

Nemaha Natural Resources District

Insight



ANNUAL REPORT

Fall 2007



This project at the Arbor Day Farms in Nebraska City was part of the Partners for Wildlife Program.

Money Available for Your Wildlife Project!

The Nemaha NRD partners with the US Fish & Wildlife Service to provide cost-share funding for wildlife improvement activities through the Service's Partners for Wildlife Program. Cost-share for projects starts at 50 percent and may differ depending upon scope and benefits of the project. Projects that the Partners for Wildlife Program will provide cost-share on include shallow water wetlands, native grassland establishment or enhancement, and native timberstand improvements. The cooperator is required to sign a Wildlife Extension Agreement with the US Fish & Wildlife Service and the Nemaha NRD for a 10-year contract not to destroy or alter any part of the project. Though no land payments are available with this program, cost-share will assist in improvements for fish and wildlife. If you have questions or an interest in the program, call the NRD and ask for Aaron.

Tree Orders Now Accepted for Spring Delivery

Orders are now being accepted at the Nemaha NRD office in Tecumseh for next spring's trees. Whether you plant your own or engage the services of the NRD's tree planting crew, NRD staff are available to help with planning, ordering, or planting design. This year's trees and shrubs, regardless of species, will cost \$0.70 each plus applicable sales tax and handling charges. These trees are available only to Nemaha NRD landowners or residents. All costs for trees and planting services are payable in advance.

Deadlines exist for placing your orders. If you want the NRD to plant your trees, the last possible date to order is December 31; in addition, if your ground is currently in sod, it must be fall tilled to be eligible for NRD planting services. Planting the trees yourself gives you a little more time to make up your mind – orders are due by March 1; however, by that late date some species may no longer be available!

Several varieties of conifers, broadleaf species, and shrubs are available. Trees are usually available sometime after April 1, depending on weather. For more information, contact the NRD at (402) 335-3325 or check our website www.nemahanrd.org.

35 Years – Where Has the Time Gone?

Everyone says "time flies", but I'm sure the original visionaries who formulated the idea of replacing 154 special purpose districts with 24 natural resources districts would agree. How much things have changed since the Nebraska Legislature passed LB 1357 creating the current NRD system we have today.

The original law enacted in 1972 has changed little over the past 35 years with the same 12 areas of responsibility still forming the basis for NRD programs today:

- Erosion prevention & control
- Prevention of damages from floodwater and sediment
- Flood prevention & control
- Soil conservation
- Water supply for any beneficial uses
- Development, management, utilization, and conservation of groundwater and surface water
- Pollution control
- Solid waste disposal and sanitary drainage
- Drainage improvement and channel rectification
- Development and management of recreational and park facilities
- Development and management of fish and wildlife habitat
- Forestry and range management

Though the Nemaha NRD has participated in each of these twelve areas at one time or another, the major focus in this District has been on erosion, flood control, and soil conservation. Currently about 470 watershed structures in the NRD's eight-county area provide more than 4,700 acres of permanent water and store nearly 97,000 acre-feet of flood waters. The District also has a long-standing tree planting program (over 1.4 million trees planted/sold), operates and maintains four public recreation areas and one hiking/biking trail, and provides assistance with development of wildlife habitat. More recently the emphasis has shifted somewhat to include more programs for water quality and quantity monitoring.

Who knows what the next 35 years will bring. For sure, though, it's been a busy first 35!

REMINDER:

The entire Steamboat Trace trail will be closed to all users during the rifle deer hunting season starting Saturday, November 10, through Sunday, November 18. No one is allowed on the trail during this time without permission from the NRD. Hunting and/or possession of weapons is never allowed on the Steamboat Trace.

CALENDAR OF EVENTS

NOVEMBER

- 8 NRD Board Meeting, Tecumseh
- 10-18 Steamboat Trace Trail Closed
- 12 Veterans Day Holiday Observed, NRD Office Closed
- 22 Thanksgiving Holiday, NRD Office Closed

DECEMBER

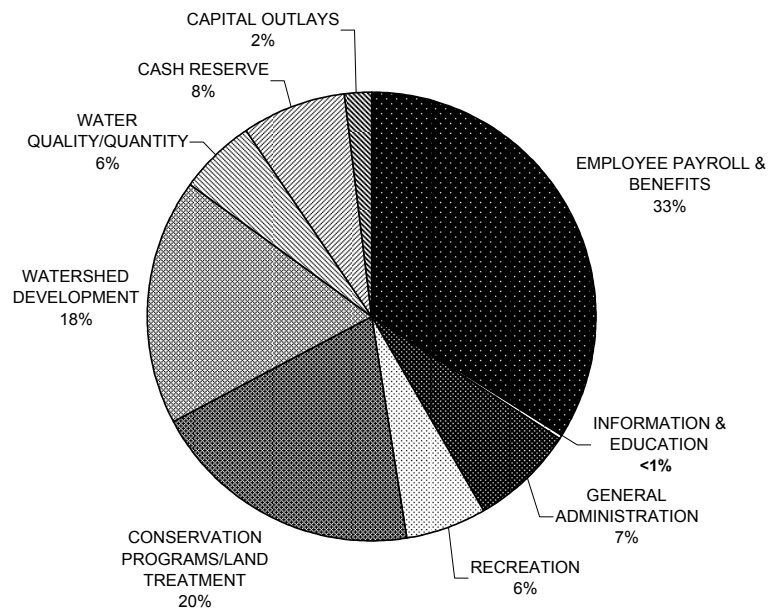
- 13 NRD Board Meeting, Tecumseh
- 24 Christmas Eve Holiday, NRD Office Closing @ Noon
- 25 Christmas Day Holiday, NRD Office Closed

JANUARY

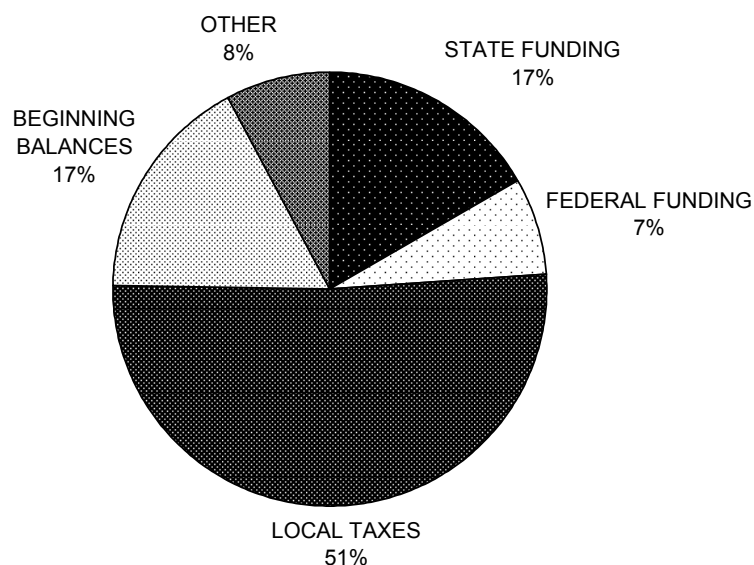
- 1 New Year's Day Holiday, NRD Office Closed
- 10 NRD Board Meeting, Tecumseh
- 21 Martin Luther King, Jr., Holiday, NRD Office Closed

Projections For 2007 - 2008

Fiscal Year 2008 Projected Expenditures



Fiscal Year 2008 Projected Revenue



A detailed breakdown of budget figures is available by contacting the NNRD Office, Tecumseh, NE.

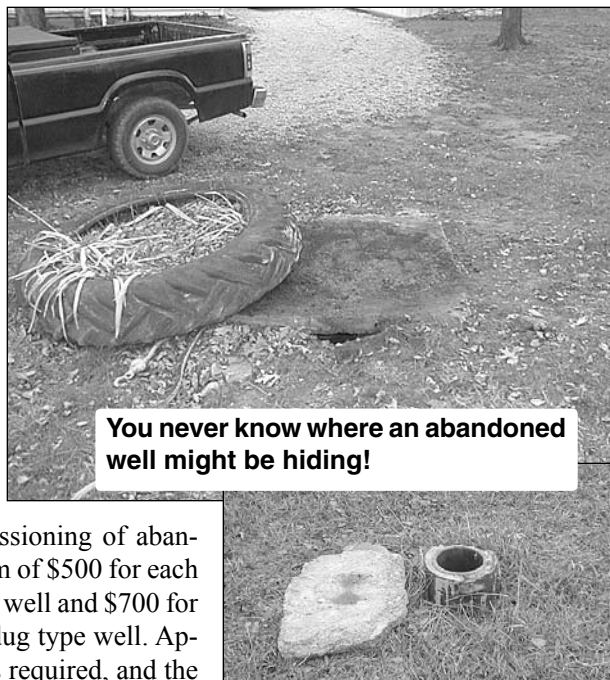
Water Resources Report 2007

Groundwater Levels

- A network of 117 wells (irrigation, livestock, domestic and public water supply) located throughout the District were measured in the spring and fall of 2006 and 2007. Spring '06-'07 readings indicated an average groundwater rise of 0.57 feet, and the Fall '06-'07 reading indicated an average groundwater rise of 1.50 feet.

Well Abandonment

- A total of 31 abandoned wells were decommissioned using the District cost-share program totaling \$12,223. Each year the District receives funding from the Nebraska Department of Natural Resources (NDNR) to fund a portion of the program. Since the program's inception in 1994, the District has received \$134,275 from NDNR resulting in the closure of 895 abandoned wells.
- The District provides 75% cost-share for the 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 driller.

- Funds are available, and the procedure is fairly simple – Sign Your Unused Well Up Today!

Groundwater Management

- In August of 1999 the entire District was designated as a Phase I Groundwater Management Area (GWMA). Phase I controls included obtaining a permit for wells designed to pump greater than 50 gallons per minute (gpm) prior to construction.
- In May of 2006 the Board of Directors approved a District-wide, temporary, two-year moratorium to the issuance of well permits in order to update the Groundwater Management Plan. Although the moratorium was issued District-wide, a well could still be applied for through a variance process. The variance process requires a testhole be drilled and logged, spacing between other registered wells pumping greater than 50 gpm must be at least 1,320 feet, and lastly Board action and approval.
- Since August of 1999, the District has received 307 permit applications; of these, 217 were actually constructed, 87 expired, and 3 were denied.
- The District's Groundwater Management Plan is currently being updated and is scheduled to be in place by the May, 2008, moratorium expiration.



You never know where an abandoned well might be hiding!

Well Monitoring

- 75 wells (17 irrigation, 58 domestic & livestock) were sampled this year for nitrate and some for bacteria (domestic wells) also.
- The District is capable of analyzing groundwater wells for nitrate and bacteria and provides this service to residents *free of charge*. Contact us to have your well tested!
- Additional tests are available from Ward Laboratories of Kearney at varying fees.

Phase II GWMA

- A Phase II GWMA was established in January of 2004 for northwest Richardson County. The 73 square mile area includes all land east and south of Pawnee and Nemaha Counties, respectively, north of the North Fork of the Big Nemaha River, and west of Highway 75.
- Elevated levels of nitrate in the groundwater prompted the designation.
- The District is offering cost-share assistance for soil sampling & complete fertilizer control systems – contact the District office for more information.
- Annual groundwater sampling occurred in August with the 21 wells sampled for nitrate-nitrogen averaging 9.4 parts per million (ppm), down from 10.8 ppm last year.

Irrigation Well Registrations

- Is your irrigation well properly registered with the Nebraska Department of Natural Resources (NDNR)? Improperly or unregistered irrigation wells are considered “illegal wells” according to State statutes and could ultimately be required to cease pumping or to be decommissioned. Registration of irrigation wells has been required since 1957.
- How do you know if your well is properly registered? District staff can assist you with looking up the information, or you can log on to NDNR's website at <http://dnrdata.dnr.state.ne.us/wellssql/> and search by several methods such as owner name, legal location, county, or NRD.
- What if you discover that your irrigation well(s) is not registered? District staff can also assist you with gathering the information needed for the registration and completion of the form. PLEASE NOTE: There is NO PENALTY for registering a well late. Registering your well helps to protect it from encroachment of other proposed high capacity wells.
- What if you found your irrigation well(s) registered but in a previous landowner's name? A simple and free Change of Ownership form is all that needs to be completed; District staff can assist with this also.

Chemigation Applications

- With the passage of LB 284 in 1986, the Nebraska Legislature enacted the Nebraska Chemigation Act. The Act charged the Department of Environmental Quality and the Natural Resources Districts with the authority to document, monitor, regulate, and enforce chemigation practices in Nebraska.
- Beginning in 1987, the Act requires producers engaged in the application of chemicals to land or crops with water through an on-farm irrigation distribution system to attend a training session and obtain/renew an applicator certificate every four years. Several training sessions are held throughout the state each winter. The NRD will also host a session at the District office later this winter.
- The Act also requires anyone chemigating to obtain a permit from the NRD for each injection location annually. The permit is reviewed and the site is inspected by District staff to insure proper safety equipment is in place and functional.
- In 2007 the District received 83 permit applications and inspected 65 systems.

FY 2007 Highlights

☑ Two small dam cost-share projects were finished in July, 2007, in Johnson County for Ken Brinkman and Bob Brandt. Seeding the structures will take place this fall. Following a few delays, a larger dam north of Falls City on the Bob Taft property is finally set for construction in the spring of 2008. Planned for construction during the FY08 fiscal year is one dam in Nemaha County on property owned by Arlen Grotrian.

☑ Muddy Creek Watershed took a few steps forward last year with the approval of a watershed plan to implement land treatment practices to help control streambed and streambank erosion. In April the Nebraska Environmental Trust gave final approval for a total of \$566,000 over a three-year period for this project. Sites have since been identified for weirs, grade control structures, and road dams. EQIP funds through NRCS will also be tapped to help with funding for some of the grade control structures.

☑ Watershed structures receiving repairs during the past year included:

Wilson Creek 8H

As a result of its proximity to Highway 2 east of Syracuse, it was determined that Wilson Creek 8-H met the qualifications to be reclassified as a high hazard structure. This means that the structure either must be renovated to meet high hazard dam specifications or the potential threat to the highway eliminated. Since the structure was originally constructed through the federal Watershed Protection and Flood Prevention Act, NRCS is developing a plan to address alternatives for correcting the problem. The plan should be completed in early 2008.

Wilson Creek 1-9

This fall the District will be repairing Wilson Creek 1-9, which is located east of Lorton, and was originally built in 1963. The major component of the project will be the replacement of the 24-inch spillway tube. Repair work on Wilson Creek 1-9 will be performed by Kuhl Trenching of Tecumseh.

Brownell 12-2

B.A.B., Inc., Adams, was hired to complete repairs on Brownell 12-2 northeast of Syracuse. Originally constructed in the late 1950s, this structure will also require the replacement of the original spillway tube.

Brownell 1-4

Repair work on Brownell 1-4 east of Syracuse was completed in the spring of 2007. Total cost to repair the structure was \$13,000, which included the replacement of the original spillway tube.

South Fork 3-D

Repair work on South Fork 3-D in Pawnee County was completed in the fall of 2006. Work included the placement of 450 tons of rock rip-rap on the face of the dam. Total cost to make the repairs was \$11,400

Winnebago-Bean 41-3A

Last fall 400 tons of rip-rap was placed on Winnebago-Bean 41-3 in eastern Richardson County to protect the dam from erosion. Total cost of the repair was \$11,500.

☑ Two applications for Urban Special Project funding were approved by the board in May, 2007, for completion during the FY08 fiscal year. Nebraska City will be using their \$20,000 of cost-share to supplement other funding for a concrete trail project. A wood chip trail will be completed with \$515 of NRD funds for the Village of Burr.

☑ \$137,287 of State Soil & Water Conservation Program funds coupled with about \$18,527 of NRD funds provided 50% cost-share for:

169,824 linear feet of terraces

19.47 acres of grass waterways

25,058 linear feet of side dikes

35,937 linear feet of tile

580 cubic yards of diversions

The next sign-up will be January 2, 2008, through May 30, 2008, at your local NRCS office.

☑ About 45 people attended a forestry workshop hosted by the NRD on February 27 in Auburn. Participants received information on managing existing timber, managing timber to enhance wildlife habitat, insect, disease, and environmental problems, and conservation practices using trees. Presenters from the Nebraska Forest Service, Nebraska Game & Parks Commission, and Natural Resources Conservation Service assisted NRD staff with the workshop.

☑ Approximately 27,000 trees and shrubs were distributed and/or planted by the NRD during the spring of 2007.

☑ Over 700 trees were provided to third graders at 15 schools throughout the District in April. Each spring the NRD distributes the trees and provides planting and care information to the youngsters.

☑ The NRD hosted the Area Land Judging Contest near Tecumseh in October, 2006, for 96 students from five schools. Norris High School qualified a team for the state Envirothon competition held at Fort Robinson in May; the NRD contributed \$100 toward their registration.

☑ Staff changes: In April, Lori Foster resigned as the NRD Clerk in the Falls City NRCS Office. Pam Joy was hired in June to take her place but left later in the summer to pursue another opportunity. Rachel Shafer was hired in August to fill this vacancy.

In August, Artis Fisher announced her resignation as the NRD's Business Assistant following 15 years of service. This position will not be filled and her duties instead reassigned to existing staff.

Howard McNiff retired in August, 2007, following a long and successful career with both the Natural Resources Conservation Service and more recently the Five Rivers RC&D. However, you might still find Howard helping out at the RC&D as they await the arrival of their new Coordinator, Tammy Thimms, who starts November 26.

Buck and Duck Creek

Potential benefits provided by the two reservoirs proposed for the Buck and Duck Creek Watershed west of Peru were evident after major storm events in May and August this year. With the structures in place, flooding and sedimentation in the historic Missouri River floodplain adjacent to Peru would have been greatly reduced. The NRD is in the process of acquiring funding in hopes of completing the project by 2011.

Nebraska's Congressional delegation in Washington is assisting the project by requesting that funds be included in the federal FY2008 budget to complete final design and begin construction. If funding for the project is included in the upcoming budget, work on acquiring the necessary land rights would begin fairly soon.

A two-month effort to collect artifacts from an area near the planned Duck Creek dam was completed in July. Archeologists from the State Historical Society believe that the artifacts and evidence of an earth lodge are approximately 800 years old. No further excavation is planned, and enough data was collected to allow the project to proceed on.

This fall the NRD will be working with Nemaha County to develop an inter-local agreement to address several roads and bridges that will be impacted by the project. Present plans are to keep 735 and 736 Roads open.

Watershed Management Projects

Kirkman's Cove – A Final Report!

Summer, 2007, marked the completion of a six-year effort to increase conservation practices within the drainage area of the lake at Kirkman's Cove Recreation Area northwest of Humboldt. Funding provided through EPA Section 319, Nebraska Environmental Trust, Federal Environmental Quality Incentives Program (EQIP), Nemaha NRD, and local landowners contributed to the implementation of best management practices throughout the watershed. The final tally of work completed included 1578 acres of tile outlet terraces, 85,056 feet of tile, 16,581 feet of non-storage terraces, and 331,596 feet of storage terraces. In addition 18 flood/grade control structures were built which control a total of 1,134 acres of drainage; and 147 acres of cropland were converted to grass.

One of the main goals of the project was to reduce sediment and associated nutrients entering the lake. Results supplied by the Nebraska Department of Environmental Quality, a partner in the project, showed an over 50% reduction of sediment, 20% reduction of nitrogen, and nearly 50% less phosphorus entering

the lake at the end of the project.

In September agency representatives from NDEQ, NETF, and NRCS along with a member of the landowner advisory council for the project joined NRD board members and staff on a tour of some of the projects completed.

Iron Horse Trail Lake

Similar to the project at Kirkman's Cove, work has begun in the Iron Horse Trail Lake watershed to protect the water quality of that recreation lake situated northwest of DuBois. So far, two dams have been built; 100 acres have been converted from cropland to grass; and 1,100 acres of tile outlet terraces are in place. No-till practices are also being implemented as part of this project.

Project partners/funding sources include EPA 319, NDEQ, NETF, EQIP, NNRD, and landowner contributions. Land treatment should be winding down by this time next year. In addition, a study is underway to determine whether a sediment basin can be incorporated above this lake to help slow the infiltration of sediment and nutrients into the lake. Results of the study are expected yet this fall.



Facing the camera on the left is NRD Resources Specialist, Shawn Kreienhop, talking with NRCS State Conservationist Steve Chick (right); in the background is a grade stabilization structure on the Leland Gerdes property just west of Kirkman's Cove.

From the Manager's Desk by *Bob Hilske*, General Manager

Sorry Miss Russnogle

For some reason back in 1972 I really struggled to get through Miss Russnogle's 9th grade algebra class. I was always convinced that it must have been her Civil War era teaching techniques. Not to suggest she was old, but I probably should have been honored to have the same math teacher as Abe Lincoln. Okay, I'll admit that Cindy who sat in the front row and filled out her sweater a lot better than she did in 8th grade probably had something to do with my algebraic ineptness too. All I know is that Cindy's measurements added up much better than Miss Russnogle's quadratic equations.

After 35 years I now can conclude with great assurance that my lack of algebraic focus really was my clear concern for the success of the new natural resources district system that originated in the summer of 1972. How could a locally elected board possibly be expected to manage and protect Nebraska's natural resources? I shutter to think of how low my algebra grade would have dropped had I known the controversy this new system created in southeast Nebraska. Many folks in this part of the state were certain that merging watershed districts and soil and water conservation districts would turn southeast Nebraska into a vast environmental wasteland that would send Al Gore into an early grave. How would a board member from Richardson County ever know how to solve problems in Johnson County? Heck, we all knew those farmers in Pawnee County couldn't plant a straight row of corn much less make a decision on allocating cost share dollars. Would you trust your tax dollars to those high rollers from Otoe County with their fancy new six-row combines?

Somehow it worked, and squabbling was put aside to continue to build much needed flood control projects. Since 1972 more than 10 major watershed plans were completed. Like most NRDs, this District's staff started small with just a few employees. As needs grew, so did the staff. I'm sure the coffee shop buzz was that the NRD was turning into the next General Motors. In the 1980s someone came up with the idea that we should include recreation facilities around some of our watershed structures. Today we have four areas that we operate and maintain. I'm pleased to report that in 2007 we set a record for the number of park permits sold.

When sitting in Miss Russnogle's class, I never dreamed that water would be the issue it is today. In the 1980s the Nemaha NRD's water programs budget was almost nothing; now we invest over \$130,000 a year; and that will continue to go up. Although projects and programs get bigger, take longer, and cost more, we still do all those simple things the NRD did when it started in 1972. The District has easily provided more than \$2 million in cost-share assistance over the years to landowners to install terraces, waterways, grade stabilization structures, and dams. Mark would want me to point out the thousands of trees we have planted over the years.

To sum it up in terms that Miss Russnogle might understand: 35 years of success = (a + miles of terraces) x (b + dollars spent) / (watersheds protected - sum of Cindy's measurements); Whoops, there I go again; sorry Miss Russnogle. So I wonder whatever happened to Cindy.

Recreation Review

The NRD continued with several improvements to its recreation areas the past year. An additional six electric RV pads were installed at Kirkman's Cove bringing the total to 16. Roads accessing the RV area and beach were also changed from one single loop to separate loops for each area. With the hot summer beach use was higher than average; and with the additional facilities, more campers used the park.

Beaches were renovated at both Iron Horse Trail Lake and Wirth Brothers Lake the past year. A new concrete restroom was installed at Iron Horse in the fall of 2006. District staff also developed a concrete surfaced, group picnic area at this park located near DuBois.

A wetter than normal summer provided two major benefits to the NRD parks: reservoirs had higher water levels, and there were fewer problems with blue-green algae. Lakes are placed on health alert whenever algae levels reach 20 parts per million. The NRD collects samples on a weekly basis during the summer to monitor water quality including algae levels. For the first time in several years, Kirkman's Cove did not reach the 20 ppm alert level. Iron Horse did exceed the trigger and was on health alert for a four-week period in July and August. Wirth Brothers Lake has never been placed on health alert. Heavy rains in May filled Wirth Brothers for the first time in many years, and District staff monitoring the lakes reported that the 36-acre reservoir in Johnson County set records for water clarity.

Records were also set for park permit sales this year. Permit sales will exceed \$10,000 for the first time since the District began requiring the permits in 1999. The NRD expects to sell over 700 permits by the end of the park season later this fall.

Repairs & Improvements Planned

Park visitors might note that the lake level at Kirkman's Cove was a bit lower, at least for a few days in October. NRD crews



New group picnic area at Iron Horse.

opened the lake's drawdown in preparation for some repairs needed on the sediment basin located at the upper reaches of the lake. However, since opening the valve significant rains then refilled the lake. It is hoped the lake can be temporarily lowered about four feet to allow for the repairs, which should only take about a week to complete, once the weather cooperates.

Steamboat Trace

Weather caused numerous problems for the Steamboat Trace this year. Flooding in May damaged 3.5 miles of trail between Brownville and Peru and also washed out a dike that protected a portion of the trail. Temporary repairs were made to keep the trail open over the summer. The NRD was able to secure emergency funding through FEMA and plans to resurface the damaged segment in November. Plans are to close the trail between Peru and Brownville beginning on November 5 until the resurfacing is completed. **The entire trail will be closed during rifle deer season from November 10 to November 18.**

NEMAHA NRD STAFF

Bob Hilske, Manager
Scott Nelson, Assistant Manager
Jane Kuhl, Administrative Assistant
Allison Caspers,
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, Projects Crew Leader
Shawn Kreienhop, Resources Specialist

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Deb Kreienhop, Auburn
Glenda Bates, Tecumseh
Jim Masters, Syracuse
Rachel Shafer, Falls City
Kathy Harlow, Pawnee 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.