

Insight

Nemaha Natural Resources District

Dammed If We Don't

With aging infrastructure and more intense rain events, entities responsible for dam maintenance are left with few options to address the maintenance needs. So far, in 2024 the United States has had two notable dam failures in Minnesota and Georgia. Collectively across the United States, there are over 90,000 dams, many of which are at their typical designed lifespan of 50 years in age or older.

In the thick of dam building, entities like the Nemaha Natural Resources District (NNRD) were able to construct upwards of eight structures per year through a financial and technical partnership with the US Department of Agriculture (USDA). Following completion of watershed based projects, the NNRD was tasked with maintenance needs of the structures.

Maintenance is an essential component of any watershed structure throughout its designed lifespan and includes things like placing rock rip rap at the toe of the dam to protect the structure from wave action, removing trees from the dam and emergency spillway, and managing vegetation. While these maintenance activities are generally predictable and easier to budget, as structures move beyond their designed lifespan, the associated costs begin to rise; and maintenance becomes more intense. Over half of the dams within the NNRD are now beyond the 50-year designed lifespan. This number continues to increase each year climbing to 67% of structures over 50 years of age within the next five years.

Repair, on the other hand, involves fixing components that have failed or are broken to restore functionality or working to prevent a catastrophic problem from occurring. Repairs are less predictable and typically come with a much higher cost. For example, un-

expected repairs on a watershed structure near Adams could cost the NNRD over \$150,000 this year. Innovative techniques to repair structures do allow the watershed budget to be stretched further. Recently the life of tubes through some dams have been extended by installing a special lining instead of replacing the tubes. This saves time and money; but with 158 structures beyond their 50-year life expectancy, the NNRD is facing an uphill battle.

Federal programs are available to help resource districts manage the growing problem by rehabilitating old structures, decommissioning no longer functional structures, and constructing new structures. However, funding remains limited.

Dams provide critical protection for human lives, agricultural land, livestock, and the environment each year. The dam infrastructure in place saves residents millions of dollars in potential losses with each large storm event.

Despite the significant benefits these structures offer, the NNRD is tasked with managing this vital infrastructure on a limited budget, which is based on a 0.29999% tax per \$100 in property valuation this year. This funding constraint presents a significant challenge as the district works to address both immediate needs and long-term stability. The budgeting process is carefully prioritized each year. Tools like inspection reports are used to identify structures with immediate needs. By assessing the current condition of structures and predicting future needs, the NNRD is able to allocate funds to manage infrastructure.

So just what is the plan to tackle this growing problem? The NNRD will continue to prioritize innovative techniques to extend the lifespan of our structures, seek potential, alternate funding sources (such as grants) to spread tax dollars further, and to continue routine maintenance within budget allowances. Protecting life, protecting property, protecting the future... we are the Nemaha NRD.



Rip Rap Maintenance

Nebraska Buffer Strip Program

The Nemaha NRD is proud to partner with the Nebraska Department of Agriculture on the Nebraska Buffer Strip Program. If you have cropland acres adjacent to a waterbody or wetland that are continually not profitable, consider enrolling them into the Buffer Strip Program. Receive an annual rental payment of 120% of the CRP rental rate by soil type on a 5-10 year contract. Annual haying and grazing once established are allowed and sign-up is available year-round. To learn more visit your county's USDA service center.

Fall 2024

Recreation Area Updates

One of the most popular gems of the Nemaha Natural Resources District (NNRD) is probably the public recreation areas. Each year staff and directors work to prioritize the operation and maintenance needs of each recreation area while considering the wish-list items we maintain for each recreation area. Since our last recreation area update a lot has taken place! Check out the highlights below

New Duck Creek Recreation Area Kayak Launch



Arguably the most exciting recreation area update this year was the new kayak launch installed at Duck Creek Recreation Area. There was so much overwhelming support from the first launch installed at Duck Creek Recreation Area that crews have decided to install a launch at Iron Horse Trail Lake in the future. If you have used the new launch and would like to provide feedback, please call the office at 335-3325 or click the "contact us" button on our website.

Additional Updates at Duck Creek Recreation Area

Over the summer months portions of the walking trails at Duck Creek were resurfaced, and trees were planted in the non-electrical camping area. Due to an erosion issue that caused a significant cut from the electrical camper pads toward the lake, partners at the USDA Natural Resource Conservation Service designed a catch basin and tile drain system to safely convey water down the slope, promoting vegetation growth and resolving the erosion issue.

Wirth Brothers Water Levels

Unfortunately, the beach at Wirth Brothers Recreation Area was unusable this year due to drought conditions. Water levels were so low weekly beach testing could not be conducted safely.

Prairie Owl Recreation Area

After thoughtful discussion and consideration the Nemaha NRD's Board of Directors has decided to maintain ownership of Prairie Owl Recreation Area as a minimal maintenance area. The site is pack in and pack out with no restrooms or trash service available.

Shoreline Fishing Improvements at Iron Horse Trail Lake

Iron Horse Trail Lake's fishing jetties received a face lift this summer with new rock surfacing. 600 tons of rock was required to face the jetties with additional screenings for the standing surface.



Fishing jetties received new rock faces at Iron Horse

Steamboat Trace Flood Damages

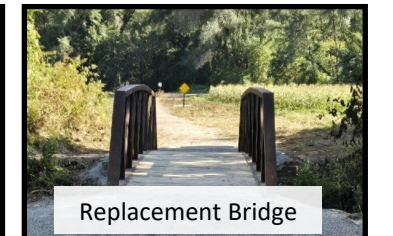
Flooding along the Missouri River closed the Steamboat Trace trail for a portion of this summer. Damages to the trail were thankfully much less than they were in the floods of 2019.



Following re-opening, the bridge just south of the Peru Depot was replaced this fall. If you haven't been to the Steamboat Trace in the fall, the NNRD encourages you to get out and explore! Users have designated fall as a favorite time to use the trail as the leaves change and put on a spectacular display of colors in the wooded segments!



Fall Colors



Replacement Bridge

Keep an Eye on Toxic Algae Into the Fall...

Although the weekly beach sampling came to an end in September, our friends at Nebraska Department of Environment & Energy want to remind everyone that toxic algae blooms can persist into the fall, even as temperatures drop. This is of particular importance to hunters that take their dogs along for the hunt. Be sure you know the signs of toxic algae prior to letting your pets swim or drink from surface water bodies.



FY24 Annual Report (July 1, 2023 to June 30, 2024) Programs

Conservation Assistance

The NNRD's Soil and Water Conservation Program works with NRCS offices to provide technical assistance, design, and layout of structural conservation practices that reduce erosion and facilitate better grazing management systems. In FY24 the NNRD along with the Nebraska Department of Natural Resources provided cost share assistance to landowners. The following conservation practices were installed throughout the district

- 13 miles of terraces
- 4.5 miles of underground outlets (tile)
- 5 acres of grassed waterways
- 275 windbreak trees/shrubs
- 9,215 cubic yard of diversions

Trees

9,575 trees and shrubs were sold through the conservation tree program. Of those trees and shrubs 4,050 were machine planted by the NNRD at 13 different locations. The remaining were picked up at the NNRD office.

Executive Travel continued their partnership with Nebraska's Natural Resource Districts working toward their goal to plant a million trees to promote its sustainability program.

Nebraska Buffer Strip Program

Over 745 acres in the NNRD were enrolled in the Nebraska Buffer Strip Program aimed at reducing cropland pollutants entering surface waters. The program provides annual payments for grass filter strips or riparian forest buffers along vulnerable surface water resources. Those acres earned a combined \$126,000 in annual payments in FY24.

Urban Special Projects

There were no Urban Special Projects completed in FY24. Communities seeking to develop/improve natural resources related recreation, education, or interpretation should visit www.nemahand.org/programs/cost-share to learn more about the program and if their project might be a good fit!

Education & Outreach

Plant-A-Tree

Third Grade Plant-A-Tree delivered 700 trees/shrubs to 15 area schools in the spring of 2024. Presentations on how to plant and care for trees accompanied the tree deliveries.

Envirothon

Four teams from District schools participated in the 2024 regional Envirothon competition. Norris went to the State competition as a wild-card.

Range Judging

Nemaha County hosted the Southeast Area Range Judging competition in September, 2023. 239 kids from 13 area schools participated. Johnson-Brock, Lewiston, & Norris competed at the State competition.

Land Judging

Area land judging was hosted in Beatrice in October of 2023. Falls City's team of Brock Niedfeldt, Ethan Morris, advanced to compete in the national competition in Oklahoma during the spring of 2024. The Nemaha NRD hosted the Southeast Area land judging competition October 2, 2024.

Weekly Radio Spot

In addition to usual advertising the NNRD continues to do short weekly live radio call in. Wednesday mornings at 8:15am you can catch the NNRD's General Manager, Kyle Hauschild, live on B103 discussing the current events at the NNRD.

Staff Years of Service

Charlie Pierce, Water Resources Specialist—20 years.

Aaron Stalder, Resources Specialist—25 years.

Students Compete At Southeast Area Land Judging



A total of 332 students and adults participated in the 2024 Southeast Area Land Judging competition held on Wednesday, October 2, 2024 in Johnson County, Nebraska. The farm of Arlen (Kathie) & Andy (Amber) Grotrian of Johnson generously hosted the event. Participants from a record eighteen schools were brought together to test their skills in soil and land evaluation. The competition, designed to promote sustainable agriculture and expose youth to potential career opportunities, continues to grow in size and importance.

The land judging competition challenges students to gain a better understanding of soil structure and land evaluation. Students learn to recognize physical features of soil, determine land capability for crop production, and evaluate management practices needed for proper stewardship. "Soils are the foundation of agriculture in Nebraska" said Mike Burgert, District Conservationist with the Natural Resources Conservation Service (NRCS) serving the Nemaha NRD.

The event was a collaborative effort between the USDA NRCS, Nemaha NRD, and Nebraska's Association of Resources Districts (NARD). Mark Willoughby, retired NRCS soil scientist volunteered his time for the ninth consecutive year as contest foreman. Landowners like the Grotrian family continue to play a crucial role in supporting the educational goals of the competition by offering their land as judging sites.

During the contest, participants had 20 minutes to judge each of

the four distinct locations. A notable update this year was the continued use of scantron technology to streamline the scoring process.

"We typically see around fourteen schools participate," said Ashley Rippe, Nemaha NRD Information & Education Coordinator. "But this year, with a record eighteen schools participating, we were able to qualify an additional school for the State competition held October 16, 2024. It is very exciting to see the growth!" State qualifying teams include

- Lewiston – Brody Wright, Cooper Swendener, Axel Seeman, Ashlynn Anderson
- Pawnee City – Dylan Layne, Tyler Tegtmeier, Madolyn Gottula, Taelyn Blecha
- Johnson County Central – Kayden Badertscher, Molly Weber, Riley Wellensiek, Stefani Peters
- Johnson-Brock – Ellanor Gerdes, Andrew Hodges, Taryn Ottmann, Austin Meyer
- Falls City – Bowdy Jones, Dayton Snethen, Malori Kuker, Taiylah Moore

In addition to the top qualifying teams, the top ten individuals also advanced to the state competition. Individual state qualifiers were Bowdy Jones (1), Dylan Layne (2), Axel Seeman (3), Ashlynn Anderson (4), Kayden Badertscher (5), Samuel Thomas (6, Meridian), Tyler Tegtmeier (7), Joely Weers (8, Diller-Odell), Madolyn Gottula (9), and Taelyn Blecha (10).

Falls City's State Qualifying team placed 4th at State Land Judging, October 16th and will be headed to Oklahoma for National Land Judging April 29th through May 1, 2025. This is the second consecutive year a team from Falls City will be competing at Nationals!

Fiscal Year 25 Budget Summary and Breakdown

At their September board meeting, the FY25 budget received final approval. Directors were firm on their stance to hold the levy at the same rate as last year, which is \$0.029996 per \$100 valuation. Revenue required for this year comes mainly from local property taxes combined with state, federal, and local funds.

Much of the program budget goes toward watershed maintenance and repair with \$100,000 set aside in a sinking fund for future projects. Repairs to a dam that provides flood protection to the Village of Adams will begin this year.

Other highlights include a new irrigation efficiency cost-share program in the Burr-Cook paleovalley area, which is supplemented with state grant funds. In the recreation department, Wirth Brothers Lake will see an old restroom replaced with a concrete structure, invasive and unwanted tree species will be cleared at Kirkman's Cove, and an outlook shelter is in the plans for Duck Creek. Matching funds are included for urban special projects in Palmyra (trail) and Talmage (pond improvement).

Full details about this year's budget are available by contacting the NRD office.

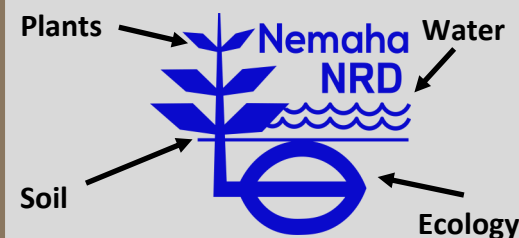
FY25 Budget Expense Category	Budgeted Amount	% of Budget
Watershed & Flood Control Projects	\$889,000	20%
Recreation	\$262,730	6%
Personnel & Director Expenses	\$1,603,277	36%
General Operation & Administration	\$384,287	9%
Conservation Assistance	\$233,600	5%
Water Quality/Quantity	\$143,250	3%
Capital Expenditures	\$110,500	3%
Cash Reserve, Sinking Funds, & Misc.	\$760,954	18%
Information & Education	\$17,095	<1%
Total FY25 Budget	\$4,404,693	



Is Your Domestic Well Registered?

New wells constructed after 1993 are required to be registered, including domestic wells. Registration provides complete information on the use of groundwater and is important to developing sound groundwater policy. The Nemaha NRD recommends all private well owners check to see if their well is registered with the Nebraska Department of Natural Resources by visiting their website's Interactive Registered Groundwater Wells Map. Registering your domestic well could help protect your water supply from encroachment by new, high capacity wells.

What's in Our Logo?



Irrigation Efficiency Pilot Project Receives Additional Funds



The Nemaha NRD is excited to announce that it received \$60,000 in additional grant funding for its pilot irrigation efficiencies project through the Natural Resources Commission's Water Sustainability Fund (WSF) in August. Initially \$60,000 in grant funding for the project was awarded by the Nebraska Environmental Trust. With the extra funding from WSF the total available funds will be \$120,000.

The pilot project aims to reduce the total volume of water consumed for crop irrigation each year by making efficiency improvements on existing center pivot systems. New highly efficient, low pressure irrigation nozzles have been developed that improve the consistency of droplet size as water exits the pivot and the uniformity of application on the ground so more water makes it to the crops, rather than being lost to drift, ponding, or runoff. Through an improvement in irrigation efficiency, less water will be required for each irrigation event to achieve the desired crop yields.

Impacts from the pilot project will be far reaching. Otoe County Rural Water District Number 3, servicing 6,687 customers from Douglas to Platte River State Park supports this pilot project as a

financial partner, pledging to contribute \$6,000 per year for each of the grants.

Eligible center pivot irrigated producers for this pilot program are located between Burr and Cook and north of the South Fork of the Little Nemaha River. The program is open on a first come, first serve basis and will be pre-approved based on funds available each year. A flow meter is required to participate, along with providing feedback after conversion. For more information, please contact the Nemaha NRD at 402-335-3325.

Calling All Communities, School Districts, and Organizations:

The Nemaha NRD's Urban Special Project fund can provide financial support to those looking to develop opportunities for natural resource related recreation, interpretation, or education in a primarily urban setting. Outdoor classrooms, arboretums, native tree/grass planting, pond improvement, native landscaping, and trails are all eligible projects for your community, school, or organization to consider! Applications are due February 1st and now is the perfect time to start organizing your ideas!



Hazard Mitigation Plan Update

The NNRD, in conjunction with other local agencies, is currently working to update its Multi-Jurisdictional Hazard Mitigation Plan (HMP). This plan, which is required to be updated every five years, plays a critical role in helping jurisdictions become eligible for federal funding aimed at building disaster resilient infrastructure and supporting post-disaster recovery efforts. The current plan expires December 16, 2025.

The ongoing update marks the fourth iteration of the plan since its initial approval by the Federal Emergency Management Agency (FEMA) in 2010. Over the years, the NNRD has seen a significant return on investment from these updates, with a \$38 to \$1 ratio. The district, along with the 5 counties included in the plan, have invested \$99,057 to develop the plans, which has resulted in \$3,818,993 in federal cost share funding through additional grants.

The goal of the HMP is to protect lives and property by minimizing the impact of natural disasters. The planning process starts at a local level, where communities assess their vulnerabilities to potential hazards. From there, long term mitigation strategies are developed to reduce risks and enhance protection for both people and property in the face of disasters.

The NNRD encourages all local communities and stakeholders to stay engaged through the planning process. With continued collaboration and planning, the NNRD remains committed to protecting lives, protecting property, and protecting the future.



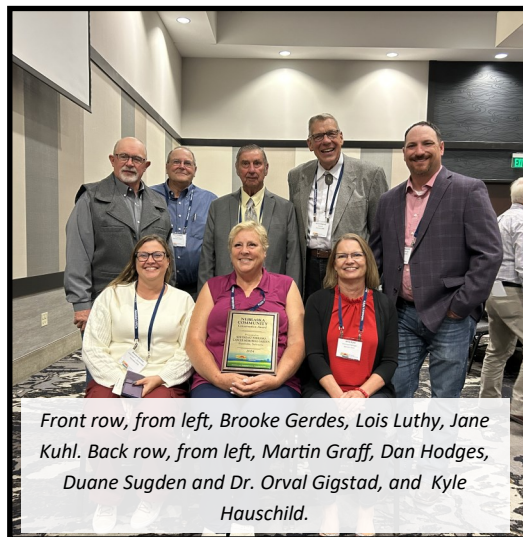
Upcoming Events

- November 11: Veterans Day, office closed
- November 14: Nemaha NRD Board of Directors Meeting
- November 28: Thanksgiving, office closed
- December 12: Nemaha NRD Board of Directors Meeting, Early Meeting at 4:30pm
- December 24: Office Closed at Noon
- December 25: Christmas, office closed



Insight is a publication of the Nemaha NRD. Requests to be placed upon the Insight mailing list and/or comments regarding information in this publication should be directed to Ashley Rippe at 62161 Hwy 136 Tecumseh, NE 68450 or at arippe@nemahanrd.org. For more information on the Nemaha Natural Resources District please visit our website www.nemahanrd.org

Southeast Nebraska Cancer Memorial Garden Receives Outstanding Community Conservation Award



Front row, from left, Brooke Gerdes, Lois Luthy, Jane Kuhl. Back row, from left, Martin Graff, Dan Hodges, Duane Sugden and Dr. Orval Gigstad, and Kyle Hauschild.

The Nemaha NRD is proud to announce the Southeast Nebraska Cancer Memorial Garden as the recipient of the 2024 Outstanding Community Conservation Award presented by Nebraska's Association of Resources Districts.

The Southeast Nebraska Cancer Memorial Garden has brought hope and a

sense of community through its carefully designed landscaping for many years and is considered a treasure of southeast Nebraska. Led entirely by volunteers, the Memorial Garden has become a place of comfort and hope to those impacted by cancer. The quick realization of the garden's vision and its ongoing splendor stand as a testament to the unwavering commitment of the Memorial Garden's volunteers. The Memorial Garden started as a vision in 2017 and evolved rapidly after receiving approval from the City Council.

Each year volunteers spend countless hours landscaping and maintaining the Memorial Garden and its amenities. Plans for the Memorial Garden are carefully crafted, with each feature having meaning and purpose. For those whose lives have been touched by cancer, the connection to nature can have a deeper, more spiritual meaning. Being completely immersed in the garden allows its visitors to find solace, healing, and community. The mission of the Memorial Garden to provide a tranquil arboretum in loving tribute to all cancer survivors, to all still fighting cancer, and to all those who have lost their battle to cancer has been achieved.

The Memorial Garden promotes conservation through its display of native and ornamental plants, pollinator habitat, educational components, and wildlife habitat. Volunteers actively utilize the Memorial Garden's Facebook page to share valuable landscaping advice covering topics such as pruning plants and attracting bluebirds to enhance your outdoor space. In the past the Nemaha NRD has provided cost-share through its Urban Special Projects Program to install informational signage, a walking path, bird houses, and native plants.

The Nemaha NRD thanks the volunteers at the Southeast Nebraska Cancer Memorial Garden for their dedication and vision. These volunteers have truly created a place that nurtures souls and provides exceptional beauty for all visitors. They have created a legacy of love for their community and beyond and deserve to be celebrated.



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