



Nemaha Natural Resources District

# Insight

**ANNUAL  
REPORT**

**2021**



View of the metal grate and trapped blockage.

## Spring Creek Principal Spillway Plug

It was all-hands-on-deck this past spring to try and resolve a plugged dam outlet in the Spring Creek Watershed by Cook. The Nemaha NRD with help from the Lower Big Blue NRD and Lower Platte South NRD put their time and resources toward figuring out what could be causing a blockage in a 2ft diameter concrete pipe. Over a 29-day period crews worked 7 days a week to lower the water elevation and unplug the structure.

With water levels rising every day the NRD team had to act quickly to start releasing water from behind the dam. Dams are not designed to have water stored above the designed outlet/pool elevation for over ten days or it can compromise the structure, possibly leading to failure. In addition, higher water levels mean reduced storage in the event of a large rain event.

At one point the team was running a high-capacity transfer pump and two, eight-inch siphon pipes that utilize gravity to draw water out of the pool area and return the pond to normal levels. The pressure within the siphon pipes was so ferocious that it ended up collapsing a section of pipe two different times.

In the end, the culprit turned out to be a 2 ft. metal grate valve protector. Trapped behind it was a lick tub and numerous tree trunks and branches.

Thankfully the landowner noticed that the outlet pipe was only flowing at about 25% capacity following a large rain event

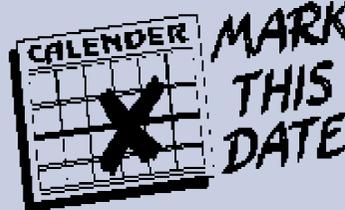


The metal grate that caused the blockage.

and called to report his concerns. If it hadn't been for the landowner, the situation could have been much worse. If you are involved in a property with a dam on it and notice anything peculiar, be sure to call the entity responsible for maintenance to alert them to the situation.

Citizens, landowners, and operators are truly the eyes and ears of our NRD. We appreciate all the cooperation and input you provide us. Thank you!

## CALENDAR OF EVENTS



### MARCH

- 1 NNRD Board of Directors  
Non-Incumbent filing deadline
- Southeast Area Envirothon -  
Beatrice
- 10 NRD Board Meeting,  
Tecumseh (7:00 p.m.)
- 13 Daylight Saving Time begins

### APRIL

- 8-14 NRD Board Meeting,  
Tecumseh (8:00 p.m.)
- 24 Stewardship Week Begins
- 27 Nebraska State Envirothon -  
Cozad
- 29 Arbor Day -  
Nemaha NRD office is open

### MAY

- 10 NNRD Board of Directors  
Primary Election
- 12 NNRD Board Meeting,  
Tecumseh (8:00 p.m.)
- 21-22 Free Park Permit Weekend  
@ NNRD Parks
- 30 Memorial Day Holiday -  
NRD office closed

## Board of Directors Election Filing Deadlines

The filing period for the 2022 Nemaha Natural Resources District (NRD) Board of Directors election is now open. One seat from each of the newly drawn ten districts, in addition to one at-large position are up for election. For more information about serving on the board visit our website <https://www.nemahanrd.org/about/> or call the office.

Directors whose terms expire in 2022 are as follows: Tim Loseke (D1), Russel Moss (D2), Doug Iske (D3), Dan Gittinger (D4), Kevin Thorne (D5), Duane Sugden (D6),

Lisa Beeche (D7), Dan Stukenholtz (D7), Bill Niedfeldt (D8), Alan Romine (D9), Don Siske (D10).

Candidate filing forms are available at the NRD, by contacting the Secretary of State (also available on their website), or from your county election commissioner. Candidate filing forms must be in the Secretary of State's office by the filing deadline. The filing deadline for incumbents has passed. The filing deadline for non-incumbents is March 1, 2022 by close of business.

## 2022 Park Permits Available Now!

2022 Nemaha NRD Park Permits are available for purchase online or at the Nemaha NRD office in Tecumseh. Make sure to have the year, make/model, and license plate number of your vehicle handy prior to ordering. Permits are \$15 each and are required for 4 of the following parks within the NRD:

- Duck Creek in Nemaha County
- Kirkman's Cove in Richardson County
- Iron Horse Trail Lake in Pawnee County

- Wirth Brothers Lake in Johnson County.

Duplicate permits are available for \$8 each and must be ordered at the same time as the first permit. If you have never been to the parks, we encourage you to check out the Nemaha NRD's website [www.nemahanrd.org/recreation](http://www.nemahanrd.org/recreation) for more information. Reminder, permits are only valid at parks managed by the Nemaha NRD.

# Annual Report:-----

## 2021 Highlights

### Recreation

Annual Park Permits issued in Calendar Year 2021: 2655

Total Park Permit Revenue for both annual and two-day permits: \$41,647. These proceeds are used to enhance the parks.

### Recycled Tires Used for Playground Mulch at NRD Parks

A waste reduction and recycling grant helped the NRD purchase rubber tire mulch for playgrounds at Iron Horse and Wirth Brothers recreation areas. The mulch was purchased through a Nebraska business and promotes recycling by using byproducts of old tires from across the state.

### Great Parks Pursuit at Nemaha NRD!

This past summer campers and adventure seekers were challenged by the Nebraska Game & Parks Commission to get out and explore various parks across the state. Kirkman's Cove was one of twenty locations chosen for the Great Parks Pursuit! Participants had to follow clues to get to the hidden Great Parks Pursuit Post where they would make a pencil impression or check in with an app.



### Steamboat Trace Trail

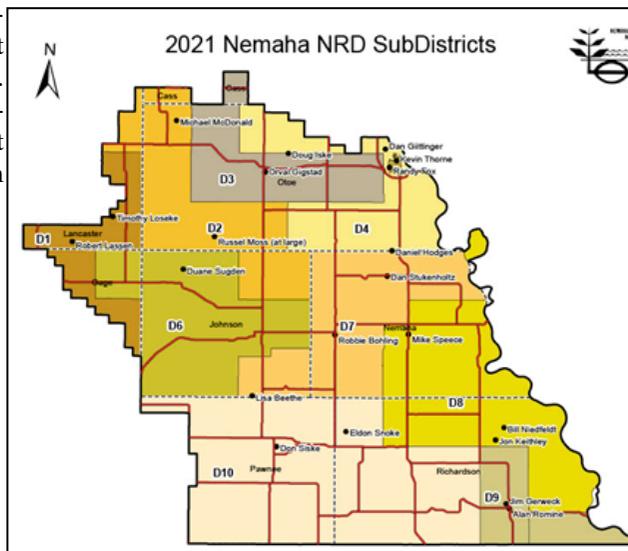
The Steamboat Trace Trail is opened from Nebraska City to two miles south of Peru.

### Duck Creek Sediment Basin Update

Work is about 20% complete on the Duck Creek Sediment Basin. Construction is shut down for the winter and will resume when conditions allow.

### Re-Districting

The Nemaha NRD completed redistricting efforts that are required every ten years. Boundaries were adjusted following the 2020 census to reflect the distribution of citizens within the Nemaha NRD.



### Dam Repairs

115 truckloads of riprap totaling 2,875 tons was placed on the face of 5 watershed structures within the NRD. Repeated waves hitting the face of a dam can erode the surface over time and lead to sloughing and structure failure. Riprap is placed to dissipate the energy from the waves and armor the dam from erosion. Total costs for the riprap, hauling, and placing was \$156,298.81.



### Conservation Assistance

In FY21 \$90,000 from Nebraska Soil & Water Conservation Program (SWCP) and \$117,000 of NNRD funds provided up to 50% cost-share for:

- 119,605 linear feet of terraces
- 0.03 acres of grass waterways
- 29,906 linear feet of tile
- 2,724 cubic yards of diversions
- 606 cubic yards water and sediment control basin
- 225 windbreak trees

### Trees

In 2021 the Nemaha NRD sold 9,300 trees and shrubs. Of those trees and shrubs, 1,875 were machine planted by the Nemaha NRD at eight different locations. The remaining were picked up at the Nemaha NRD office.

The NRD purchased an additional 35 larger trees that were planted at Iron Horse, Kirkman's Cove, and Duck Creek Recreation Areas. The NRD is proactively working to mitigate future effects of the Emerald Ash Borer at Kirkman's and Iron Horse with these tree plantings.

### Grass Drilling

Grass seedings in 2021 were down 77% from 2020. There were two seedings contracted for a total of 17.4 acres.

### Nebraska Buffer Strip Program

Over 945 acres in the Nemaha NRD were enrolled in the Nebraska Buffer Strip Program in FY21, which provides annual payments for grass filter strips or riparian forest buffers along vulnerable surface water resources. These acres earned a combined \$120,175 in annual payments.

### Information & Education

Activities that the Nemaha NRD conducted or participated in during 2021:

- Water Across Nebraska – A virtual option for the previous “Water Celebration” was offered in March, 2021. Just 190 4th, 5th, or 6th graders from four schools in the Nemaha NRD chose to participate in this statewide activity day about water.
- Third Grade Plant-A-Tree – 675 trees were distributed to third graders from 13 schools in spring, 2021. Most schools were able to have in-person presentations. Schools opting for virtual presentations were still sent a tree seedling for their students to take home.
- Envirothon – This high school contest was held in person at the local and state levels. Locally Norris High School qualified two teams to the state contest in late April at Lake Wanahoo, near Wahoo. One of Norris' teams placed second overall at state. Nebraska hosted the national contest virtually in July, 2021. NNRD staff assisted with preparations and judging at the national competition.
- In October, 2021, Johnson Brock's land judging team placed 7th and Pawnee City's team placed 9th at the State Land Judging Contest.
- Staff Service – Vernon (Junior) Speers and Mark McDonald were recognized for 40 years of service in September, 2021, at the annual conference of Natural Resources Districts in Kearney. NRD Clerk, Kathy Harlow, also celebrated 15 years with the NRD in 2021.

### Urban Special Projects

In May of 2021 the Village of Brownville was approved for a \$16,000 grant to add educational signage near a trail and arboretum. Work must be completed by June 1, 2022. Applications each year for this program are due in February.

### WILD Nebraska

There is one ongoing WILD Nebraska project involving tree clearing on a native meadow. WILD NE is a partnership between the NE Game and Parks Commission and the Nemaha NRD to increase or improve wildlife habitat on private land or land owned by conservation partners.

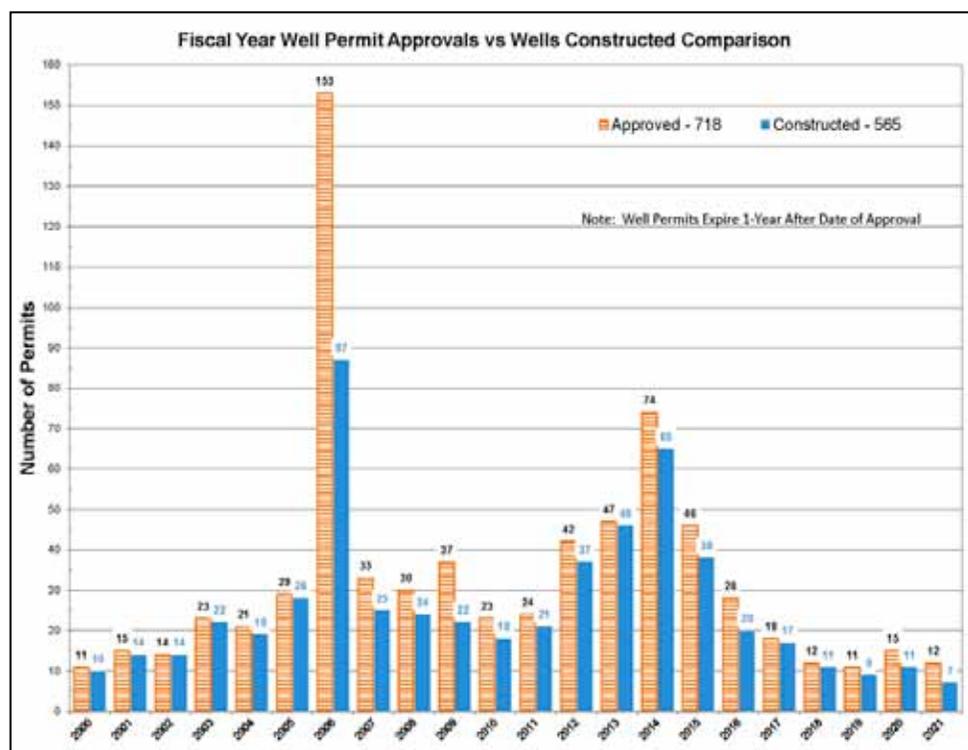
### New Directors & Staff

- Ken Kuhlmann from Humboldt helped keep our parks maintained during the summer of 2021. Working part time, his job included cleaning and resupplying outhouses.
- Lauren Shoemaker started in November, 2021, as the new NRD Clerk at the Natural Resources Conservation Service in Syracuse. She is a native of Nebraska City and had previously worked for NelNet in Lincoln.
- In December, 2021, Ashley Rippe joined the NRD staff as our Information, Education & Grants Coordinator. She most recently had worked at the Natural Resources Conservation Service in Tecumseh.

## Water Resources Report FY2021

### Groundwater Management

- Water wells that are designed to pump greater than 50 gallons per minute (gpm) require an approved well permit application prior to construction. A well driller's test hole log must also accompany the permit application which is used to determine ranking criteria. Test hole drilling does not require any permit however anyone considering a high capacity well is encouraged to call or stop in the office prior to drilling for additional information and groundwater availability. Well permits must be received by the 1st Thursday of each month to be approved by the NRD Board at their monthly meeting held the 2nd Thursday of each month. Upon receiving approval, the applicant has one year in which to have the well constructed before the permit expires. A flow meter is also required to be installed on any new or replacement wells.
- A complete copy of the District's Groundwater Management Plan and associated Rules and Regulations and ranking system scoring is available upon request and can be found on the District website under Programs/Water.



### Groundwater Levels

- A revised network of 119 wells (irrigation, livestock, domestic, public water supply and dedicated observation wells) located throughout the District were measured for the Spring and Fall of 2021. Of the 119 measured wells, 78 were used to create a lifetime average minus a 10-year average groundwater level change.
- The District lifetime average change of measured wells was a decline of -0.23 feet.

### Well Abandonment

- A total of 21 abandoned wells were properly decommissioned the past fiscal year through the District Cost-Share Program totaling \$7,802.06 in payments. Since the Program's inception in 1994, the District has provided cost-share funds for the closure of over 1,300 abandoned wells. Statewide NRD's have provided cost-share assistance for the closure of over 20,100 abandoned wells. A portion of the funding is provided annually by the Nebraska Department of Natural Resources based upon the amount of money received from well registration fees. Each NRD is allocated a percentage of the funds based upon the District's average number of wells decommissioned in the previous three years.
- The District provides 75% cost-share for the proper decommissioning of abandoned wells with a maximum of \$500 for each smaller diameter, cased type well and \$700 for each larger diameter, hand dug type well. Approval prior to the closure is required and the work must be conducted by a licensed pump installer or well contractor. Funds are available – Sign Your Abandoned Well Up Today!

### Chemigation

This year the District received 306 permit applications and inspected 110 systems for safety equipment compliance. Out of the 306 applications received 279 were renewals, 26 were new permits, and 1 emergency.

Applicator certification is required prior to chemigating. Chemigation Applicator Certification Training will be offered in March 2022 at the following dates and nearby locations:

- March 2nd – 9 am Tecumseh – Johnson County Fairgrounds
- March 3rd – 1 pm Wilbur – Saline County Extension
- March 8th – 1 pm Fairbury – Jefferson County Fairgrounds

- March 10th – 1 pm Beatrice – Gage County Extension

A full list of training sessions throughout the State can be found on the Department of Environment & Energy's website, [www.deq.state.ne.us/](http://www.deq.state.ne.us/) click on Licenses & Certification drop down box located on the top right center of the page then click Chemigation for a current list of training dates, locations and training materials. Also, applicators can find their certification number and expiration year.

### High Capacity Flow Meter & Irrigation Management Cost-Share Program

- The District has a cost-share program for flow meters for water wells within the District pumping greater than 50 gpm. The program covers 50% of the cost of a new flow meter up to a maximum of \$500.
- Cost-share is also currently available for irrigation management equipment. Eligible equipment includes soil moisture sensors, sensor readers and atmometers (evapotranspiration gages). The program covers 50% of the cost of the equipment up to a maximum of \$300. Approval is required prior to purchase for both programs.
- Contact the office for more information or log-on to our website and download the fillable applications.
- 205 flow meters were read this fall indicating an average of 3.85 inches of water was applied per acre on approximately 22,717 acres.
- Do you have a flow meter that isn't working properly? The District is certified to conduct repairs and general maintenance on a fee basis for parts and labor.

### Surface Water Sampling

- The beaches at Iron Horse Trail Lake, Kirkman's Cove, Wirth Brothers and Duck Creek Recreation Area were sampled weekly during the recreation season (May-September) for E. coli bacteria and blue-green algal toxins.
- Iron Horse, Kirkman's Cove and Wirth Brothers were placed on health alert for toxic algae for 8, 4, and 7 weeks this season, respectively. Wirth Brothers and Kirkman's Cove tested high for E. coli one week, and Iron Horse and Duck Creek for two weeks.
- Additional Lake beach bacteria and toxic algae monitoring results for other lakes throughout the State can be found on the NDEE website at: <http://deq.ne.gov/NDEEProg.nsf/OnWeb/SWMA> More information about health alerts, potential health effects and facts regarding toxic algae can be found there also.



# Cheers to 50 years of partnerships and conservation!

This year Nebraska's Natural Resources Districts (NRD) are celebrating our 50th Anniversary! 50 years of protecting lives, protecting property, and protecting the future. Around the time the Natural Resources Districts were created by the unicameral, a wide variety of groups and organizations were already in place to manage natural resources across the State. There were 154, in fact. Anything from mosquito abatement districts to watershed districts and drainage boards. Our legislators envisioned the Natural Resources District system as one body to oversee the following areas:

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, utilization, 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, and
12. Forestry and range management.

Since its creation in 1972, the Nemaha NRD has formed valuable partnerships with other Local, State, and National organizations to find common ground and fulfill the duties in which the NRDs were created to oversee. The district has constructed and manages flood/grade control structures and recreation areas with the help of partners like the Natural Resource Conservation Service (NRCS) and Department of Natural Resources (DNR). We monitor and strive to improve water quality with partners like Nebraska Department of Environment & Energy (NDEE), DNR, and Nebraska Department of Agriculture (NDA). We work to preserve and improve wildlife habitat with partners like Nebraska Game & Parks Commission (NGPC), 5Rivers RC&D, Nebraska Forest Service & NRCS. And so much more! Thanks partners, we couldn't do it without you!

## Save the Date

The Watershed of Wonders Day Camp is back! This year's day-camp is scheduled for June 15, 2022, at Duck Creek Recreation Area in Nemaha County, Nebraska. Children ages

10-12 are invited to attend a fun-filled, day-long event sponsored by the Nemaha Natural Resources District and other area agencies and organizations. Kids will have the opportunity

to participate in outdoor exploration and games. Keep your eye on local newspapers, school handouts, and our website for future information about registration.

**Kids 10-12**  
Save the Date!  
**June 15**  
Watch for more information later this spring!

# Watershed of Wonders

## DAY CAMP

DUCK CREEK REC AREA

# 2022

Join us for a day filled with fun, outdoor activities at Duck Creek Recreation Area in Nemaha County! Lunch, snacks, drinks, and more will be provided **FREE!**





Sponsored by the Nemaha NRD in conjunction with other area agencies and organizations



- Protect waters  
- 5 or 10 year contracts

NEBRASKA BUFFER STRIPS

Contact your local NRCS office for more information.

**PARTICIPATE WITH LAND ENROLLED IN CRP FILTER STRIPS**  
-OR-  
**PARTICIPATE INDEPENDENT OF CRP WITH FEWER HAYING/GRAZING RESTRICTIONS**

### NEMAHA NRD STAFF

Kyle Hauschild, Manager  
Jane Kuhl, Administrative Manager  
Jill Rogman, Administrative Assistant  
Lisa Bartels, Secretary  
Chuck Wingert,  
Water Resources Manager  
Charlie Pierce,  
Water Resources Technician  
Steve Bartels, Field Representative  
Mark McDonald, Field Representative  
Vernon Speers, Jr., Field Representative  
Aaron Stalder, Resources Specialist  
Tomas Chalé Aké, Field Technician  
Ken Hatten,  
Land & Water Resources Assistant  
Ashley Rippe,  
Information, Education, & Grants Coordinator

### NRD STAFF IN NRCS OFFICES

Alice Alexander, Auburn  
Geraldyn O'Malley, Tecumseh  
Lauren Shoemaker, Syracuse  
Kathy Harlow, Pawnee City  
Vacant, Falls City

### BOARD OF DIRECTORS

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Rob Bohling, Johnson  
Randy Fox, Nebraska City  
Dan Gittinger, Nebraska City  
James Gerweck, Falls City  
Orval Gigstad, Syracuse  
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Dan Stukenholtz, Brock  
J. Duane Sugden, Sterling  
Kevin Thorne, Nebraska City

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The Nemaha NRD's *Insight* is a publication of the Nemaha Natural Resources District. Requests to be placed upon the *Insight* mailing list and/or comments regarding information in this publication should be directed to Ashley Rippe Information, Education & Grants Coordinator at the above address or at [nrd@nemahanrd.org](mailto:nrd@nemahanrd.org).