



# Nebraska Resources

Newsletter

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## 2001 Water Administration Summary

By Susan France

Water administration consists of making sure no surface water irrigator diverts more than their permitted amount and, in times of shortage, shutting off diversions based on the priority date of the water right (first in time is first in right). Water administration is a normal annual occurrence in the Republican River Basin and the Platte River Basin above Columbus.

This year the Republican River Basin administration was unusual in that the H & RW Irrigation District and the Frenchman Valley Irrigation District only delivered 2.5 acre-inches of water to their users. The source of most of the water for these two districts is Enders Reservoir, which had low water levels this water year. Releases from Enders began on July 2 and ended on July 29 this year.

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## Planning and Assistance Division

By Steve Gaul



The **Natural Resources Planning and Assistance Division** of the Department of Natural Resources provides statewide mapping and geographic information system analysis, conducts state level planning studies, provides assistance to other governmental units, coordinates Departmental

stream gaging efforts, and provides a variety of technical assistance to the Director. The Division's duties and projects span a wide variety of topics and do not have a single discrete theme. Changing needs can also result in significant changes in many of the Division's projects and activities through time. Some of the current Division projects and duties include the following items.

### **Mapping/Geographic Information System Activities**

These activities are generally cooperative efforts with other divisions or agencies and include water rights mapping, the national hydrographic dataset, digital mapping of soils, floodprone area mapping and other mapping or geographic system analysis.

One of the more intriguing projects in terms of long term Departmental efficiencies is **mapping water rights in a digital/electronic format**. The Department has maintained a visual record of irrigated land under various types of water rights for over 100 years. The hand drafting method of creating and editing water rights maps is being replaced by digital cartography that will be linked to the surface water rights database. This will provide better access, improve accuracy, and allow analysis of water rights information with other information in a geographic information system. The effort is expected to take about 2 ½ years.

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### Agency Numbers to Remember

#### **Agency address:**

Nebraska  
Department of Natural Resources  
301 Centennial Mall South  
Fourth Floor  
P.O. Box 94676  
Lincoln, Nebraska 68509-4676

#### **Agency phone number:**

(402) 471-2363

#### **Agency fax number:**

(402) 471-2900

#### **Agency homepage address:**

<http://www.dnr.state.ne.us>

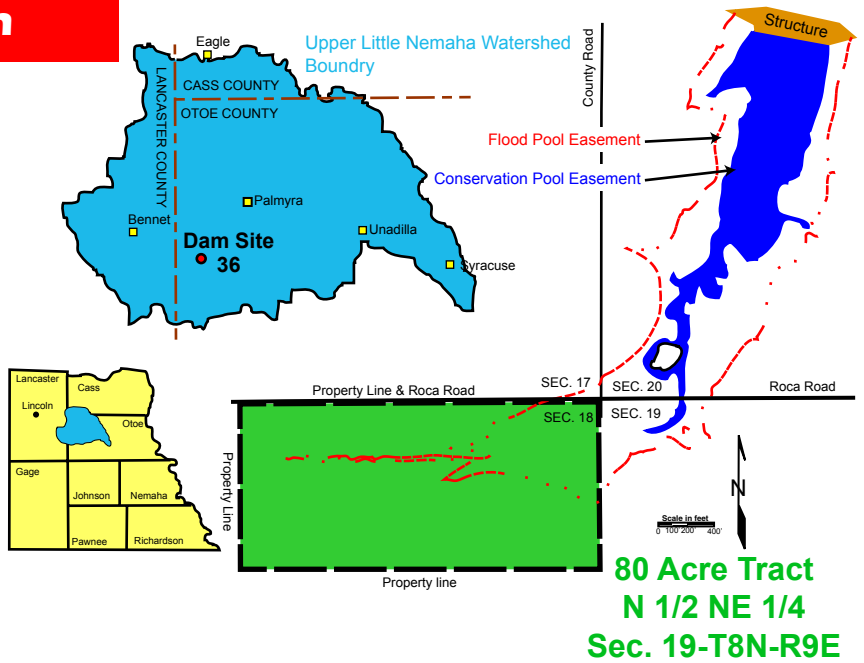
**Editor's Note:** *The Natural Resources Planning and Assistance Division article in this newsletter is the third in a series on the Divisions, Field Offices and Programs of the Department of Natural Resources.*

## January 2002 Land Auction

By Tom Pesek

An 80-acre tract of land associated with Site 36 of the Upper Little Nemaha Watershed will be **sold at public auction on January 9, 2002**. The tract contains approximately 32 acres of cropland, including a buffer strip, with the remainder in pasture. There are acres, including 11.1 acres of cropland, in the flood pool of Structure 36. The tract is **located approximately 2 miles south and 3 miles east of Bennet or 20 miles southeast of Lincoln**.

This tract was purchased by the Nemaha NRD in 1999 with state funds provided by Small Watersheds Flood Control Fund. The auction will be held at **1:30 p.m. at the American Legion Hall in Palmyra**. Auctioneer Bill Rut of Dorchester call the sale.



**80 Acre Tract  
N 1/2 NE 1/4  
Sec. 19-T8N-R9E**



## Missouri River Master Manual RDEIS Ready for Comment

By Jeff Shafer

The **Missouri River Master Manual** is a set of rules governing the release of water from the mainstem reservoirs to meet the project's authorized purposes. The authorized project purposes include flood control, irrigation, hydropower, water supply, water quality, navigation, recreation, and fish and wildlife.

During the late 1980's, the Corps of Engineers initiated the Master Manual review and update study. The purpose of the study was to identify a water control plan that serves the contemporary needs of the basin, complies with current environmental laws, and serves Congressionally authorized project purposes. Now, more than 10 years after the process began, the Revised Draft Environmental Impact Statement (RDEIS) is available and open to public comment.

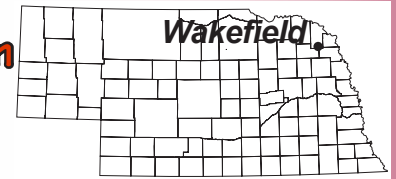
There are six alternatives studied in detail in the RDEIS. The alternatives can be categorized as the current water control plan, a plan for additional conservation of water during droughts, and four plans for changes in the release of water from Gavins Point Dam in addition to addition conservation.

**Beginning October 9<sup>th</sup>, the Corps of Engineers will begin holding a series of public workshops and meetings throughout the Missouri River Basin.** At the present time, only one workshop and hearing is scheduled in Nebraska. **The workshop will be from 2:00-5:00 p.m. and the hearing from 7:00-10:00 p.m. on November 8<sup>th</sup> at the Lied Conference Center in Nebraska City.**

A copy of the RDEIS summary, information about the public workshop schedule, and information on making comments on the RDEIS is available at the Corps website:

<http://www.nwd-mr.usace.army.mil/mmanual/mast-man.htm>.

## Wakefield Project Dedication



By Tom Pesek

The City of Wakefield conducted a dedication ceremony of the **Wakefield Levee Project** on Saturday, September 22, 2001. It was an enjoyable and well-organized event that included the unveiling of a monument at the western end of the levee.

The Wakefield Levee Project protects Wakefield from the 100-year flood on Logan Creek and consists of nearly two miles of levee on the north and east sides of the community along with associated drainage structures (culverts and sluice gates). Total project cost was \$1,292,534 with nearly 71% or \$917,640 of federal funds through the Nebraska Emergency Management Agency. The Nebraska Resources Development Fund provided \$224,900 or 60% of the non-federal cost and the Lower Elkhorn NRD and the City of Wakefield each contributed \$74,997 or 20% of the non-federal cost.

In his remarks, Roger Patterson commended the City of Wakefield on initiating this excellent project which will help the community grow and prosper in the years ahead. Commission members Garry Anderson of Dixon, who represents the Elkhorn River Basin, and Vince Kramper of Dakota City, who represents the Missouri Tribes River Basin, also attended the dedication.

## Shorts

### Warren Fairchild Remembered

Warren Fairchild, who was the Director of the Natural Resources Commission from 1957 until 1970 passed away the last part of September. He left the Commission to become assistant director for planning with the Bureau of Reclamation in Washington D.C., later becoming director of the Water Resources Council and also worked for the World Bank before his retirement in 1989. Fairchild was considered the "father" of NRD legislation creating Nebraska's unique natural resources districts and a was friend of Nebraska's natural resources.

### Length of Service Awards

As part of **Nebraska Employee Recognition Month**, *Length of Service Ceremonies* were held across Nebraska during October. Employees of the Department of Natural Resources recognized at the ceremonies were:

Don D. Adelman.....	25 years
Dorothy A. Brening.....	45 years
Mike Donovan.....	35 years
Gayle A. Follmer.....	10 years
Robert Stephen Gaul.....	25 years
Joshua W. Lear.....	10 years
Mary L Lonowski.....	15 years
Thomas A. Mitchell.....	30 years
Harvey Melvin Mortimore.....	30 years
Michael P. Munson.....	15 years
James F. Ostdiek.....	15 years
Krista S. Reed.....	15 years
Russell A. Rinne.....	35 years
Kevin J. Schwartman.....	10 years
Steven W. Soberski.....	25 years
Kent L. Zimmerman.....	10 years

### Dorothy Brening Retirement

Dorothy Brening from the Bridgeport Field Office is retiring effective Oct. 31, 2001, finishing a 45 year career with the State of Nebraska. Her career began on Aug. 1, 1956 with the former Bureau of Irrigation, Water Power and Drainage Department. During her career she worked with 37 different employees in the Bridgeport Office where she spent the entire 45 years.

The Bridgeport Field Office staff hosted an open house for Dorothy on October 31 with many of her friends and family members attending. The entire staff of DNR wishes Dorothy the very best in retirement.

## 2001 State of Nebraska

### Employee and Supervisor/Manager of the Year Awards

Governor Mike Johanns proclaimed the month of October 2001, as State of Nebraska Employee Recognition Month. A ceremony honoring agency supervisors/managers and employees of the year was held on October 25 in the rotunda of the State Capital Building. In addition to the State Capital ceremony, Length-of-Service ceremonies were held across the state recognizing state employees celebrating 10, 15, 20, 25, 30, 35, 40, and 45 years of service to the state.



Receiving the Supervisor/Manager of the Year Award for the Department of Natural Resources was

**Brian P. Dunnigan**, Division Head with the Floodplain Management/Dam Safety/Survey Division of the agency. Brian has been an important part of the Department since 1986, first working as an engineer in the division he now heads. Brian is an exceptional model of a supervisor/manager and with his guidance and dedicated staff Brian has advanced Nebraska's efforts in proper floodplain management and dam safety. The recipient of

numerous state and federal awards and recognized for his leadership and coordination talents, Brian is not only a great asset to Nebraska but has furthered floodplain management nationally. Brian is always open to exploring new technologies and innovative methods to accomplish any job and to expedite floodplain management and dam safety. A more professional or dedicated employee would be hard to find.



Receiving the Employee of the Year Award for the Department of Natural Resources was

**Mike Thompson**. An employee with the agency since 1989 Mike serves as a GIS Support Analyst with the Natural Resources Planning and Assistance Division of the agency. This past year Mike has spent numerous days coordinating the purchase of and installation of new software making it

possible for more users, both inside and outside the Department, to utilize agency data. In Mike's words,

"we brought together available data with interested users, GIS data and applications were brought together for GIS users who are not GIS experts". Mike plays a central role in the department as an employee who is often requested by many to perform various duties within different areas of the Department. Mike enjoys working with a variety of people and projects both inside and outside the Department. He always seems to accomplish the task in a kind hearted and good natured manner, one of those employees you like to work with. Mike finds pleasure in helping others and all of us in the agency are very thankful for Mike's talents and involvement.

The Department of Natural Resources is fortunate to have two employees like Brian and Mike. Both employees are always open to suggestions; ready to do that little extra that makes the big difference and they always takes the necessary time to listen to fellow employees and their ideas and suggestions. The agency and staff congratulate both Brian and Mike on their awards and for their continued outstanding service to the Department and State of Nebraska.

Planning and Assistance Division Continued from page 1

The Division is compiling **national hydrographic dataset** digital mapping projects for several Nebraska subbasins with a long term goal of working toward statewide coverage. The 1:24,000 national hydrographic dataset (NHD) would present water features at the same scale as other state digital mapping packages and would provide the basis for or enhance the efficiency of a wide range of potential water analysis and administration activities. These include uses such as surface water quality assessment, bridge design, and water rights administration.

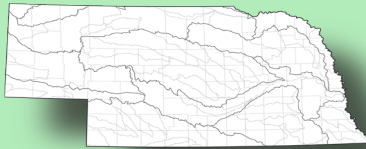
The Nebraska GIS Steering Committee has prioritized this database and it is one of the select few databases that provide the underlying framework for coordinated GIS development and widespread data sharing and integration.

The Division is cooperating with the Natural Resources Conservation Service, the University of Nebraska Conservation and Survey Division, and DNR's Data Bank in an effort to **convert Nebraska's published soil surveys to an electronic/digital format**. The project is to develop a digital soil base of all 93 Nebraska counties by September 30, 2002. Once digitized, the files can be adjusted in scale, making it easier to integrate soils data with other geographic data. Considerable Division staff time is also devoted to the **flood-prone area mapping project** which is being coordinated through the Floodplain Management/Dam Safety/Survey Division. That effort has resulted in major efficiencies in the production of county flood area maps for rural/unmapped areas. Finally, the Division has engaged in a variety of other **technical mapping projects**, including improvements to the "tagged vector coverage" developed in an earlier mapping project. That effort will result in more accuracy and utility for a product that can be used for a variety of activities such as calculating depth to water, development of farm terraces, or watershed delineation.

### State Level Planning Studies/ Technical Assistance/ Reviews

The Planning and Assistance Division participates in a variety of planning

oriented studies and conducts reviews of projects and programs. The Department is one of ten project sponsors of the **Platte River Cooperative Hydrology Study**, an effort to develop an understanding of the hydrological and geological conditions in the Platte Basin in Nebraska upstream of Columbus. The Division has provided support for the database management, GIS coverage and website portion of the project and has housed a database management specialist hired by the study sponsors. The study is partially funded by the



Nebraska Environmental Trust and is entering a second phase which is due to be completed by June 30, 2004. When complete, the effort should help Nebraska meet its obligations under the Platte River Cooperative Agreement and enable NRDs and others to provide appropriate analysis, regulation and management.

The Planning and Assistance Division is also currently responsible for preparation/contract oversight for **reports on Nebraska carbon sequestration potential** being prepared in response to LB 957 (2000). Carbon sequestration involves storing carbon in the land and vegetation in order to reduce levels of atmospheric carbon and address global warming issues. The Nebraska Environmental Trust and other entities have provided funding for this effort and most, though not all, of the work has been contracted out. A report on the policy and administrative aspects of carbon sequestration is due to be completed this December 1 and a contract report assessing Nebraska's current and potential carbon sequestration is due January 1, 2002.

Another current Division project is participation in compilation of the US Geological Survey **national water use estimate data for Nebraska**. The estimates are completed once every five

years and DNR surveys of municipal and industrial water users this past summer will provide significant input for that effort. Finally, Division staff provide reviews on a variety of natural resources projects and currently chair the economic and technical committees for the Nebraska Resources Development Fund. Division staff also work on agency database maintenance, and coordinate website maintenance.

### Stream Gaging

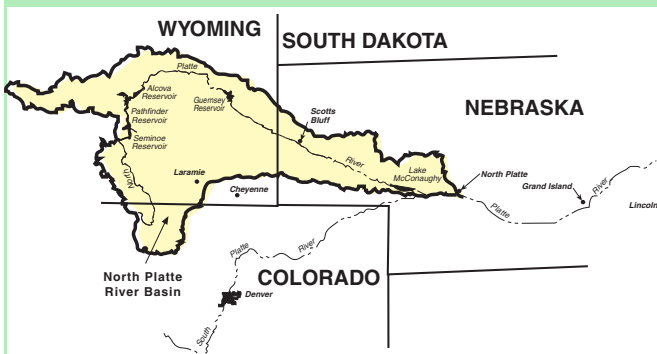
The Department of Natural Resources operates 160 gages on rivers, streams, canals, reservoirs, and returns in Nebraska. This includes 61 continuous full year and 5 partial year stations on rivers and streams, 1 reservoir, 90 canal, and 3 return flow stations. These stations, along with an additional 53 reservoir and canal records from other agencies are published in the Department's *Hydrographic Report* and entered into the Data Bank. Although a Planning and Assistance Division staff member is responsible for program coordination and publication of the hydrographic report operation of the stream gaging system is a responsibility of DNR's field offices.

### Interstate Issues/ Technical Assistance to the Director

Planning and Assistance Division staff provide a variety of technical assistance to the Director on compact and decree administration and interstate issues. A Division staff member serves on the engineering committee for the Blue River Compact, the engineering committee for the Republican River Compact and the technical committee for the Missouri River Basin Association. Another Division staff member is developing procedures for monitoring compliance with the North Platte Decree and the recent settlement with Wyoming. Division staff also assist the Governor's Republican River Basin Council and provide technical assistance to the Director on a variety of stream hydrology issues.

## DNR Staff to Monitor North Platte Modified Decree Compliance

By Jennifer Schellpeper



The states of Nebraska, Wyoming, and Colorado and the United States submitted a proposed settlement of the Nebraska v. Wyoming lawsuit to Special Master Owen Olpin last spring. In his final opinion to the

Supreme Court, Olpin recommended the court approve the settlement and Modified Decree without changes.

Nebraska will need to ensure that Wyoming is properly implementing the modified Decree. Several settlement items require immediate attention. The first is to verify that Wyoming is not irrigating more than the allowed number of acres or consuming more than the allocated amount of water from both surface water and hydrologically connected ground water along the North Platte River and its tributaries upstream of Guernsey and Pathfinder Reservoirs in Wyoming.

Other tasks include the adjudication of ground water permits and the determination of the number of active ground water wells with hydrologic connections to the North Platte River from the Colorado-Wyoming state line to the Wyoming-Nebraska state line.

To monitor Wyoming's compliance DNR has hired Jennifer Schellpeper, who has a MS Degree in Natural Resources from UN-L and extensive experience in ground water studies, and Patrick Goltl, who has a BS in Geohydrology from the University of Wyoming. DNR has also reassigned the duties of Shane Wright to assist in the monitoring activities. Schellpeper will be working in Lincoln, Goltl and Wright will be based at the Bridgeport Field Office.

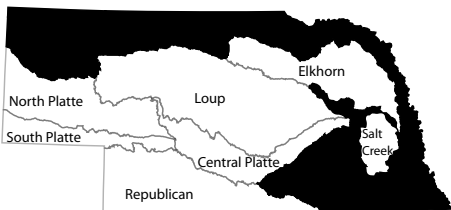
## Commission Acts On Skull Creek Project Proposal

By Tom Pesek

The Natural Resources Commission, at its September 25<sup>th</sup> meeting, advised the Lower Platte North NRD that it **may proceed with an application and feasibility report for Skull Creek Site 31 but recommended that Site 30 not be included** at this time. The recommendation on Site 30 was due to the relatively low level of land treatment above the site, the extent of untreated land adjacent to the proposed reservoir, and the apparent lack of significant interest among landowners to apply land treatment measures in the near future. The Commission also directed the NRD to address several questions that arose during review of the project proposal by the Department of Natural Resources and other state agencies.

Sites 30 and 31 are two floodwater retarding structures (dams) near Bruno that were identified in a comprehensive study of the Skull Creek Watershed. Site 31 is a road structure that would replace a Butler County bridge. The structure would result in a reservoir with a planned conservation pool of 53 acres.

Water Administration Continued from page 1



Water administration also occurred for the second straight year in the Loup River Basin, Elkhorn River Basin and Salt Creek Basin located in the lower end of the Platte River Basin (below Columbus) because a 1993 instream flow permit for the lower Platte River was not met. Administration began on August 7 and continued through August 18 this year.

A comparison graph showing major reservoir capacity, maximum storage this year and the amount that will carry over to next year is found to the right.

### Comparison of Storage in Reservoirs for Water Year 2001

Reservoir		Capacity		Maximum Storage		Carryover	
		Top of Irr. Pool in Acre-feet	Acre-feet	% Average	September 30, 2001 Acre-feet	% Average	
Pathfinder	a	1,016,510	871,636	95%	196,488	46%	
Glendo (ownership)	a	184,870	183,236	109%	148,166	108%	
Lake MacConaughy	a	1,948,000	1,231,400	74%	898,542	66%	
Oliver (no irr. water stored)	b	2,680	2,239	82%	1,236	61%	
Whitney	a	10,000	10,882	105%	5,770	135%	
Box butte	a	31,060	21,116	107%	7,406	141%	
Enders	a	44,480	27,850	78%	15,710	93%	
Harry Strunk	a	37,140	37,660	92%	18,820	81%	
Swanson Lake	a	120,160	72,170	65%	23,270	35%	
Harlan County Lake	a	342,560	312,500	91%	237,400	94%	
Hugh Butler Lake	c	37,780	31,320	90%	16,420	62%	
Sherman	d	69,080	70,230	103%	49,190	105%	
Merritt	e	74,490	78,080	105%	46,410	93%	
Calamus	f	127,400	131,500	114%	68,430	92%	
Davis Creek	g	32,459	28,370	99%	16,020	94%	

Records used for average

a 1960-2001, b 1981-2001, c 1962-2001, d 1963-2001, e 1964-2001, f 1985-2001, g 1994-2001



**State of Nebraska**

Mike Johanns, Governor

**Nebraska**

**Department of Natural Resources**

Roger K. Patterson, Director

The *Nebraska Resources* is a quarterly publication of the Nebraska Department of Natural Resources and is edited by Terry L. Cartwright, Public Information. Your comments and or suggestions are welcomed.

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**Nebraska Department of Natural Resources....**

**....dedicated to the sustainable use and proper management of the State's natural resources.**