

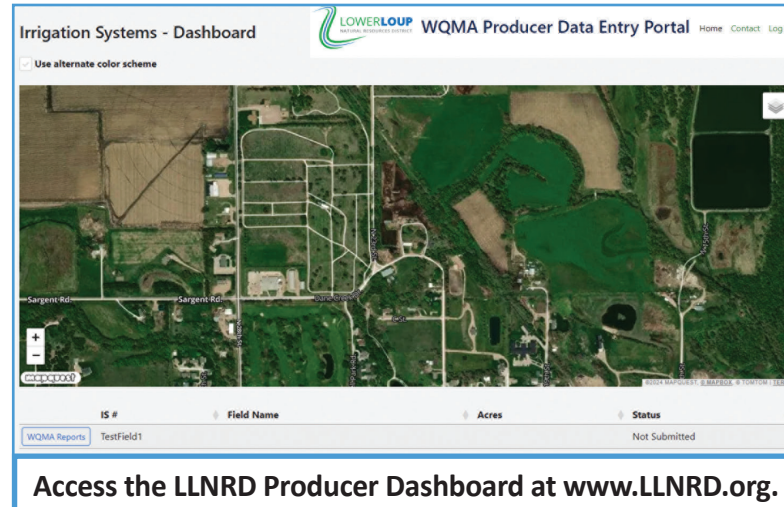
# New Producer Dashboard Streamlines Nitrogen Management

Producers in Water Quality Management Areas 28, 29, and 30 now have the option of completing their annual report entries online. This online option will improve the efficiency of the annual reporting process by offering producers a convenient and quick option for submitting reports to the LLNRD.

The online format is similar to the mailed version. Users will simply type their information into the corresponding text box. To upload attachments, (soil sample reports, manure analyses, and inhibitor documentation), users will browse their device (computer, tablet, smart phone) for the desired files and click "Upload Attachment."

To access the LLNRD Producer Dashboard, WQMA operators need to go to [www.LLNRD.org](http://www.LLNRD.org), open the drop-down menu in the Programs tab, and then click on "Producer Dashboard." Users will be prompted to create an account using an email address and a password. After creating their account, new participants will need to contact the LLNRD to have their reports linked to their new online account.

An in-depth walk-through



Access the LLNRD Producer Dashboard at [www.LLNRD.org](http://www.LLNRD.org).

video and how-to sheet are also located at the Producer Dashboard portion of [www.LLNRD.org](http://www.LLNRD.org).



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**Protecting Lives, Protecting Property, Protecting the Future.**



IN THE LOUP is a publication of the Lower Loup Natural Resources District. It is published quarterly by the LLNRD and is distributed to the residents of the 16 counties that make up the District. IN THE LOUP is edited by Alan J. Bartels, Information & Education Coordinator.

# Road Closure Scheduled for Davis Creek Recreation Area

To better serve visitors, the access road through Davis Creek Recreation Area will close beginning Oct. 1, 2024, for a paving project. The popular recreation area is south of the community of North Loup.

Continual improvements to Davis Creek Recreation Area by the Lower Loup NRD have led to increased visitation and use of existing roadways. Campground reservations will not be accepted during the closure. The road improvement project is being timed to avoid the busy summer recreation season.



Vehicle access to the recreation area will not be permitted during the entirety of the road improvement project.

The project will include paving the existing 2-lane gravel access road from the recreation area entrance through the exit of the east campground loop. Parking areas near the shower house will be paved as part of this project. Drainage improvements will also occur.

The project is being funded through Bureau of Reclamation Title 28 grant funds. LLNRD previously used Title 28 grant funding for the 2017 Davis Creek campground expansion, and to build the RV dump, playgrounds, and the maintenance shed.

The Lower Loup NRD has an ongoing 25-year lease from the Bureau of Reclamation for operation and maintenance of the 157-acre recreation area on the west side of Davis Creek Reservoir.

The road closure is planned through Dec. 31, 2024. The LLNRD will reopen the improved access road earlier if possible. Questions can be directed to LLNRD at (308) 728-3221.

Road work will begin in October at Davis Creek Recreation Area.

# Crop ET and Precipitation Reports

Crop evapotranspiration (ET) and regional precipitation reports are now active on the LLNRD website. Crop ET reports are released on Wednesdays during the growing season and consist of three infographics demonstrating average daily water use over the past week for corn, soybeans, and potatoes. Weather stations in the western (Merna), central (Ord), and eastern (Central City) portions of the District are displayed. All data is collected from the University of Nebraska's Evapotranspiration Calculator. Growth stages for this season are determined on a May 1 – May 15 planting timeline.

that displays the daily rain totals of the past 7 days, a monthly report that displays a hybrid graph showing the daily rain totals for the past 30 days and the accumulated precipitation compared to the 30-year average, and a growing season report displaying the same data as the monthly report spread over the entire growing season since May 15.

To view these reports, go to [www.LLNRD.org](http://www.LLNRD.org), click on the Programs tab, and select "Crop ET and Precipitation." This QR code will also take online users to the LLNRD's Crop ET and Precipitation page.



Three types of precipitation reports are posted: a weekly report



Visit [www.LLNRD.org](http://www.LLNRD.org) for news, events, forms, applications, rules, newsletters, to opt-in for text alerts, and more from LLNRD.



# Nebraska Legislature Creates Nitrogen Reduction Incentive Program

During the Nebraska Legislature's 2024 regular session, the Unicameral approved the creation of a program to incentivize the reduction of nitrogen use in Nebraska farming practices.

Senator Teresa Ibach's LB1368 creates a nitrogen reduction incentive program to be administered by the Nebraska Department of Natural Resources. The program will provide an annual incentive of \$10 per acre to qualified farmers who verify a reduction in commercial fertilizer rates of either 40 pounds per acre or 15% by incorporating a qualifying product into the farm's nutrient management plan. Ibach's stated goal is to encourage farmers to adopt sustainable practices to avoid and hopefully reduce nitrate contamination of groundwater resources

– which nearly all Nebraskans rely on for their drinking water and other needs.

Nebraska's Natural Resources Districts have worked for years to protect water quality by educating agricultural producers about the cost savings of using less fertilizer while being able to maintain yield. With many producers intentionally exceeding the University of Nebraska – Lincoln's nitrogen recommendation, which has been shown scientifically to exceed the amount of nitrogen a corn plant needs to reach maturity, Ibach's bill provides an added financial incentive on top of the cost savings producers would experience as a result of needing to purchase and apply less fertilizer.

A recent University of Nebraska Medical

Center study shows correlation between Nebraska counties with elevated nitrate levels and the places where children suffer higher rates of lymphoma, leukemia, and brain cancer. Nebraska's pediatric cancer rates are among the highest in the nation.

Nebraska's Nitrogen Reduction Incentive Act will be funded through a one-time transfer of \$1 million from the Water Resources Cash Fund to a newly created Nitrogen Reduction Incentive Cash Fund, and \$100,000 in general funds in fiscal years 2024-25 and 2025-26.

The Nebraska Legislature unanimously passed the bill. The incentive program application process is in development now.

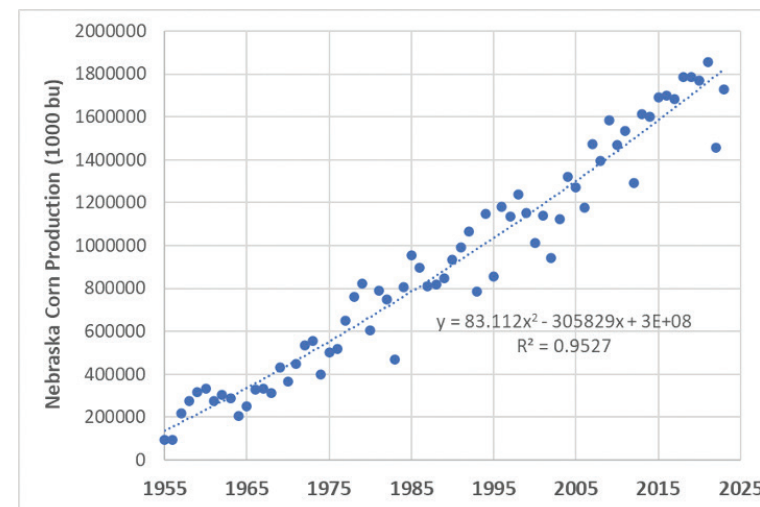


Figure 1. Corn grain production in Nebraska, 1965-2023. Compiled from USDA NASS data.

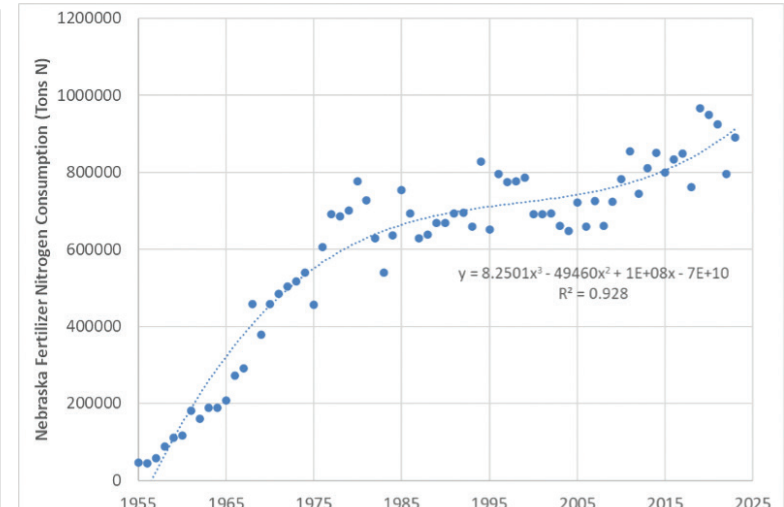


Figure 2. Fertilizer nitrogen consumption in Nebraska, 1955-2023, compiled from Nebraska State Department of Agriculture data (primary N sources only).

(Both from <https://cropwatch.unl.edu/2024/nitrogen-fertilizer-trends-nebraska-1955-2023>)

# Lower Loup NRD Directors Vote to Initiate Hearing Process for Drought Zone 19

During the May 2024 Lower Loup NRD Board of Directors meeting, and following a staff recommendation, the Board voted to initiate the public hearing process to designate Drought Zone 19 as a Water Quantity Management Area, as per Chapter 8 of the LLNRD Groundwater Management Area Rules and Regulations. A designation as a Water Quantity Management Area would mean that all irrigated agricultural fields in Drought Zone 19 that are not currently equipped with a flow meter would require flow meter installation within two years of a final vote.

Twenty drought zones have been mapped based on the unique features found across the Lower Loup NRD, which is a large and diverse District. At any given time, zones could be in varying levels of declaration, allowing for nuanced and locally informed management actions, rather than a one-

size-fits-all approach. To provide further management capabilities, LLNRD Rules and Regulations allow areas to be subdivided into Groundwater Quantity Management Sub-areas.

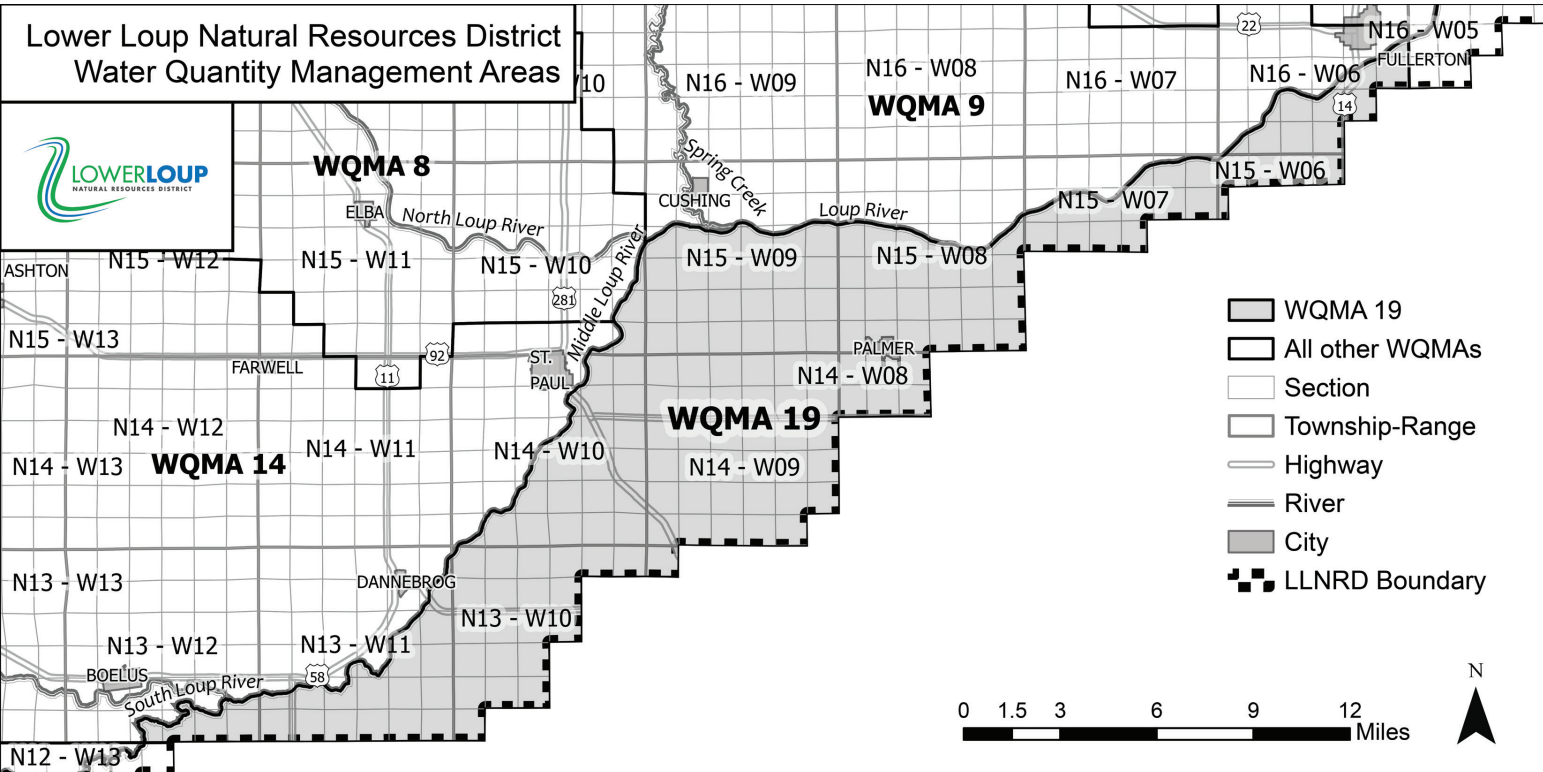
Drought Zone 19 encompasses the portions of Howard, Merrick, and Nance counties that are south/southeast of the Middle Loup and Loup rivers.

The Lower Loup NRD began developing a Drought Management Plan in 2020. Irrigators, ranchers, city administrators, hydropower industry representatives, LLNRD staff and directors, and other stakeholders joined for a series of meetings. Input from this Drought Stakeholders Group was used to develop the LLNRD Drought Management Plan. This plan was developed to function as a guide to the LLNRD Board of Directors to enhance

drought response. The plan was approved by the LLNRD Board during its November 2022 meeting.

Once the board has set a date for a public hearing, LLNRD staff will hold a public information meeting in Drought Zone 19 to present information on why the designation was recommended and discuss any questions and concerns with the public hearing process. The dates and times of all public information meetings and the public hearing will be sent to regional media outlets and posted at [www.LLNRD.org](http://www.LLNRD.org), as well as sent via text message to residents who have signed up for the LLNRD Text Alert system.

Sign up for these text alerts under the "Text Messages" tab at [www.LLNRD.org](http://www.LLNRD.org).



# A Message From The Manager

What a relief it is that the drought situation in Nebraska has improved significantly in recent months thanks to timely rainfall across much of the state. The most recent U.S. Drought Monitor map from the University of Nebraska – Lincoln shows most of the Lower Loup NRD rated at a Drought Level of "None," its lowest level.

We all know that the dry times will return, and it could be sooner rather than later. Nebraska is blessed with groundwater and surface water resources. Still, water conservation is always a good idea. I look at it this way: Water saved now can only benefit us down the road.

There are more than 10,500 active irrigation wells within the Lower Loup NRD. Many of these high-capacity wells are capable of pumping more than 600 gallons of water per minute straight up from the aquifer. The water in the aquifer is a natural resource for the benefit of all. For that reason, we must manage it properly. That means conservation.

All water users are responsible for safeguarding this resource. In the last

decade, the number of acres watered by gravity irrigation in Nebraska has dropped from 2.4 million acres to approximately 1.5 million acres as gravity irrigated farm fields have been converted to center pivot irrigation. This improvement is the result of thoughtful investment by ag producers who recognize the efficiency of a center pivot in getting water to the crops (90%), versus a gravity setup (65%).

With the next drought never far from mind, continuing to convert gravity irrigated acres to more efficient center pivot irrigation will help stretch water supplies for all water users when rainfall is scant. Our ag producers don't have to make this substantial investment on their own.

The Environmental Quality Incentives Program (EQIP) is a voluntary conservation program administered by the Natural Resources Conservation Service (NRCS). Through EQIP, agricultural producers receive financial and technical assistance to implement structural and management conservation practices that optimize environmental benefits on working agricultural land. This includes water



LLNRD General Manager  
Russell Callan

conservation practices like converting gravity irrigation fields to center pivot irrigation.

LLNRD District secretaries stationed at every NRCS field office in the District are available to answer questions and help producers sign up for this and other NRCS conservation practices that offer financial incentives. Furthermore, Nebraska Soil & Water Conservation Program (NSWCP) cost-share applications and irrigation management applications are available at our website, [www.LLNRD.org](http://www.LLNRD.org).

Thanks for doing your part to help conserve our precious water resources.

# Stay on Top of Land Ownership Changes and Equipment Upgrades/Modifications to Avoid Irrigation Violations

The Lower Loup NRD reminds irrigators that changes to an irrigation system can result in an unintentional but illegal expansion of irrigated acres.

Equipment changes that should be considered include new or replacement pivots, new end guns or border pumps, and new corner or swing arm systems. Conversion from gravity to pivot irrigation can also create unintentional changes to the number of irrigated acres.

LLNRD Assistant General Manager Tylr Naprstek said that changes to the

irrigation systems of grass or alfalfa should be considered, not just crops like corn and soybeans.

Field boundary revisions or changes of ownership, warranty deed revisions, and the formation or alteration of a trust or LLC requires recertification through the NRD and potentially the county assessor. This applies to modifications of groundwater and surface water irrigation.

The entire District is inspected using aerial infrared photography on an annual basis. This advanced technology indicates

fields that are irrigated and those that are not, and reveals non-certified acres that are being illegally irrigated. Failure to take irrigation modifications into account could constitute a violation of District rules and regulations which may result in a penalty requiring offset of future irrigation.

The Lower Loup NRD's interactive Map Viewer allows landowners to check their certification status. It can be accessed at [www.LLNRD.org](http://www.LLNRD.org) and by following this QR code.



# Photo Contest Winners Announced

Winning photographs have been chosen in the Lower Loup NRD's 2024 Photo Contest. Photographers from the Lower Loup NRD and across Nebraska submitted 330 images. Subjects photographed included wildlife, landscapes, events, sports, weather phenomena, wildflowers, recreation, architecture, and agriculture. Cheryl Albright of Ravenna won first place

for a scenic image of a foggy sunrise at Annevar Park in Ravenna. Cameron Jennings of Broken Bow took second place for a winter image of an irrigation pivot in Custer County with the Milky Way glowing overhead. Lincoln resident DE Grabenstein's image of a potato field west of Columbus covered with purple blooms was chosen for third place.

Albright's image will be printed, framed, and displayed at the LLNRD Headquarters in Ord. After one year, when the winning 2025 LLNRD Photo Contest image replaces it, Albright will be presented with her winning print. All three places will receive a prize package of Lower Loup NRD logo items.



1st Place - Cheryl Albright



2nd Place - Cameron Jennings



3rd Place - Derrill Grabenstein

# Buffalo County Model Employs State-of-the-art Technology

The Lower Loup NRD continues to utilize advanced technologies to assess aquifers and available water resources in areas of the NRD where there are ongoing groundwater availability concerns.

One area of interest is south of the South Loup River in Buffalo County, an area where airborne electromagnetic (AEM) survey data was collected in 2019. AEM surveying is the process of using a helicopter to deploy sensors that measure the earth's response to a generated electromagnetic field. Geophysicists can then use the measurements to determine aquifer materials and overall thickness of the various components where the survey was conducted. The result is a better understanding of aquifer layering, the rate at which water can move through the material (transmissivity), and the amount of material that each layer constitutes as well as the overall thickness of the aquifer in that area.

During the 2019 AEM surveys, the flights

were used to locate sands and gravels that could potentially connect the aquifer to the South Loup River and determine changes in recharge rates across the survey area. The LLNRD has hired a consultant to develop a more refined area model using the survey data to determine benefits of different recharge projects to increase aquifer storage and provide augmentation to the lower South Loup region.

This assessment is a necessary first step to testing the function of such recharge projects. The area model will also aid the LLNRD in developing different groundwater management

strategies that could be implemented to help improve long-term water level declines across the area.

Going forward, the research conducted using this model may give the LLNRD a more in-depth understanding of water retiming projects and help the NRD achieve its goal of long-term conservation and utilization of the water resources.

