

2025 Lower Loup NRD Photo Contest

The Lower Loup Natural Resources District is now accepting entries for its 2025 Photo Contest. The intent of the contest is to inspire photographers of every level to visit LLNRD recreation areas and to explore the diverse scenery of the district.

Photographers should submit high-resolution files to abartels@llnrd.org by midnight May 15, 2025. Photographers retain ownership of their images while granting the

LLNRD potential use of images in social media, website content, other digital use, and in printed materials. LLNRD directors and employees, and their immediate families, are not eligible to enter. Photos can include nature, wildlife, people, agriculture, recreation, conservation, local events, and more, and must have been taken within the Lower Loup Natural Resources District. Winners will be announced in June 2025.

“The Lower Loup NRD is the largest of Nebraska’s natural resources districts,” said LLNRD Information & Education Coordinator, Alan Bartels. “The opportunities for capturing stunning images within the district are endless.”

Hundreds of images were entered in the 2024 contest. Cheryl Albright was the first-place winner with her scenic image of a foggy sunrise at Annevar Park in Ravenna. A framed canvas print of Albright’s first-place image will hang in the LLNRD headquarters in Ord for one year before being presented to the photographer and replaced by the 2025 contest winning image. First, second, and third places will be awarded in the 2025 contest.

Questions should be directed to Alan Bartels at (308) 728-3221 or abartels@llnrd.org. Learn about the Lower Loup Natural Resources District at LLNRD.org.

LLNRD Photo Contest entry by Kimberly Neemeyer



Stay Up to Date with the Lower Loup NRD

Members of the public interested in the latest information from the Lower Loup NRD have many options for staying up to date. Signing up for SMS/Text alerts is easy through LLNRD.org. Clicking the TEXT MESSAGES tab allows users to opt in and be guided through an easy-to-follow sign up form.

The form requests the user’s name, address, email address, and mobile phone number. Once opted-in, a user will receive text messages (SMS/MMS) to their mobile phone with updates pertaining to important informational meetings, public hearings, and other information relevant to LLNRD activities and policies. Users can opt-out at any time by replying “STOP.”

The Lower Loup NRD also has several social media channels. Posts are regularly added to Facebook, Instagram, and X, to inform about current projects, cost-share programs, educational events, holiday hours, and more. Sometimes we simply post beautiful photos taken in the District. The LLNRD’s YouTube channel features a variety of videos ranging from water quantity project updates to chemigation inspection tips. Some of the most popular videos feature drone footage taken from high above LLNRD recreation areas.

The LLNRD.org website was redesigned last year. The user-friendly format allows website visitors to easily locate information and forms, and keep up with LLNRD news. People can always email us at info@llnrd.org, or reach out to us the old-fashioned way with a phone call to (308) 728-3221.



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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.

A Message from the Manager



LLNRD General Manager
Russell Callan

Dr. Ray Ward, founder of Ward Laboratories, Inc., in Kearney, and a respected leader in the field of soil health testing, spoke recently to a gathering of Lower Loup NRD staff and members of our Board of Directors.

In his presentation, “Nitrogen Testing & Nitrogen Use,” which is based on decades of his research, Ward revealed that on average, producers apply 1.1 lbs. of nitrogen (N) per acre of corn planted, **but the grain only uses .67 lbs.**

He questioned what happens to the excess fertilizer, and then asked the attendees if it is acceptable to just “let it go?”

Ward then talked about the conversion of nitrogen to nitrate, nitrogen use efficiency and how water carries

nitrate through soil, and how soil sampling can help producers take into account how much nitrogen is in the soil and then only applying enough nitrogen for the current crop. Nitrogen credits for planting legumes, and considering nitrogen in irrigation water were discussed, as well as the benefits of crop rotation, cover crops, plant diversity, and minimizing soil disturbance.

In 2024, University of Nebraska Extension published the NebGude, “In-Season Nitrogen Management for Irrigated Corn.” The first paragraph includes this impactful statement, “Fall N application, and significant N application prior to planting in the spring, is not recommended for irrigated corn.”

Fertilizer applied before planting is subject to leaching out of the root zone and toward groundwater resources before plants are present to use it. Ongoing vadose zone research performed by Lower Loup NRD staff

members shows that depending on soil type and precipitation – nitrates can sink through the soil profile up to nearly 1 inch per day. That means it can escape the root zone entirely in a month’s time. Fertilizing before plants are present to benefit from fertilizer is financially wasteful and detrimental to the water resources that belong to all Nebraskans. In-season application is the way to go. Find NebGuide G2365 for free online at extensionpubs.unl.edu/.

I hope we can all agree that knowingly allowing excess fertilizer, or agricultural chemicals of any kind to get into our water resources – which costs producers money and jeopardizes human health – does not represent good stewardship of our limited natural resources.

And to answer Dr. Ward’s question, No, it is not OK to just let that nitrogen go.



In-season Fertilizer Application is Best: Here’s Why

Spring is quickly approaching, and it will soon be time to get the planters hooked up and put seed in the ground for the 2025 growing season. Do you know the nutrient status of the soil you’re about to seed into? Considering evidence gathered during the Lower Loup NRD’s ongoing Vadose Zone Study, it may be less than you think.

Routine soil testing is invaluable for determining what is out there. With an open winter last year and considering conditions so far this year, soil nutrition may have changed significantly between fall and spring sampling.

There is strong evidence in the Lower Loup NRD study – as well as from UNL – that to prevent potential loss of nitrogen due to weather conditions, applying in-season nitrogen is not only best for your crop but also best for your bottom line and the environment. In 2024, Lower Loup NRD technicians applied potassium bromide (KBr) to 10 sites as a tracer to simulate the movement of Nitrate through the soil since it has the same negative charge as NO₃. On those sites the average percolation rate of the tracer was 0.94” per day. Some previous research indicates that the KBr rate can be an overestimation of 20-25%. Even if going with the high side of overestimation, that would mean a daily percolation rate of 0.71”.

The Lower Loup NRD (LLNRD) also had three SoilVue10 moisture probes spread across Platte and Greeley counties. Consistently, there was only root uptake shown on these sensors down to 19.4 to 24 inches. This is a much shallower rooting depth than generally believed. Research shows that with genetics and the breeding programs of today’s hybrids, the root mass and zone have increasingly moved toward the surface. This makes

sense as hybrids become more drought tolerant since the most efficient way to take up water and nutrients is to stay close to the surface to fight water loss and to utilize as much water as possible (irrigated or rained).

What does all this information and data show us? With our soil data paired with that of the bromide tracer, nitrogen moves quicker in our soils than many people realized. This movement is also heavily influenced by water moving through the soil profile (as was shown from the wet spring). Add on the observations and studies about the shallower root depths, and it is obvious that in-season nitrogen application is ideal. Not just ideal to help prevent potential leaching and loss but also best for your crop.

Did you know that at V6 (mid-June in 2024) a corn plant has only taken in 10% of its total required nitrogen for the year! Just another reason to push your nitrogen applications to when the plant is needing it later in the growing season.



LLNRD technician Shay Reilly applies a bromide tracer to a test plot within a cornfield in Platte County.



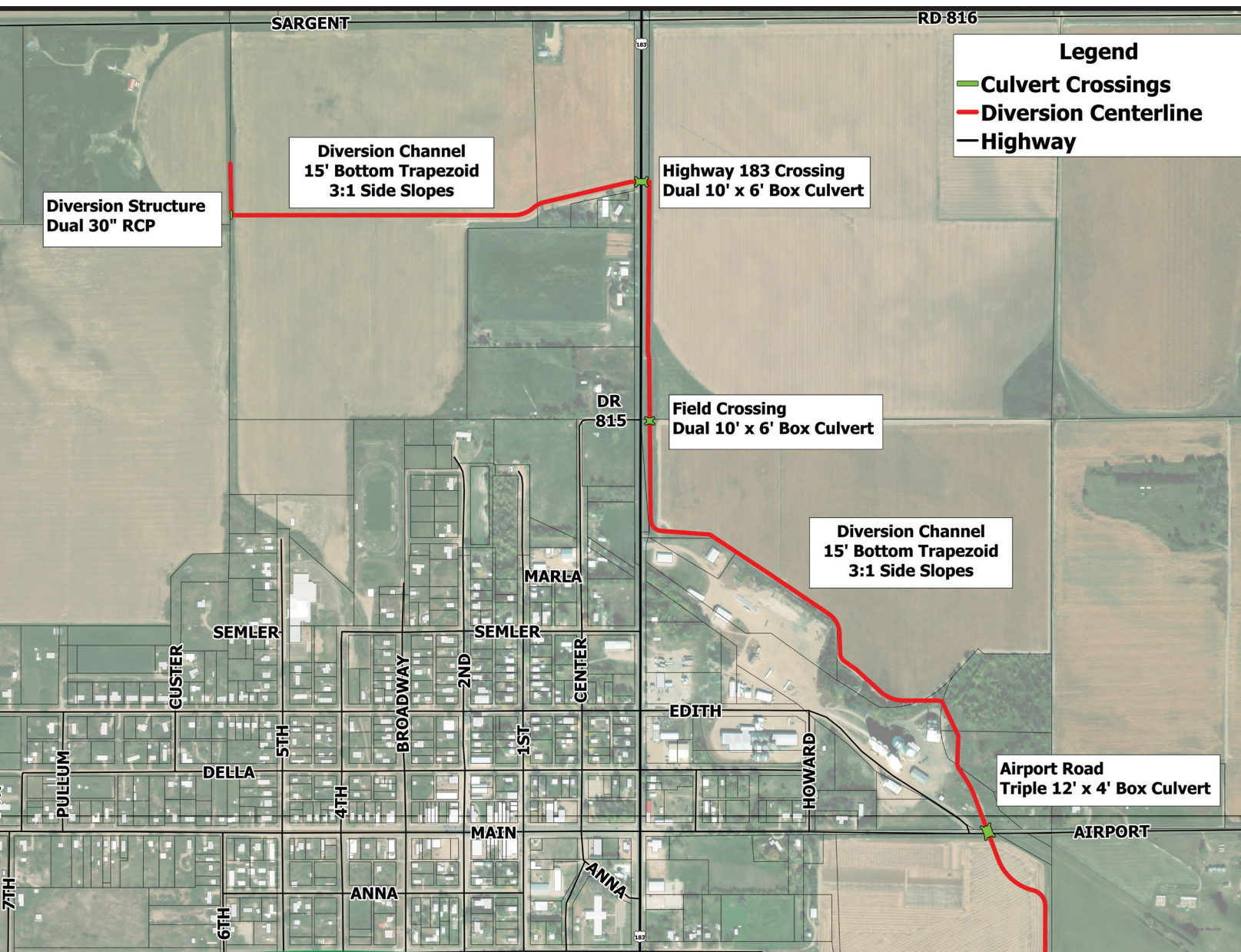
Visit www.LLNRD.org for news, events, forms, applications, rules, newsletters, to opt-in for SMS alerts, and more from LLNRD.

Sargent Flood Resiliency Project Update

Design of the Sargent Flood Resiliency Project is moving forward. JEO Consulting Group has completed 60% of the design. This project is intended to alleviate flooding and damage from elevated groundwater levels in Sargent. The project is funded by the City of Sargent, the Lower Loup Natural Resources District, a Water Sustainability Fund Grant through the Nebraska Department of Natural Resources (NeDNR), and the Federal Emergency Management Agency (FEMA).

An open house was held in September 2024 where representatives of JEO Consulting Group and LLNRD explained the project and answered questions from the public.

The design is scheduled to be completed by June 2025. FEMA must review and approve the design to confirm that the project remains feasible before construction can begin. LLNRD hopes that construction can begin in the spring of 2026, but that will be dependent on the time required for necessary reviews and permitting.



LLNRD Works with Communities for Source Water Protection

All communities face the challenge and responsibility of supplying safe, uncontaminated water to their residents. Municipalities test water year-round for a wide range of possible contaminants to ensure the water being supplied is safe to drink. This becomes more difficult when nitrates, selenium, arsenic, bacteria, or other contaminants start being detected in wells.

The City of Fullerton recently had to locate a site for a new municipal well due to a well testing above the legal maximum contaminant level for selenium, one of many naturally occurring elements that can contaminate wells.

There are strict requirements for well drilling, including set-back distances that must be met before any drilling can occur. This can be a challenge due to the sheer number of wells that are registered in Nebraska. For example, there are more than 11,000 irrigation wells in the Lower Loup Natural Resource District alone.

Abandoned wells also pose a threat to water sources, and are illegal if not properly capped with a watertight seal. The LLNRD works with the communities of the district to locate and properly decommission unused wells. The City of Fullerton is currently working to close abandoned wells and protect their drinking water wells within the wellhead protection area (WHPA). This is especially important, since the community is actively working to protect their source water while planning for future well sites.

NiRIA Program Update

The Lower Loup NRD and the Nebraska Department of Natural Resources have partnered to offer a new cost-share program to reduce nitrogen fertilizer inputs.

The Nitrogen Reduction Incentive Act (NiRIA) Program was established to provide incentive payments to producers for reducing the use of commercial fertilizers. The requirements of NiRIA are that participating producers verify a reduction in nitrogen application rates of 40lb per acre or 15% reduction of their baseline application rate.

The Lower Loup NRD received 69 applications for the NiRIA Program. The applications covered 7,431.37 acres across 8 counties in 3 Priority Areas established by NiRIA Program guidelines. There were

The LLNRD has a cost-share assistance program for landowners wishing to decommission an abandoned well. The program provides up to 100 percent cost-share for well abandonment if the well is located within a community's WHPA and 70 percent cost-share for any wells located outside this community boundary. Requirements include:

- A licensed well decommissioning firm must do the work.
- The application must be approved by LLNRD before the work takes place.
- Decommissioning must be in accordance with Nebraska Department of Health regulations.

For more information on well abandonment or an application for cost-share assistance, contact the Lower Loup Natural Resources District, 2620 Airport Drive, Ord, Nebraska, 68862. You may call the LLNRD at (308) 728-3221, and cost-share applications are also available at www.LLNRD.org.



Davis Creek Recreation Area Update

The road paving project through Davis Creek Recreation Area that began last fall continues as Nebraska winter weather allows. Mild conditions in November allowed the crew to complete about 40% of the paved surface before colder weather slowed work to a halt. In addition to the remainder of the road; approaches, entrances, and exits to the shower house, campgrounds, and other amenities will also be paved. This project is being funded through Bureau of Reclamation Title 28 grant funds.



Campground reservations are not being accepted during the entirety of the paving project. Vehicular access via Davis Creek Road is prohibited until the road officially reopens. Public access to the reservoir is available at several nearby Nebraska Game and Parks Commission sites. Updates are being provided through area media, the LLNRD's social media accounts, through LLNRD newsletters, and at LLNRD.org. These same communication channels will announce the reopening dates of the road once that information is known.

Camp Hosts Needed at Davis Creek Recreation Area

The Lower Loup Natural Resources District is seeking camp hosts for Davis Creek Recreation Area. Camp Host is a volunteer position with the benefits of a free, reserved camper pad at Davis Creek Recreation Area.

Camp Hosts must be over 18 and be willing to act as a steward and the public relations contact at the recreation area. Responsibilities include greeting campers and answering questions, assisting in campground registration and reservations when needed, understanding and explaining the rules and regulations of the recreation area, notifying LLNRD staff and/or law enforcement/first responders in the case of an emergency. All interested volunteers will need to complete a campground host supplemental application and return it to the Lower Loup Natural Resources District.

The host program operates from May to September each year. Approved camp host volunteers must reach an agreement with the Lower Loup NRD on the dates they will be hosting. Davis Creek Recreation Area is currently under construction for an entry road improvement project and no campground reservations will be accepted until the construction is completed. Visit LLNRD.org and LLNRD social media channels for updates on the road construction progress.

Chemigation Training Available Online

Anyone planning to apply any chemical to farm fields through chemigation must have a current certified chemigation applicator license. Online training and certification is available at <https://pested.unl.edu/training-and-certification/chemigation/>. Annual permits are also required. Find the permit application at LLNRD.org