dashboard will enable producers to identify trends in water use, fertilizer application and crop yield.

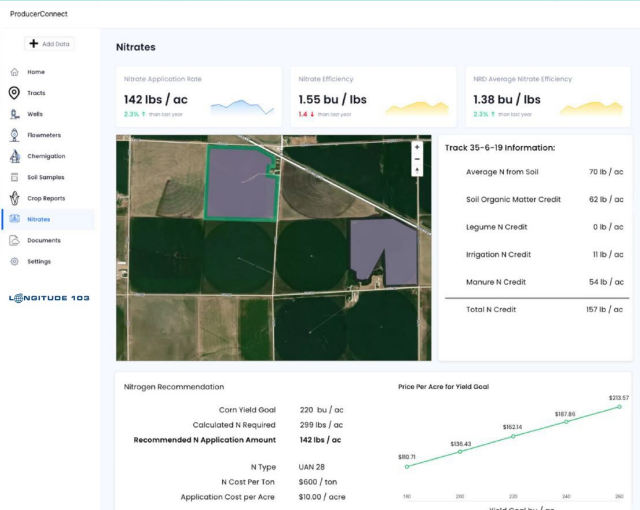
**Environmental impact assessment:** The platform will assist farmers in quantifying the impact of their nitrogen usage, aiding in compliance with regulations and demonstrating commitment to sustainable practices.

**Information exchange:** The dashboard will allow for communication between the producer and the local NRD. Producers will also be able to view current research results to improve profitability.

Scan Here to submit  
your email



Collaborators on this project include the Nebraska Corn Board, Natural Resources Conservation Service (NRCS), Central Valley Ag, 17 of Nebraska's 23 NRDs, the Nebraska Association of Resources Districts (NARD), the NARD Foundation, Corteva Agriscience, and the Nebraska Cooperative Council. The application is being developed by with Longitude 103, a leading provider of agricultural technology solutions.

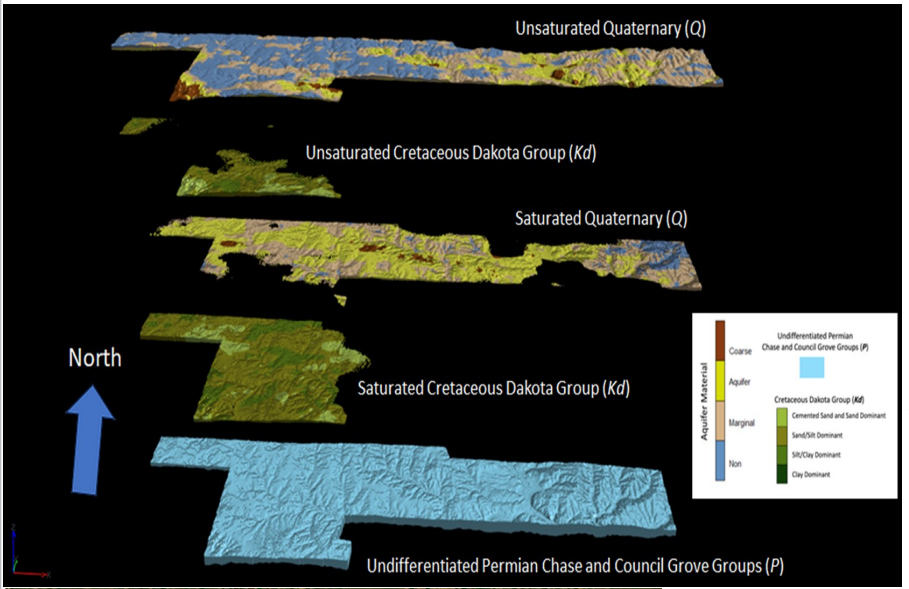


## AEM Project

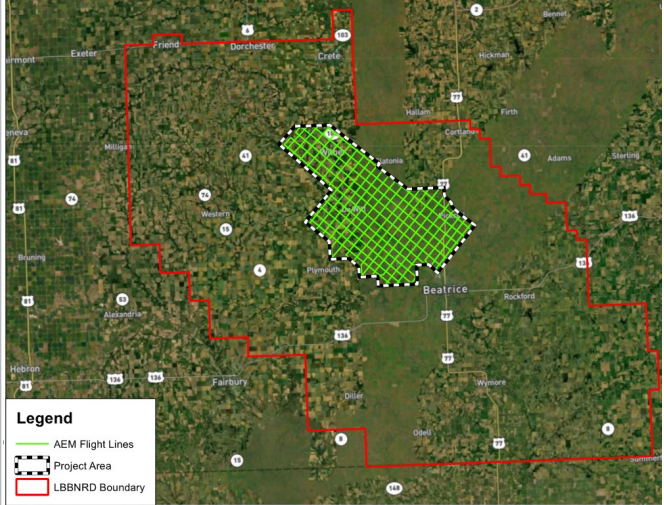
Airborne Electromagnetic Hydrogeologic Survey or AEM is a rapid and efficient way of remotely sensing geology across an entire area without engaging in extensive drilling. In AEM surveys, a geophysical device,

(typically bullet or hoop-shaped) containing sensors is suspended beneath an aircraft (typically a helicopter) to collect geophysical data using electromagnetics. The hydrogeology of the Lower Big Blue NRD is varied across the District's 1,700 square miles as a result of how geologic material was deposited. Phase 1 allowed the LBBNRD to survey roughly 429 square miles in 1 mile grids in the Southwest portion of the District. Phase 2 will include survey of 431 line-miles in portions of Gage, Jefferson and Saline counties, including around the Wellhead Protection Areas (WHPAs) of Beatrice, DeWitt, Pickrell and Wilber, NE.

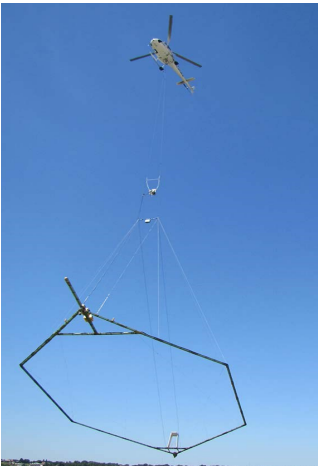
Data acquisition in Phase 2 is planned for July-August 2024. Both Phase 1 and 2 have been funded with the help of grant applications to Nebraska's Water Sustainability Fund. Building a hydrogeologic framework provides staff and directors the ability to better comprehend, and therefore, better manage the groundwater resources of the District.



Exploded 3D model of layered aquifer from Phase 1



2024 project area



The geophysical device is shown here suspended below a helicopter

## Free Family Fishing Day 22nd Annual Youth Fishing & Casting Derby



Sat. May 18, 2024

9:30-11:00 a.m.

At Willard Meyer Recreation  
Area (Swan 5)

Located: 3 miles East and 2 miles North of Tobias, NE or from the intersection of Hwys 74 & 15, 5 miles West and 2 miles North

Check-In: 8:30-9:30 a.m.

Prizes & Free Hot Dog Lunch  
for All Participants

Pre-Registration is required | Deadline May 16, 2024

Registration must include:

- Your child's name, age and hometown
- The total number expected to eat lunch (including adults)
- Your contact information

A limited number of fishing poles will be available for those who don't have them. Please indicate if you need a rod and reel for your child(ren)

Convenient ways to register :

Scan the QR Code at the right with your smartphone camera

Visit [lbbnrd.net](http://lbbnrd.net) and look for the registration link

Email [kimberling@lbbnrd.net](mailto:kimmerling@lbbnrd.net)

Call 402-228-3402

Lower Big Blue  
Natural Resources District

