



# 2023 Long-Range Implementation Plan



## **Introduction**

In 1978, the Nebraska Unicameral passed LB 783 (Revised Statutes of Nebraska, 1943, sections 2-3201 through 2-3261) which changed the formal planning process of natural resources districts. The change was to outline the process for planning of resources development, management, utilization, and conservation as one of the purposes of natural resources districts. For planning purposes, areas of responsibilities of the natural resources district were consolidated under the Nebraska Natural Resources District Act.

Nebraska Revised Statute 2-3277 specifies that each district shall prepare and adopt a long-range implementation plan which shall summarize planned district activities and include projections of financial, labor, and land rights needs of the district for at least the next five years and the specific needs assessment upon which the current budget is based. District long-range implementation plans shall be reviewed and updated annually.

The Lower Loup NRD (LLNRD) is dedicated to the conservation, protection, development, and management of our natural resources. The 21-member locally elected Board is charged with the task of establishing policy that fits the interests of the State of Nebraska, the District, and its citizens. The General Manager is responsible for implementing the policies which utilize direction from the Board.

The LLNRD Board of Directors developed and updated a Master Plan in 2022 which spans a ten-year period and includes the District's goals and objectives pertaining to legislative authorities for Nebraska's NRDs. This Long-Range Implementation Plan will give a general timeline for completion and will indicate the funding necessary to carry out the goals and objectives.

The LLNRD works closely with local, state, and federal agencies to coordinate the management of conservation efforts. The District values these relationships and recognizes there in performing the tasks and responsibilities with which the LLNRD has been charged.

While required by Nebraska State Statutes, this plan is also designed to facilitate a greater understanding of NRD Goals and Objectives to the public. It is a resource to aid in making informed decisions and sound resource management. As such, the approved long-range plan is posted annually to the NRD's website for public consumption.

## **The Natural Resources Districts' Declaration of Intent**

*The Legislature hereby recognizes and declares that it is essential to the health and welfare of the people of the State of Nebraska to conserve, protect, develop, and manage the natural resources of this state. The Legislature further recognizes the significant achievements that have been made in the conservation, protection, development, and management of our natural resources, and declares that the most efficient and economical method of accelerating these achievements is by creating natural resources districts encompassing all the area of the state, as provided by this act.*

More specifically, the Legislature provided 12 purposes of NRDs in Section 2-3229.

*The purposes of natural resources districts shall be to develop and execute through the exercise of power and authorities contained in this act, plans, facilities, works, and programs relating to:*

1. *Erosion prevention and control*
2. *Prevention of damages from flood water and sediment*
3. *Flood prevention and control*
4. *Soil conservation*
5. *Water supply for any beneficial uses*
6. *Development, management, utilizations, and conservation of groundwater and surface water*
7. *Pollution control*
8. *Solid waste disposal and sanitary drainage*
9. *Drainage improvement and channel rectification*
10. *Development and management of fish and wildlife habitat*
11. *Development and management of recreational and park facilities*
12. *Forestry and range management*

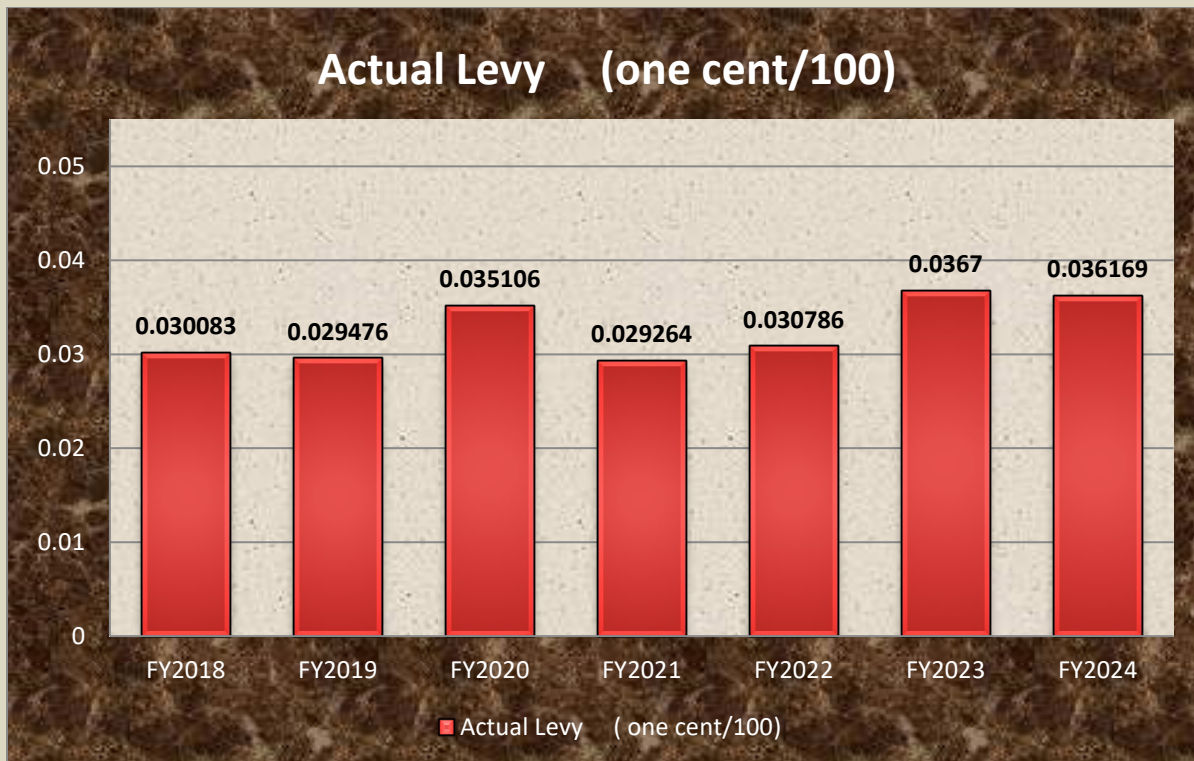
## **The District's Priorities**

The Lower Loup NRD Board of Directors met and developed a prioritization of the District's general direction and focus. A prioritized list of items was generated and will be used to assist the General Manager and staff in the planning and budgeting process --

- Priority 1. Monitor and continue work on Water Quantity and Quality
- Priority 2. Develop innovative cost-share programs
- Priority 3. Promote and research No-Till/Cover Crops
- Priority 4. Irrigation Efficiency Management
- Priority 5. Promote Forestry (Rural and Urban)
- Priority 6. Investigate New Irrigated Acres
- Priority 7. Continue to emphasize Range Management
- Priority 8. Continue work on Flood Control/Protection
- Priority 9. Work to promote wildlife habitat, wetlands, outdoor recreation (hunting/fishing)
- Priority 10. Parks/Recreation Areas/Trails
- Priority 11. Buffer Strips/Streambank Erosion
- Priority 12. Invasive Weeds
- Priority 13. Promotion of NRD to Public
- Priority 14. Relationship/interaction with Irrigation Districts
- Priority 15. Water Quality Regulation
- Priority 16. Development of beneficial management policies
- Priority 17. Consider/implement alternative water quality treatments
- Priority 18. Wellhead Protection
- Priority 19. Development/regulation of new crop land
- Priority 20. Ecotourism

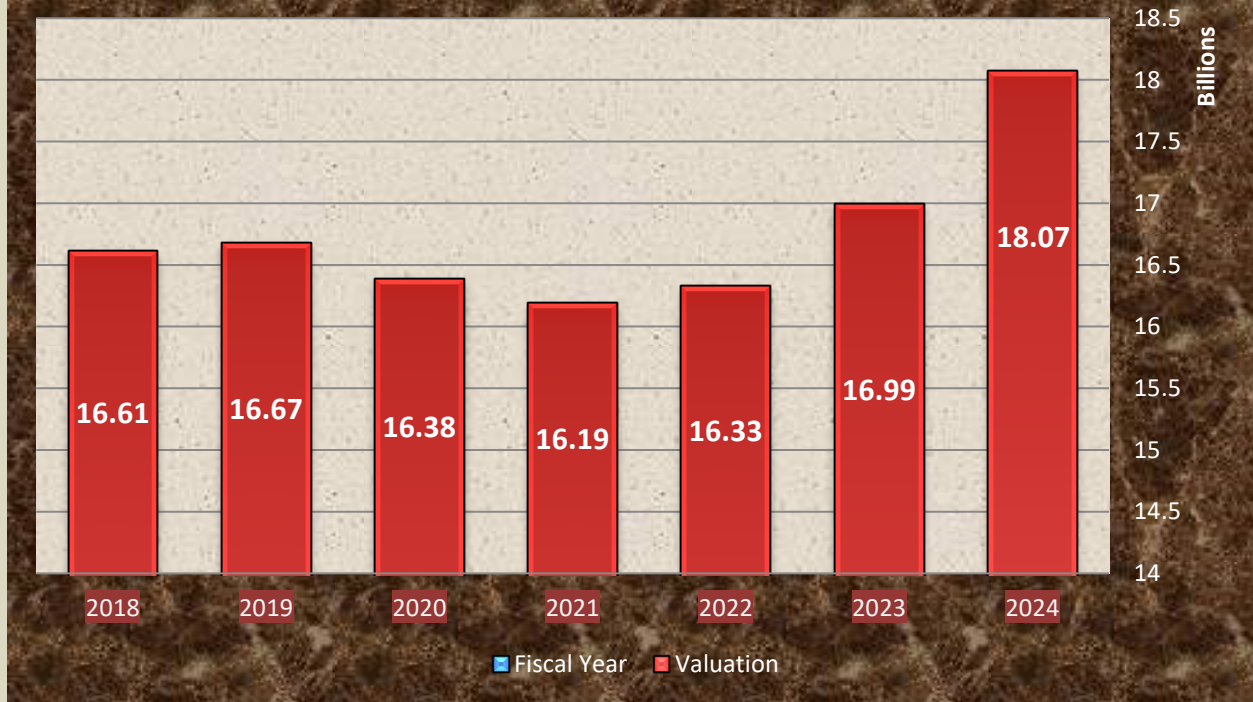
## District Financing and Budgeting

The Lower Loup NRD has multiple funding sources available including a taxing authority of 4.5 cents granted when NRDs were formed starting in 1969, the 1 cent levy granted for water programs in 2004, the occupation tax granted in 2007, the ability to assess fees through improvement project areas, the ability to charge fees for certain services, and matching funds received through grant funding. This allows the District the ability to obtain financing by sources other than just tax dollars. The District's budget, property tax request, and resulting levies are set and approved by the Board of Directors.



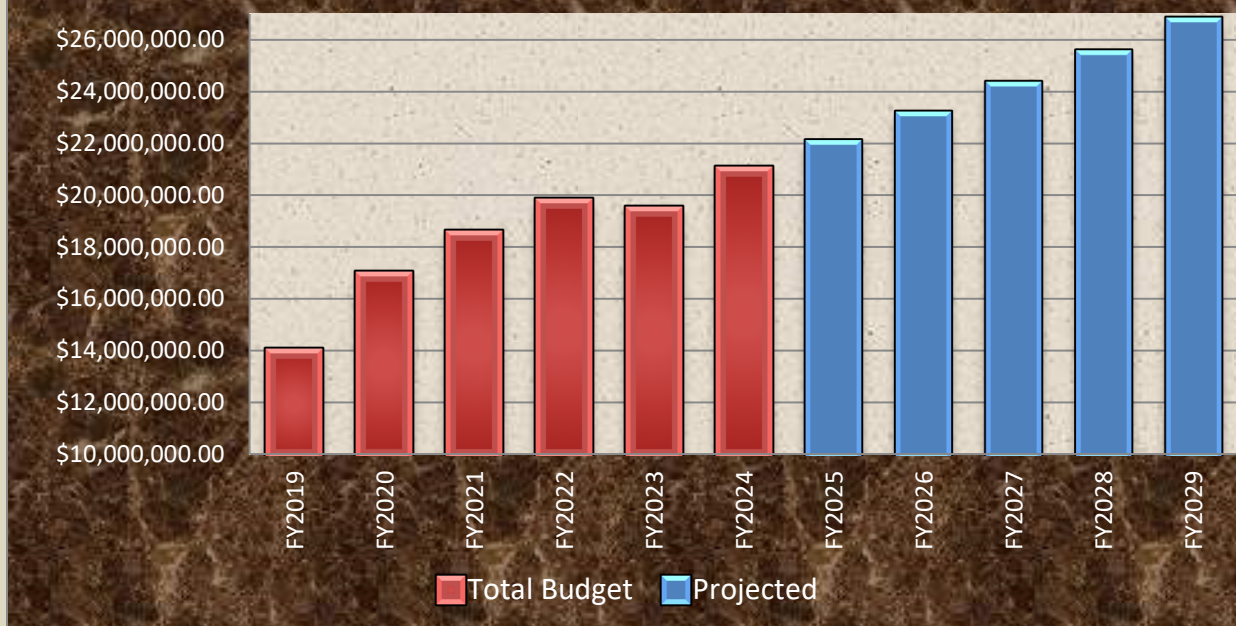
The District is comprised of all or parts of 16 counties. The counties are diverse from an urban/farming setting in the east to rangeland in the northwest. The LLNRD works with the county assessors, who are responsible for setting the county valuations. The valuation change has continued to see a significant increase across the NRD associated counties.

## District Valuation in Billions

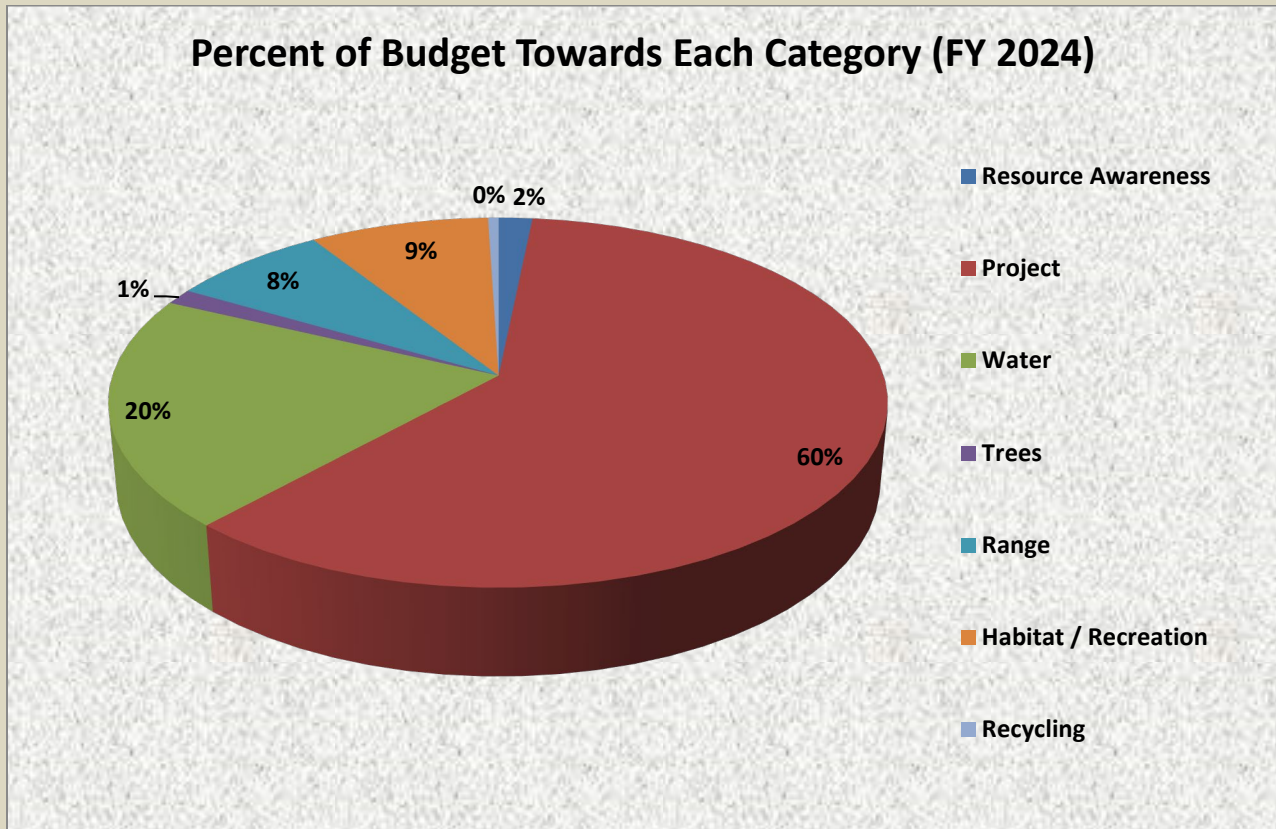


The Board of Directors and the General Manager of the District are charged with the task of balancing the need to manage our natural resources and the responsibility to use patron tax dollars wisely. This task is a complicated one, especially with the increasing statutory requirements and expanding demand for natural resources.

## District Total Budget



The following pie chart looks at the percentage of the total projected budget that could be spent in each category.



This spreadsheet shows what the budgeted amount is for each general category by fiscal year.

Description	FY2024	FY2025	FY2026	FY2027	FY2028	Total
Resource Awareness	\$135,200.00	\$139,270.00	\$143,543.50	\$148,030.68	\$152,742.21	\$718,786.38
Flood Protection	\$15,807,536.00	\$2,055,000.00	\$2,070,750.00	\$2,087,287.50	\$2,104,651.88	\$24,125,225.38
Water Quantity	\$1,076,152.00	\$1,113,652.00	\$1,153,027.00	\$1,194,370.75	\$1,237,781.69	\$5,774,983.44
Trees	\$112,573.00	\$117,201.65	\$122,061.73	\$127,164.82	\$132,523.06	\$611,524.26
Water Quality	\$799,500.00	\$839,475.00	\$881,448.75	\$925,521.19	\$971,797.25	\$4,417,742.18
Soil Erosion	\$405,000.00	\$425,250.00	\$446,512.50	\$468,838.13	\$492,280.03	\$2,237,880.66
Range	\$612,187.26	\$642,796.62	\$674,936.45	\$708,683.28	\$744,117.44	\$3,382,721.05
Drainage Improvement	\$111,000.00	\$111,000.00	\$111,000.00	\$111,000.00	\$111,000.00	\$555,000.00
Fish and Wildlife	\$55,000.00	\$60,000.00	\$60,000.00	\$70,000.00	\$75,000.00	\$320,000.00
Habitat / Recreation	\$1,167,000.00	\$1,177,000.00	\$372,000.00	\$387,000.00	\$400,000.00	\$3,503,000.00
Recycling	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$45,000.00	\$225,000.00

## District Staffing

The Lower Loup NRD has a staff of 20 full-time employees at the District Headquarters office in Ord. The staff also includes 7 District Secretaries at the Natural Resources Conservation Service offices in Albion, Broken Bow, Burwell, Columbus, Fullerton, Ord, and St. Paul. There are also 4 NRD Field Staff located in Broken Bow, Columbus, Spalding, and Fullerton. Part-time and seasonal staff are employed for tree planting, drip irrigation installation, and maintenance of the NRD Arboretum, as well as Davis Creek and Pibel Lake recreation areas. Vacant positions represent personnel needs for the District in various operating capacities. Projected personnel need necessary for the NRD to continue its operations are highlighted in yellow below.

<b>Russell Callan</b> General Manager	<b>Tylr Naprstek</b> Assistant General Manager	<b>Irene Kreifels</b> Administrative Assistant
<b>Dell Harris</b> Water Resources Specialist	<b>Cheryl Hornickel</b> Programs Assistant	<b>Jane Klanecky</b> Secretary/Receptionist
<b>Kimberly Lyons</b> Financial Secretary	<b>Kevin Gustafson</b> District Engineer	<b>Cacey Wilken</b> Water Modeling Coordinator
<b>Alan Bartels</b> Information & Education Coordinator	<b>LeeAnn Smith</b> Water Programs Assistant	<b>Brant Bechtold</b> Information & Education Specialist
<b>Anne Freeman</b> Program Secretary	<b>Phillip Hill</b> Park/Shop Superintendent	<b>Derek Domeier</b> Assistant Recreation/Shop Manager
<b>Dan Ruterbories</b> Rangeland Management Specialist	<b>Vacant Position</b> Projects Coordinator	

## District Secretaries

<b>Kandis Bremer</b> Albion Field Office	<b>Jeri Rosno</b> Columbus Field Office	<b>Peggy Griffin</b> St. Paul Field Office
<b>Alyssa Dubas</b> Fullerton Field Office	<b>Michelle Gibbens</b> Broken Bow Field Office	<b>Julie McBride</b> Burwell Field Office
<b>Vacant Position</b> Spalding Field Office	<b>Beverly Smedra</b> Ord Field Office	

## NRD Field Staff

<b>Jon Westerby</b> Conservation Technician Broken Bow	<b>Ken Dawson</b> Water Resources Technician Ord	<b>Ed Drozd</b> Conservation Technician Columbus
<b>Harold Benton</b> Water Resources Technician Ord	<b>Mike Lorenz</b> Agronomy Technician Fullerton	<b>Jason Moudry</b> Water Programs Specialist Ord
<b>Jordyn Duffek</b> Conservation Technician Spalding	<b>Brian Kolar</b> Projects Technician Ord	<b>Ryan Hellbusch</b> Water Quality Technician Columbus

## **District Goals and Objectives**

The Lower Loup NRD’s Master Plan lists 11 goals and objectives of the District derived from the 12 basic purposes established by the Nebraska Legislature in Sections 2-3229. This Long-Range Implementation Plan will give each one of those goals a general timeline for completion, a relative priority by the Board of Directors, and the financial obligation to complete the tasks. This plan is a working document with yearly reviews and updates by both the District staff and Directors.

The accompanying goals and objectives are modified to reflect changes of the District operation yet remain the same.

1. Resources Awareness
2. Prevent damage from flood water
3. Development and management of groundwater and surface water for beneficial uses
4. Forestry management
5. Water quality and pollution control
6. Erosion prevention, control, and sediment reduction
7. Range management
8. Drainage improvement and channel rectification
9. Development and management of fish and wildlife habitat
10. Development and management of recreational and park facilities
11. Solid waste disposal

### **1) Resources awareness**

The Lower Loup NRD has kept pace with continued promotion of natural resources conservation and NRD programs. The Lower Loup NRD has increased the number of publications that include a quarterly newsletter and multi-media programming. The NRD utilizes two newsletters, *In The Loup* and *Water Matters*, to share details of ongoing projects and programs. Both newsletters cover a wide range of NRD activities and provide information on the various work of the District. Because of the increased focus on water quality, *Water Matters* became a biannual newsletter, and the targeted audience was adjusted from just the Water Management Quality Areas 28, 29, and 30 to an NRD-wide publication. More correspondence is being sent to all residents with wells where groundwater nitrate level test results are high.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	Fits all priorities	\$248,650.00



The LLNRD is increasing public outreach through most available internet platforms and has increased the use of social media outlets such as Facebook and YouTube. The NRD is also in the process of creating an overhaul on its website to improve communication and allow additional features such as interactive maps. New this year is a revised Crop Water Use Report with easily consumable crop water needs graphs, updated throughout the growing season. The website provides the public with access to a variety of data, ranging from the NRD's Groundwater Management Rules and Regulations to announcements and minutes from the NRD Board of Directors meetings. Over the last year, traffic on the website equates approximately 2,000 unique page views per month. Facebook had 210 unique posts, and there have been 628 views across the Lower Loup NRD YouTube channel over the last year with Davis Creek flyover footage accounting for the most (170 views).

Timeline	Priority	Projected Cost FY 2024-2028
1 – 5 Years	Fits all priorities	\$269,000.00



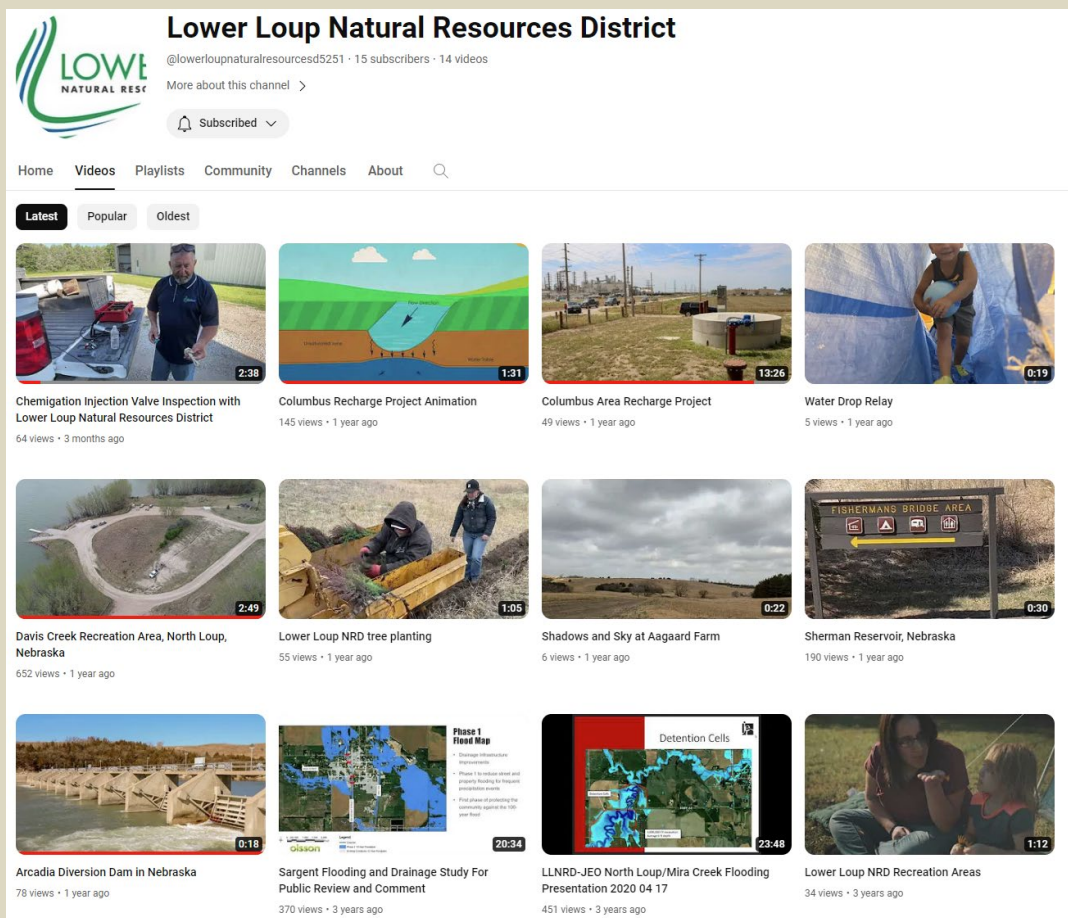
Some examples of the publications released over the last year.

The Lower Loup NRD assists, hosts, and sponsors educational opportunities for both elementary and secondary school students across the District. Elementary students may attend LLNRD presentations at the annual Groundwater Festival in Grand Island and the Conservation

Celebration in Ord. Middle School students are part of the Adventure Camp about the Environment (ACE), sponsored in part by the LLNRD. These events provide students the opportunity to showcase their knowledge of natural resources in a competitive setting.

New for fall 2023 is an outreach event known as “MUDFEST.” This event instructs students about soil and water – two of our most precious natural resources. Four schools brought a total of 100 fourth graders for the event where they allowed to have a hands-on learning experience in an outdoor classroom. Personnel from four Nebraska NRDs, as well as Nebraska Extension (Garfield County), NRCS, and JEO Consulting, presented 30-minute sessions on soil or water. The event will hopefully continue to be a draw for area schools.

Timeline	Priority	Projected Cost FY 2024-2028
1 – 5 Years	Fits all priorities	\$201,100.00

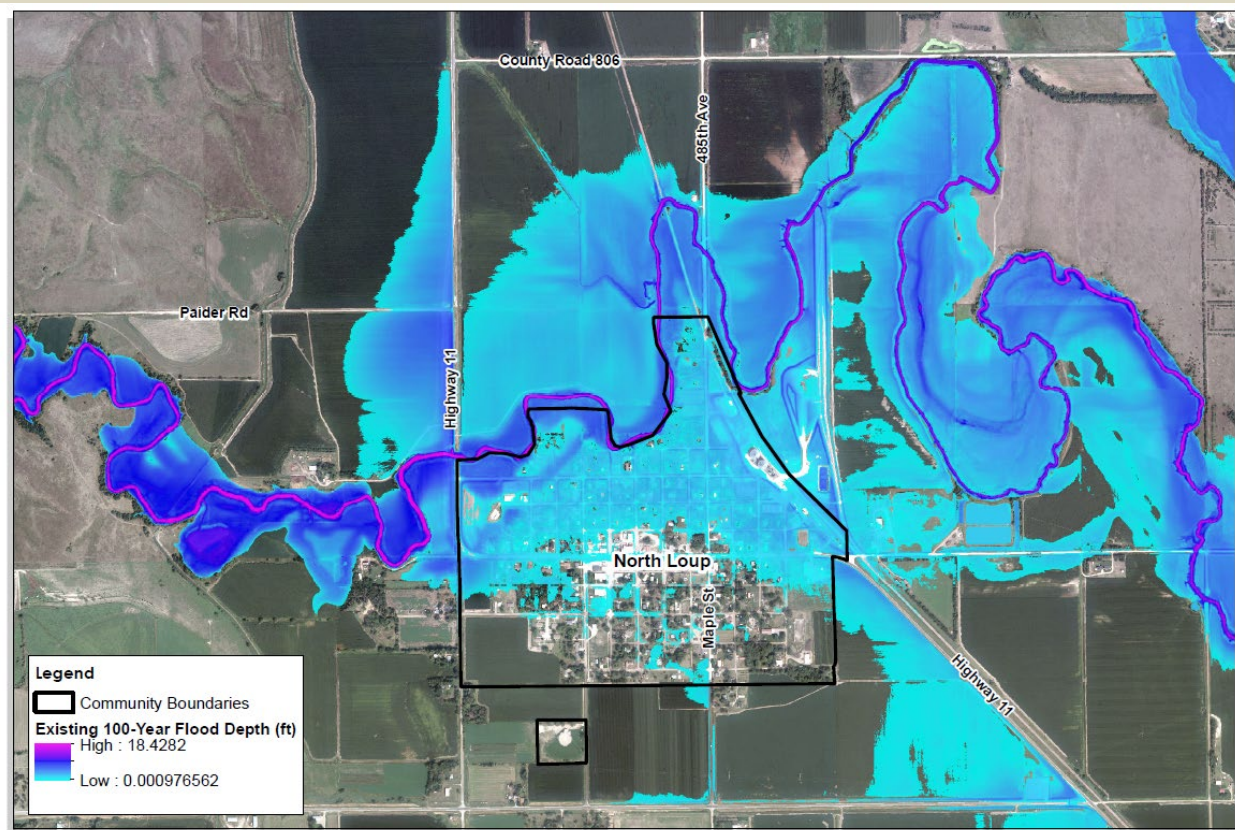


A snapshot of Lower Loup Natural Resources District – YouTube Channel

## 2) Prevent damage from flood water

Continuing after the events of 2019, assisting communities with flooding and water control structures remains the highest priority across budgetary demands and is represented by

community needs within the NRD. Both infrastructure improvements in preparation for the next flooding disaster and emphasis on sound watershed planning and management are part of the Lower Loup NRD planning strategy. The LLNRD has hired a full-time District engineer to initiate design conversations and hold sound information support on potential construction design options. This improves both technical assistance and financial options to urban and rural governments. The LLNRD has two separate Watershed and Flood Prevention Operations (WFPO) through the Natural Resources Conservation Service (NRCS). The Mud Creek plan features some dry reservoirs near the town of Ansley and has been submitted to NRCS for national acceptance. Mira Creek WFPO involves channel widening and clean-out north of North Loup and includes a berm. The Mira Creek plan has been submitted to NRCS for regional approval.



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 Date: 12/27/2022  
 Software: ArcGIS 10.8.1

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### Existing 100-Year Floodplain

Mira Creek WFPO & EA

0 500 1,000 Feet

A modeled 100-Year Flood Depth Impact as part of the Mira Creek WFPO

Communities the LLNRD has recently worked on infrastructure improvements in anticipation of future flooding events include Ansley, Belgrade, Broken Bow, Litchfield, Loup City, Sargent, North Loup, St. Edward, and Columbus.

The LLNRD Board of Directors understands the need for water storage and management within the District. The Board has expanded the budget for studies on potential locations and the need for dams, water augmentation, flood protection, and/or groundwater recharge/retiming projects. The NRD engineering position allows for some guidance in design for smaller communities without the available resources to hire a consulting firm.

The community of Sargent was particularly impacted during the flooding of 2019 and has requested funds from the Federal Emergency Management Agency to assist with drainage coming into town. The LLNRD has secured a state-funded Water Sustainability Grant as well as community support for this project and is dependent on federal funds to proceed with construction of an important bypass channel around the north end of the town.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	1,2,8,9,11,13,16,17	\$24,125,230.00

**3) Development and management of groundwater and surface water for beneficial uses**

The District continues to be well known for its management of water resources and this is showcased by emphases in long-term goals of the development and management of groundwater and surface water for beneficial use. This objective is a major factor of all NRDs activities and financial obligations. Over the last 20 years, water management has become a top priority of the NRDs and the public.

The District’s bi-annual water level measurements have become the standard for assessing availability of the resource in the area. The program includes static water levels, both manually recorded and collected through the installation of automated data loggers in dedicated monitoring wells, and privately-owned irrigation wells. The LLNRD also finances real-time well networks through the Conservation and Survey Division (UNL) and the United States Geological Survey (USGS) across the District. The NRD recently applied for and received funding from a USGS grant for the construction of five dedicated monitoring wells and the installation of real-time pressure transducers in a series of wells to be developed near the community of Petersburg. Mid-summer drawdowns created a necessity to supplement and replace wells associated with the statewide groundwater monitoring network to better assess stressed aquifer conditions.

The installation of flow meters across the District, specifically in the water quality areas as well as on a voluntary basis across the NRD, has allowed the District to promote efficient water usage in high-capacity irrigation wells. Currently, the NRD is undergoing rule changes to potentially require flow meter installation on all high-capacity wells in two sub-areas of the NRD that have been most impacted by ongoing drought. The District collects irrigation pumping data

from irrigation wells on over 1,000 sites across the NRD, as well as municipal well pumping data from all its 47 communities and all commercial/industrial high-capacity wells.

Starting in the summer of 2022 and extending through to fall 2023, there has been an ongoing drought impacting a majority of the NRD. In November 2022, the NRD Board of Directors accepted a Drought Management Plan that had been in development for 2 years with partial funding coming from the Water Sustainability Fund. Part of this plan is determining when a drought is taking place and determining what actions are necessary to offset the impacts as well as prepare those areas of the NRD that have been susceptible to drought for future mitigation efforts.



Field Staff Collecting Flow Meter Readings in Nance County

The LLNRD continues to collect 4-band, aerial infrared photography on an annual basis. Collection this year was done earlier to accommodate the drier temperatures because of ongoing drought conditions. The entire NRD was imaged between August 10 and August 22. Resolution has been improved to 0.25 meter (10-inch). Through these flights, the District has a snapshot of development that has taken place and can enforce established Rules and Regulations in the District’s Groundwater Management Plan. Given the ongoing drought conditions in summer 2023, the imagery should show excellent contrast between irrigated and non-irrigated ground.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	1,2,3,4,6,11,13,14,15,16,17,18,19	\$4,630,380.00

#### 4) Forestry management

Tree planting continues to be an important program for the LLNRD. The cooperation between the Nebraska Forest Service, the NRCS, and rural and urban citizens proves to be a great method to get meticulously designed windbreaks and tree plantings on the land. The District has seen a reduction in the number of trees planted in the last few years but continues to promote and recommend the planting of trees. As Emerald Ash Borer becomes more prevalent across the state, there may be a need to provide more diverse tree varieties. The 2023 tree planting season saw the first use of the newly built tree cooler. The updated tree cooler will help ensure higher survival rates of the conservation trees during the planting season. The NRD has been involved with improving awareness of available tree species and helped develop the new tree inventory complete with pictures.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	2,5,7,9,10,13,16	\$612,000



Spring hand plant preparation at the Spalding Field Office

The Aagaard Farm is an official State Arboretum site that the LLNRD uses to evaluate and demonstrate different tree species, study food plots, land preparation and herbicide uses. The Aagaard Farm has been a wildlife preserve since the NRD received the 480-acre farm. There are approximately 55 acres of various food plots and cover crop plantings used for demonstration

and review purposes. The maintenance building and dedicated monitoring wells on the farm have proven to be an asset for onsite training, such as hosting the NRD technician training in 2021 and the 2023 Envirothon.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	2,3,5,7,9,10,11,12,13,16	\$100,000.00

**5) Water quality and pollution control**

With the LLNRD Board of Directors’ approval of the Groundwater Management Plan in 1985, a commitment to water quality was made by the LLNRD. This commitment and enforcement are made possible by the Groundwater Management and Protection Act. In 2001, the Board of Directors approved rules and regulations that placed the entire District into an initial Phase I Management Area for water quality. The Phase I designation is a commitment by the Board to promote water quality, through educational outreach and water sampling programs. Through this outreach and widespread water quality testing, the public has gained a more thorough understanding of groundwater quality. In February of 2023, changes were made to the Rules and Regulations portion of the Groundwater Management Plan that saw the merging of the two higher phases, Phase II and III, which had similar management and reporting requirements. Now, an area with higher well nitrates will be elevated to Phase 2 and have all the requirements that come with additional management of a Groundwater Quality Management Area.

The Lower Loup NRD has developed a Nitrate Vulnerability Model (NVM) for those areas in a Groundwater Quality Phase 2 Management Area. Given the amount of data required to be submitted on an annual basis, the NVM will help District staff determine which fields are routinely out of balance for available nitrates and the NRD rule change now requires that operators of those identified fields work with staff to develop a Nutrient Management Plan. This plan will examine how fertilizer application rates are determined, methods on how the field is fertilized, and conservation steps that the producer can take to bring the field back into balance.

Another rule change that impacts water quality is the lowering of the field size required as a representation for soil sampling. The new rule states that a maximum of 40-acres shall represent a field, which means a quarter of ground will now require a minimum of four soil samples to represent the field. With current agricultural technology, this will give the operator a better understanding of soil-available nitrates and provide better recommendations for fertilizer applications.

The LLNRD continues to lead the state in the number of water quality tests collected. Wells that are specifically targeted by NRD field staff include those sites that have a known depth and are registered with the state for ease when submitting to the statewide quality clearinghouse.

The clearinghouse database contains all nitrate and pesticide data collected from federal, state, and local agencies as well as the University of Nebraska. All data is screened based on established criteria and must meet quality objectives. The LLNRD sample total is due to the large expanse of land covered by the District and the high number of wells located throughout the area. Currently, the water quality program includes sampling approximately 2,200 domestic, livestock, and irrigation wells per year for nitrates. Irrigation wells are sampled during chemigation inspections across the NRD; however, within each Groundwater Quality Management Area, all irrigation sites are sampled. Results from all water quality tests are provided back to the corresponding landowner.



Growing season vadose soil analysis near Genoa

The District staff has expanded the soil vadose sampling efforts across the NRD, with special emphasis on the eastern portion where groundwater nitrates are continuing to increase. The Lower Loup NRD discussed banning fall fertilizer application as part of the recent rule changes in the interest of protecting water quality. This proposed rule change was suspended for the NRD to collect more information regarding the amount of potential contamination in the vadose zone on different fields being applied with differing fertilizer methods, including fall application. A few fields have been sampled monthly to examine how quickly nitrates are moving through the profile. Once compiled, Lower Loup NRD Staff & Board will analyze the



collected data to make a more informed decision as to what rules could potentially be implemented to promote and protect water quality.

The Lower Loup NRD has entered into an agreement with the USGS and Lower Platte North NRD to investigate age-dating nitrate contamination at the Loup River confluence with the Platte River and further downstream. This will provide all parties with information as to how old the nitrate contamination problem is and includes LLNRD Groundwater Quality Management Areas 28 & 30 near Columbus.

Two additional studies are being executed in collaboration with the UNL Water Science Center, both to examine the isotope composition of the nitrate contamination. Nitrate isotopes are being analyzed to determine the origin of the contaminants within the vadose zone, the area between the root zone and the aquifer. In GWQMA 29 in northeast Wheeler County, an isotopic water study was done to determine whether the source of the nitrate contamination was due to commercial fertilizer or an organic source such as animal waste application or leaky septic systems. Results from these studies will be publicized to bring awareness of the source of the nitrate problem.

The Lower Loup NRD Board has made a strong commitment to promote removing potential contamination sources near the Wellhead Protection Areas.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	1,2,4,15,16,17	\$4,417,750.00

**6) Erosion prevention, control, and sediment reduction**

The LLNRD has worked closely with the Nebraska Department of Natural Resources and the United States Department of Agriculture, through the NRCS, to provide technical and financial assistance to producers in the District for the prevention and control of soil erosion. The District has provided a mechanism for cost-share programs and staffing in both the NRCS and LLNRD offices. Through the Nebraska Soil and Water Conservation Program (NSWCP), eligible practices can receive cost-share to promote and install conservation measures. The Lower Loup NRD also promotes using the Environmental Quality Incentives Program (EQIP) through each of the NRCS field offices. Priority areas for applications have been designated in the three GWQMAs, the Wellhead Protection Areas, and the two 319 Watershed Management Areas (Clear Creek-Pibel Lake, South Loup River).

The NARD has worked to pass legislation to change the Erosion and Sediment Control Act to enable NRDs to better understand and enforce the Act.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Year	2,3,4,8,11,16	\$2,238,000.00

**7) Range management**

Since a majority of the District is comprised of rangeland, the Board has directed staff to work with NRCS to determine the workload and staffing needs to manage the rangelands. The NRCS has worked with the NRD on joint programs in the past and the NRD will continue to promote and assist with those programs under the Long-Range Implementation Plan and continue to show its dedication to range management.

The District has also furthered its commitment to range management through the hiring of a Rangeland Management Specialist in 2018 to promote range health and implement relevant cost-share programs.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	1,2,3,7,9,10,11,12,13,16	\$3,382,700.00



Range Judging Session

**8) Drainage improvement and channel rectification**

The LLNRD has repeatedly participated in channel rectification projects. The channel maintenance allows flood waters to travel past urban settings without causing additional damage. The District continues to provide potential financial assistance, as well as staffing services for these projects. The funding set forth in this portion of the budget can help a community being impacted with drainage issues. The NRD has recently helped Loup City with

applying for U.S. Army Corps of Engineers programs to assist with channel issues at the airport along the Middle Loup River.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	1,2,8,10,11,16	\$500,000.00

The Improvement Project Area (IPA) section of State Law provides an effective vehicle for groups of landowners to apply drainage improvements to their property. This authority was set forth in Nebraska Revised Statute 2-3252. The Duncan East IPA in Platte County is a good example of how these projects work. The NRD can participate in construction when it provides benefits to the public. Otherwise, any normal maintenance costs are the responsibility of the impacted landowners. A small amount of staff time is used for administration. NRD staff are continually on alert to situations where the formation of an IPA would be appropriate. The LLNRD has been proactive in the development of new IPAs. The District is always willing to work with producers to alleviate flooding issues through improvements to area drainage.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	2,8,9,11,13,16	\$55,000.00



Drainage Channel Maintenance by Lower Loup NRD Staff

**9) Development and management of fish and wildlife habitat**

The LLNRD continues to promote and encourage the development, enhancement, and protection of wildlife habitat. Habitat programs are supported through the tree planting program, grass seed program, and cost-share assistance programs in cooperation with the NRCS and are not figured in with this dollar amount. This item includes dollars targeted for a District habitat program.

The LLNRD continues to expand and work on a partnership with the Nebraska Game and Parks Commission to improve participation in the Open Fields and Waters Program. The LLNRD portion of the program is specifically targeted towards those areas already enrolled in the Conservation Reserve Program (CRP) to help promote habitat as well as improve accessibility for public enjoyment.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	2,5,9,10,13,20	\$325,000.00

**PUBLIC ACCESS ATLAS**  
 — FOR WALK-IN HUNTING, TRAPPING, —  
 AND FISHING IN NEBRASKA

The Open Fields and Waters Program is a joint project of the Nebraska Game and Parks Commission and valued partners. This atlas is valid through July 31, 2024.

Funding support provided by:

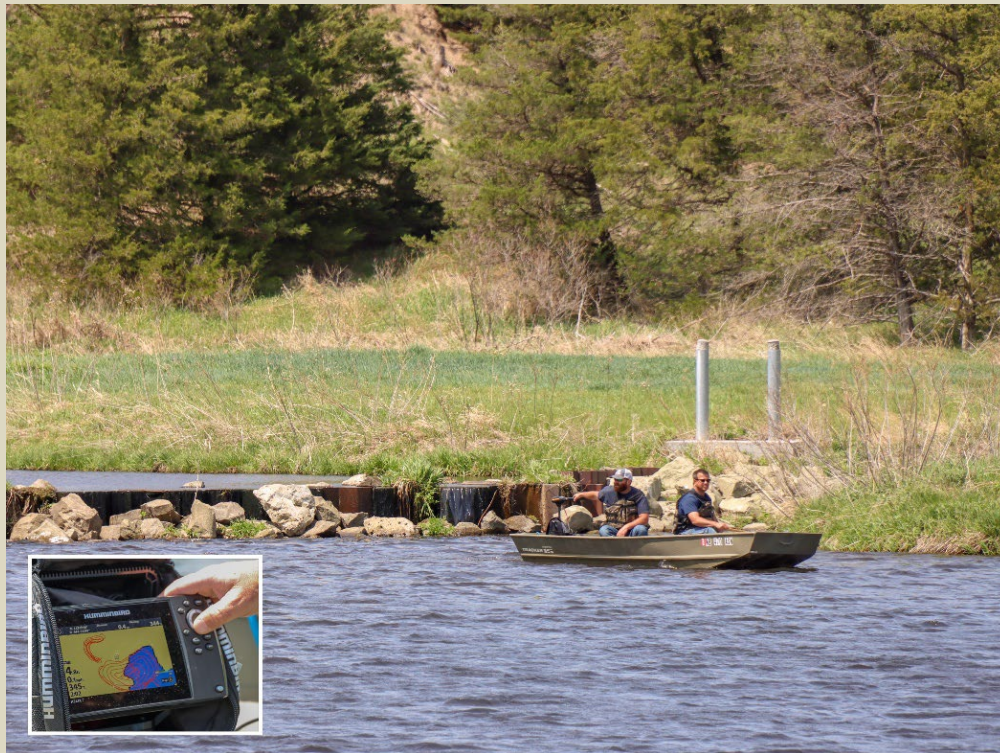
NEBRASKA GAME AND PARKS  
 PHEASANTS FOREVER  
 QUAIL FOREVER  
 SNAKE FISH & WILDLIFE RESTORATION  
 USDA  
 LOWER LOUP

Lower Loup NRD is continuing to improve its partnership with the Nebraska Game and Parks Commission

**10) Development and management of recreational and park facilities**

One of the most well-known of all LLNRD programs requiring a smaller portion of the budget, less than 10%, is the NRD recreational facilities. Pibel Lake is in south-central Wheeler County and is one of the few outdoor recreation areas in that vicinity of the state. In 2012, the Nebraska Legislature transferred lake ownership from the Nebraska Game and Parks Commission to the Lower Loup NRD. The recreation area received overdue maintenance and facility upgrades in 2015-2016. A picnic shelter, ADA accessible fishing piers and a walking bridge were constructed to allow access to the east side of the lake. A private donation was received to help the District purchase and erect free-standing playground equipment. Staff also utilized an Environmental Trust grant to install a sediment control structure to protect the lakes water quality as well as develop a watershed management plan to address quality issues upstream. In 2023, new lined pit latrines were installed at the main tent camping area and at the adjacent boat launch. The east ground, which was purchased in 2017, has been planted to alfalfa by the adjacent landowner and a Request for Proposal is pending to increase recreational opportunities and seek financial assistance for the expansion; specifically modernized RV camping, a new boat launch facility, and a walking/hiking trail encompassing the entire lake.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	5,9,10,13,20	\$275,000.00



Lower Loup NRD staff assessing the sediment settling basin on the upper end of Pibel Lake

Davis Creek Recreation Area has continued to be a well-recognized recreation facility in central Nebraska. The camping area continues to be full during the summer weekends and has seen more fall campers in recent years. Fishing and boating are important recreational activities to the area, and the LLNRD has added a new boat ramp, fish cleaning station, and camper dump site which receive high praise from weekend outdoor recreationists. Additional improvements include a maintenance building, playground equipment at each of the camping loops, and an outhouse at the inlet of the lake in cooperation with NGPC. In 2019, LLNRD staff completed a tent camping area near the original boat launch and have modernized all the RV camping sites to include 30/50-amp hookups. The county added asphalt to the access road to the edge of the recreation area and the NRD has received a Title 28 grant to fund concrete road access for the first one-third of a mile into the recreation area. Additional funding is being sought from the U.S. Bureau of Recreation – Title 28 funding to complete the entire loop.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	5,9,10,13,20	\$1,893,000.00



Summer Camping at Davis Creek Recreation Area

Trails have become popular in many District communities. Trails are functional for recreation, providing efficient routes for alternative transportation, as well as pleasant and safe places for activities such as walking, running, and biking. As the need arises, the LLNRD plans to continue to provide financial participation for recreation trails sponsored by public agencies or

community organizations. The LLNRD also purchased outdoor fitness equipment and placed it along the Arboretum trail near the office. Future requests for both trails and outdoor exercise equipment could become common as more communities realize the benefits.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	9,10,13,20	\$1,060,000.00

The Lower Loup NRD continues to promote community and urban forestry. The current Community Forestry Program requires that a public entity establish a legally constituted Community Tree Board. The program assists communities with tree inventories, planting, removal, and care. With an approved request, the program will also provide financial assistance for nursery stock and some supplies.

The District has seen a need to broaden the scope of this program to include additional functions such as urban recreation facilities, parks, playgrounds, and green space areas. As Emerald Ash Borer becomes more prevalent across the state, the LLNRD will need to be prepared for the potential increase in assistance requests as communities try to salvage or replace their stands of green ash trees.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	5,9,10,13,20	\$225,000.00



Ribbon Cutting at Ravenna Hike & Bike Trail

**11) Solid waste disposal**

The District will continue to encourage communities and organizations to promote and sponsor recycling. Through newsletters and the web site, the LLNRD will list recycling event times and dates. Tire recycling and electronic waste disposal continues to receive a lot of attention and may be offered by more communities across the District.

<u>Timeline</u>	<u>Priority</u>	<u>Projected Cost FY 2024-2028</u>
1 – 5 Years	2,9,10,13	\$225,000.00

**Conclusion**

The Lower Loup NRD’s mission is the conservation, protection, development, and management of natural resources in the lower portion of the Loup River Basin. The Board of Directors and staff will review, adapt, and amend this long-range plan to reflect the needs of the basin and its residents. Reviews will be done on an annual basis and any modifications to the goals and objectives deemed necessary will be made by staff at the direction of the Board.

This plan was approved by the Lower Loup Natural Resources District Board of Directors on **October 26, 2023.**