

Nemaha Natural Resources District

Insight

**ANNUAL
REPORT
2018**



Have We Got a Deal for You!

For every old, unused well on your property, we'll give you as much as \$500-\$700. But, of course, there's a catch: you must properly seal the well after receiving approval through our Well Abandonment Cost-Share Program.

It's not hard to do – just go to the Resources page on our website (nemahanrd.org) and click the Well Abandonment Application link. You can print the application, complete it and submit to our office with an aerial photo showing the well location. Once you receive approval, you must hire a contractor who is licensed to

properly close wells. Drilled wells are eligible for 75% cost-share up to \$500; hand-dug wells receive the same rate up to \$700. (Don't have Internet access? Call our office, and we'll send you the form.)

Old wells are a danger to both humans and animals and pose a risk to our water supply. Many times they are disguised with vegetation, rotting wood planks, or simply a bucket or other covering. Funds are available and just waiting to line your pocket, so contact us today to submit your application.

NRD Board Re-Election Results

The November, 2018, general election found the Nemaha NRD board of directors looking much the same as it has for the past couple of years. All except one incumbent chose to run again for their seat on the 21-member board, and all ran unopposed. Those who began another four-year term include:

- Lisa Beethe, Elk Creek – Subdistrict 6
- Doug Iske, Dunbar – Subdistrict 3
- Tim Loseke, Hickman – Subdistrict 1
- Russel Moss, Burr – At-Large
- Bill Niedfeldt, Shubert – Subdistrict 9
- Alan Romine, Falls City – Subdistrict 10
- Don Siske, Table Rock – Subdistrict 8
- Dan Stukenholtz, Brock – Subdistrict 7
- Duane Sugden, Sterling – Subdistrict 2
- Kevin Thorne, Nebraska City – Subdistrict 5

Directors who were elected to a two-year term to finish out a position for which they were appointed within the past two years include Robert Lassen, Firth, in Subdistrict 1 and Eldon Snoko, Humboldt, in Subdistrict 8. One seat in Subdistrict 4 remained vacant, and the board has accepted letters of application for appointment to the position. Action is pending on the March 14 board meeting agenda.

Selected to lead the board in 2019 are Bill Niedfeldt-Chair; Mike McDonald-Vice Chair; and Doug Iske-Secretary/Treasurer.



Order Your Park Permit Online

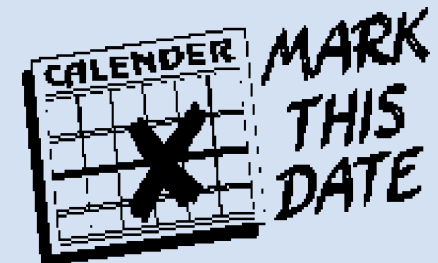
Did you know the quickest way to obtain your Nemaha NRD park permit is through our website? Just use your major credit card to purchase your permit(s), and they will be back in the mail to you in most cases within a day or two (especially if you avoid April-July, the busiest months for permit purchases). The first annual permit is \$15; and if you wish to purchase a second permit (called a duplicate) for a vehicle you also own, they are just \$8 but only if purchased at the same time as your original, full-price permit. That's the rule regardless of whether you purchase your permit by mail, online, or in person.

[Order Park Permit](#)

So the key is to purchase early, and consider using our website order form. See you at the parks!

**Note: NNRD park permits are valid only at Kirkman's Cove, Iron Horse Trail Lake, Wirth Brothers Lake, and Duck Creek Recreation Area. (Our permits are not valid at Lake Wanhoo – those may be purchased from the Lower Platte North NRD.)*

CALENDAR OF EVENTS



MARCH

- 514 NNRD Board Meeting, Tecumseh (7:00 p.m.)
- 30-4/3 NARD Washington, DC, Conference

APRIL

- 11 NRD Board Meeting, Tecumseh (8:00 p.m.)
- 22 Earth Day
- 24 Nebraska Envirothon, Ord
- 26 Arbor Day (NNRD Office is Open)
- 28-5/5 Stewardship Week

MAY

- 9 NNRD Board Meeting, Tecumseh (8:00 p.m.)
- 18-19 Free Park Permit Weekend @ NNRD Parks
- 27 Memorial Day Holiday, NNRD Office Closed
- 31 SWCP Cost-Share Application Deadline

Annual Report:-----

2018 Highlights

Watershed Repair:

The District is responsible for operating and maintaining over 350 watershed dams. In 2018 work was completed on 15 dams at a cost of \$165,000.

Rehabilitation of Upper Big Nemaha 25-C (Doctor's Lake near Adams):

Federal rehabilitation funds will pay for 65% of the cost to construct a large, concrete chute through the center of this high hazard dam in order to bring it to federal safety standards. The necessary permits have been obtained, and construction is scheduled to begin this spring.

Small Dams Program:

Funding was approved for a small dam in Pawnee County for Galen Haug, and design was completed by FYRA Engineering. Permits are expected to be in hand this spring with construction scheduled for summer, 2019.

Recreation:

Annual Park Permits Issued: 2,132

Total Park Permit Revenue from both annual and two-day permits: \$33,922.90

2018 was a big year for the NRD's five recreation areas highlighted by the opening of the new Duck Creek Recreation Area five miles northwest of Peru in spring, 2018. It quickly became the District's most popular area. The recreation area was one component of the Buck and Duck Creek Watershed Project which included the construction of two flood control dams, upgrading three county roads, and installing numerous best management practices.

Here are some of the 2018 recreation area highlights:

Duck Creek

Construction of the recreation area included 28 electric RV sites, a primitive camping area, restrooms, water system, picnic shelters, playgrounds, a beach, boat ramp, and various angler access facilities. Gates opened on April 23, 2018, followed by a Grand Opening Celebration on June 4th to officially open the area to the public and recognize all who contributed towards the completion of the Buck and Duck Creek Project. Day use facilities were popular all summer particularly with groups and families. The District cooperated with Nemaha County to install a warning siren in the park.



Fisheries experts were on hand at the grand opening to explain what is in the lake at Duck Creek.

Plans for 2019

Complete trail system to connect east and west side of the lake.

Additional tree and grass planting

Iron Horse Trail Lake

A new boat dock was installed replacing the aging dock at the boat ramp. Campgrounds were busy all summer with electric areas fully occupied most weekends. The District entered into an agreement with Game and Parks for funding assistance to remove invasive tree species on the property which will help promote the health of desirable species such as oak, walnut, and hickory.

Plans for 2019

New signage on the loop trail

Complete the tree removal project

Kirkman's Cove

RV camping was popular all summer, and we replaced older electrical outlets in the RV campground. The District is looking at options for enlarging the sediment basin. HDR Engineering completed the 404 permit application, which is expected to gain approval this spring. Next fall the application process will begin to secure grant funds for construction.

Plans for 2019

Install two new concrete restrooms

Continue planning for sediment basin

Look at options for a trailer dump station

Replace west entry sign

Prairie Owl/Wirth Brothers

The shelter and restroom at Wirth Brothers were repaired/repainted. Garbage service was discontinued at Prairie Owl were pack-in/pack-out is now encouraged.

Plans for 2019

Replace signage at Wirth Brothers

Install rubber mulch in playground area at Wirth Brothers

Modify archery range at Wirth Brothers

Shoreline protection at Prairie Owl

Steamboat Trace

The Steamboat Trace trail is celebrating 20 years of providing hiking and biking opportunities to Nebraska. It had a challenging year in 2018 as water levels in the Missouri River were high all year, and portions of the trail were flooded on several occasions. Improvements to the trail the past year were replacing the toilets in the Peru Trailhead and upgrading the wood decking on the bridge over Camp Creek to concrete. The District has almost completed the bridge surfacing projects, and hopefully the last three small bridges can be done in the next year. The trail remains popular with users, some who come from across the country.

Duck Creek Sediment Basin Project

A final piece in the Duck Creek project puzzle is the construction of a sediment storage structure on Duck Creek south of the main reservoir. The purpose of the structure is to store sediment and help extend the life of Duck Creek and maintain the high water quality being enjoyed in the lake. It is estimated that the seven-acre storage reservoir will hold 35 years of sediment. Designed by NRCS in 2014, funding to construct the project was secured through the NRCS Watershed and Flood Prevention Program in 2017. FYRA Engineering from Omaha was hired to assist the NRD with updating the environmental assessment and complete permitting. It is hoped construction can be completed by the end of 2019. The sediment storage structure is on private property and is not accessible from the recreation area.

Conservation Assistance:

Combined funds of \$193,207 from Nebraska Soil & Water Conservation Program (SWCP) and NNRD funds provided up to 50% cost-share for:

126,599 linear feet of terraces

4.68 acres of grass waterways

29,917 linear feet of tile

575 windbreak trees

Sign-up is underway now for 2019-20 funding. Contact your local NRCS to submit your application. Deadline is May 31.

Nebraska Buffer Strip Program:

Over 1,015 acres in the Nemaha NRD are currently enrolled in the Nebraska Buffer Strip Program, which provides annual payments for grass filter strips or riparian forest buffers along vulnerable surface water resources. These acres are earning a combined \$70,000 in annual payments.

Trees & Grass Drilling Programs:

Approximately 17,650 seedlings were sold last year with the NRD's tree crew planting about 10,000 at 21 different sites.

In November the fourth grade class from Nebraska City Lourdes Central Catholic school helped plant three trees at the Duck Creek Recreation Area. A total of 10 trees were obtained through a grant from the Free Trees for Fall ReTree Planting program sponsored by the Nebraska Forest Service and Nebraska Statewide Arboretum.



NRD Staff Steve Bartels (right) supervises as 4th graders plant a tree at Duck Creek.

Grass drilling during the past year totaled just 7.9 acres on three sites. An unusually wet fall affected the total number of acres drilled. Applications for spring drilling are due each year by March 1; fall applications must be submitted by October 1.

2018 Highlights - Continued

Information & Education:

Activities that the Nemaha NRD conducted or participated in during 2018:

- Water Celebration – 374 fifth graders participated in water related activities at this event held at Peru State College each spring
- Third Grade Plant-A-Tree – 660 trees distributed to third graders at 14 schools
- Envirothon – Norris High School qualified a team during the regional contest to attend the state contest held at Niobrara State Park last April. The NRD provided \$100 toward their registration fee.
- National Land Judging – A team from Johnson County Central High School qualified to compete at this national contest in Oklahoma City in May, 2018. The NRD contributed \$500 toward their expenses.
- NRD staff assisted with the Farm Safety Day in Tecumseh in April, the State Fair in August, and Husker Harvest Days in September.
- Nemaha NRD was host to the annual basin tour for NRD directors and staff from across the state in June. Participants passed several NRD projects and visited the newly opened Duck Creek Recreation Area, stopped at Iron Horse Trail Lake for a quick tour and lunch, and enjoyed a break at the NRD office where they were updated on the niobium project near Elk Creek.
- Watershed of Wonders, a day camp for 10-12 year olds, was held at Iron Horse

Trail Lake in June. Though weather caused the camp to be postponed a week, 66 youngsters participated.

- Over 160 high school students from 12 schools competed in the Southeast Area Land Judging Contest held in Otoe County in October.
- Staff Service – NRD staff members recognized in 2018 for their years of service include: Chuck Wingert-20 years; Steve Bartels-30 years

Urban Special Projects:

In May of 2018 three projects were approved for matching funds during FY19 with final deadlines of June, 2019.

- Village of Firth – Tree replacement in city park (\$1,800)
- City of Humboldt/Humboldt Garden Club – Cancer garden plantings, trail (\$13,150)
- Village of Bennet – Trail & plantings in park (\$25,000)

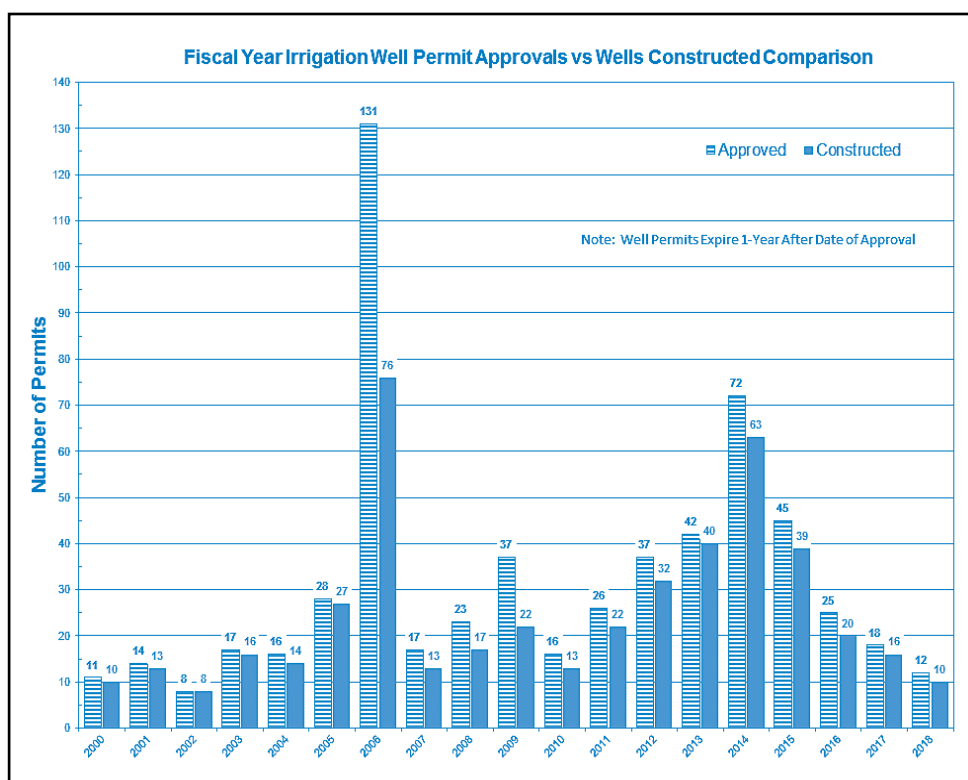
New Staff:

In October Turner Moore was hired with grant funds to provide technical assistance for NRCS. He is stationed at the Tecumseh NRCS office. Laura Hart also started in October as the new NRD Clerk at the Falls City NRCS. She replaced Monica Dishong who moved across the hall in August to work for the Farm Service Agency.

Water Resources Report FY2018

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 flowmeter is also required to be installed on any new or replacement wells.
- The chart below represents the number of well permits approved vs. wells constructed since 2000.



Groundwater Levels

- A network of 131 wells (irrigation, livestock, domestic, and public water supply) located throughout the District were measured in the spring and fall of 2017 and 2018. Ninety-seven of the 131 measured wells were used to create a lifetime average minus a 10-year average groundwater level change. The District lifetime average change was a decline of -0.01 feet.

Well Abandonment

- A total of 40 abandoned wells were decommissioned this fiscal year through the District cost-share program totaling \$10,844.28 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.

Phase II Groundwater Quality Management Area

- A Phase II GWQMA was established in January of 2004 for a 72 square mile area in northwest Richardson County due to elevated levels of nitrate-nitrogen in the groundwater. Within this area cost-share assistance is available for soil sampling & complete fertilizer control systems.
- Annual groundwater sampling occurred in July with 28 domestic wells and 5 irrigation wells sampled for nitrate-nitrogen averaging 7.1 parts per million (ppm), which is up from 7.0 ppm measured last year.
- Throughout the District, 127 wells (54 irrigation, 61 domestic, & 12 monitoring) were sampled and analyzed for the nitrate-nitrogen concentration averaging 5.9 ppm for the domestic wells, 3.5 ppm for the irrigation wells, 2.1 for the monitoring wells, and 4.5 ppm overall. Fifty-three of the samples collected were also analyzed for atrazine with none of the samples exceeding the minimum detection limit at or above 0.05 parts per billion (ppb); therefore, none exceeded the 3 parts per billion (ppb) maximum contaminant level (MCL) set by US EPA. The MCL for nitrate nitrogen is 10 ppm.

Chemigation

- This year the District received 277 permit applications and inspected 94 systems for safety equipment compliance. Out of the 277 applications received, 240 were renewals; and 37 were new permits.
- Applicator certification is required prior to chemigating. Training sessions are held throughout the State each winter/early spring. Contact the NRD or log on to www.deq.state.ne.us/ click on Licenses & Certification dropdown box located on the top right center of the page then click Chemigation for a current list of training dates, locations, and training materials. This year's training session at the NRD office was held prior to this publication on February 12th. Also, applicators can find their certification number and expiration year.

High Capacity Flow Meter & Irrigation Management Cost-Share Program

- The District has cost-share programs for flow meters for water wells within the District pumping greater than 50 gpm and for irrigation management equipment. The programs cover 50% of the cost of a new flow meter up to a maximum of \$500 and 50% of the cost of eligible irrigation management equipment up to \$300. Approval is required prior to purchase for both programs.
- 181 flowmeters were read this fall indicating an average of 3.85 inches of water was applied per acre on approximately 19,293 acres.

Surface Water Sampling

- The beaches at Iron Horse Trail Lake, Kirkman's Cove, Wirth Brothers Lake, 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 and Kirkman's Cove were placed on health alert for toxic algae for four and seven weeks this season, respectively. Kirkman's Cove tested high for E. coli four different weeks, Wirth Brothers for nine weeks, and Duck Creek for three weeks.

FISCAL YEAR 2018 - 2019 PROJECTIONS

For the third year in a row, the Nemaha NRD board successfully cut its tax request even though the total budget was actually more than last year. Substantial state and federal grants make up the difference with a large chunk of the funds coming in for the upcoming rehabilitation of Upper Big Nemaha 25-C. Other significant projects this year include the Duck Creek sediment basin, tree removal at Iron Horse Trail Lake, AEM flight project, and a monitoring well project funded with Nebraska Environmental Trust monies.

Projected Expenditures

Watershed & Flood Control Projects: \$2,178,500

- Buck/Duck Mitigation
- Watershed Rehabilitation (Upper Big Nemaha 25-C)
- Watershed Structure Repair/Maintenance

Recreation: \$489,618

- Duck Creek Recreation Development (sediment basin, maintenance building, siren)
- Park & Trail Maintenance (rock, sand, tables, grills, utilities, mowing, etc.)
- Iron Horse Trail Lake (tree removal, dump station)
- Kirkman's Cove (2 restroom replacements; sediment basin)

Personnel & Director Expenses: \$1,275,465

General Operation & Administration: \$218,005

- Utilities, vehicle & equipment expenses, property maintenance, supplies, insurance, dues, postage, etc.; hazard mitigation plan update

Conservation Assistance: \$361,150

- Tree Planting & Grass Drilling
- Nebraska Buffer Strip Program
- Soil & Water Conservation Program
- Urban Special Projects
- Small Dams Cost-Share Program

Water Quality/Quantity: \$636,479

- Groundwater & Surface Water Monitoring; monitoring well project
- Well Abandonment
- Chemigation
- Flow Meter & Irrigation Management Cost-Share
- Basin Planning/Groundwater Consulting; AEM Flight Project
- Wellhead protection

Capital Expenditures: \$50,000

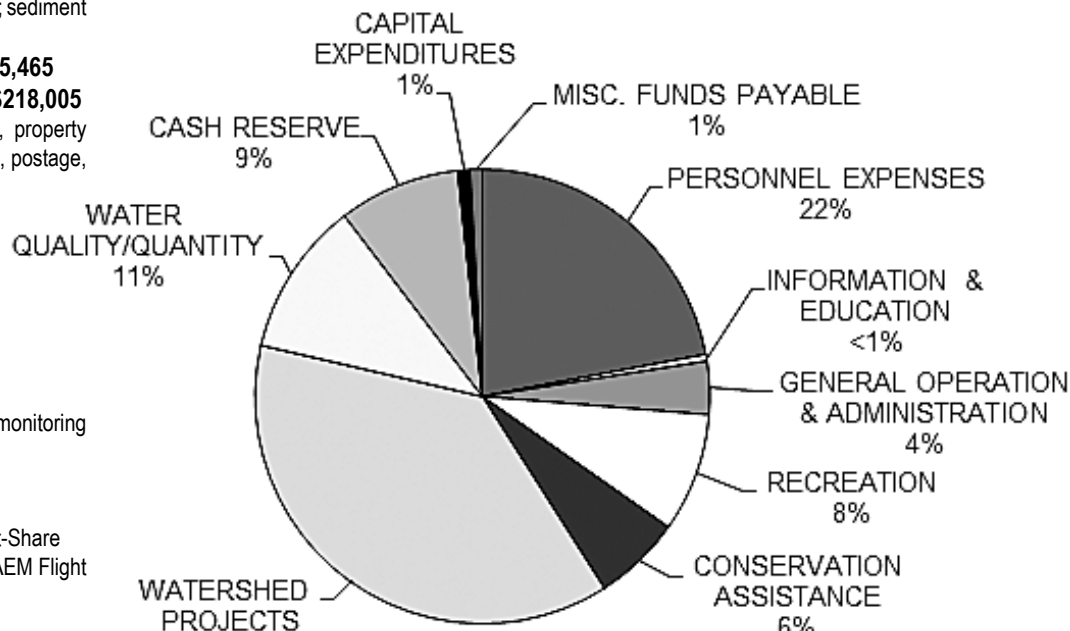
- Additional pickup, boat & trailer, power washer

Information & Education: \$27,780

- Awards, youth & education programs, newsletter & website, advertising, etc.

Misc. Funds Payable: \$50,608

Cash Reserve: \$600,000



Projected Revenue

Federal Grants & Funds: \$1,288,879

- Nemaha Basin Water Quality Plan (EPA 319 Funds)
- UBN 25-C Rehab Project (NRCS)
- Duck Creek Sediment Basin (NRCS)

State Grants & Funds: \$554,468

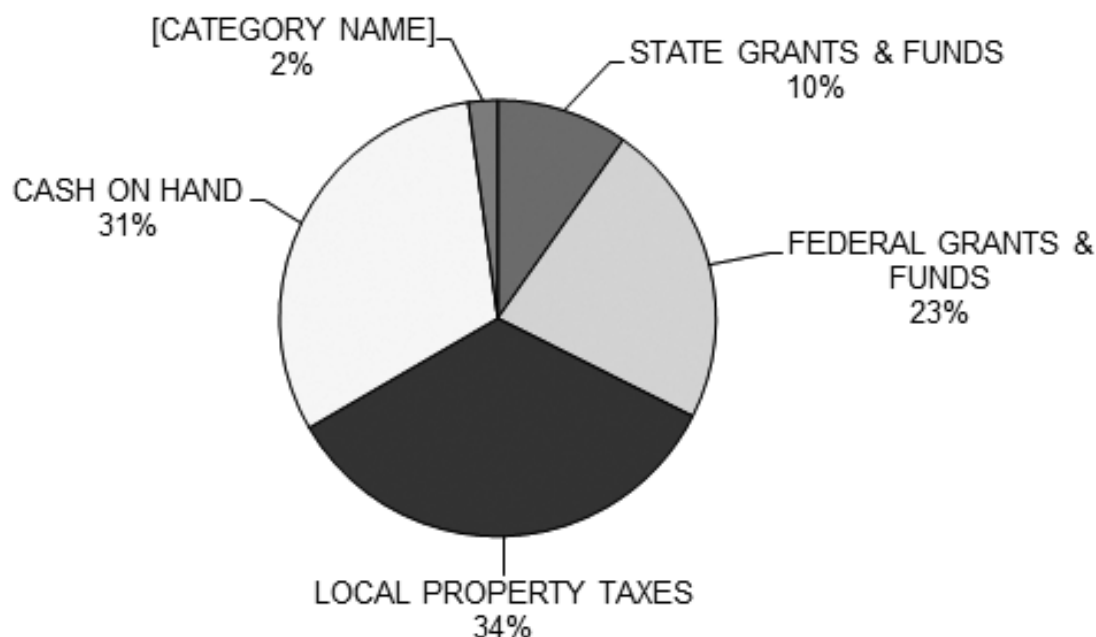
- Iron Horse Tree Removal (Nebraska Game & Parks)
- Duck Creek Recreation (Nebraska Resource Development Fund)
- Monitoring Well Project (Nebraska Environmental Trust)
- AEM Flight Project (Water Sustainability Fund)
- Nebraska Buffer Strip Program (Nebraska Department of Agriculture)
- State Water Quality Funds

Local Property Taxes: \$1,945,520

Cash on Hand & Misc. Funds Receivable: \$1,774,445

Other: \$123,077

- Landowner Share of Project Costs (small dams)
- Tree sales & planting services
- Park Permits & Electrical Hookup Fees



NEMAHA NRD STAFF

Bob Hilske, Manager
 Scott Nelson, Assistant Manager
 Jane Kuhl, Administrative Assistant
 Kerri Miller, 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
 Phil Vance, Seasonal Maintenance
 Doug Schmidt, Seasonal Maintenance

NRD STAFF IN NRCS OFFICES

Alice Alexander, Auburn
 Geralynn O'Malley, Tecumseh
 Kim Zech, Syracuse
 Kathy Harlow, Pawnee City
 Laura Hart, Falls City
 Turner Moore, Tecumseh

BOARD OF DIRECTORS

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 James Gerweck, Falls City
 Orval Gigstad, Syracuse
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 Doug Iske, Dunbar
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 Robert Lassen, Firth
 Timothy Loseke, Hickman
 Michael McDonald, Palmyra
(VICE-CHAIR)
 Russel Moss, Burr
 William Niedfeldt, Shubert **(CHAIR)**
 Alan Romine, Falls City
 Don Siske, Table Rock
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 Mike Speece, Auburn
 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 Jane Kuhl, Administrative Assistant, at the above address or at nrd@nemahanrd.org.