

# The 2006 MRNRD Annual Report

Middle Republican

Natural Resources District

## 3.1 Million in Groundwater Projects in 2006

In 2006-07, more than 40% of the district's \$1,654,580 budget was allocated to Groundwater Management.

A particular focus for 2006-2007 was the implementation of various special projects and initiatives to address groundwater management in the district. These projects, which leveraged over \$3 million basin-wide, include:

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### Surface Water Buyout

In 2006, the Middle Republican NRD contributed \$50,000 to purchase surface water in Hitchcock county. Riverside Irrigation Company accepted an offer to not use the natural flow. The agreement between the Riverside Irrigation Company and the state affected 600 acres in the Riverside District.

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### Pocket Irrigation Guide

The Republican River Basin Pocket Irrigation Guide, funded in part by the Nebraska Environmental Trust, includes instructions on irrigation scheduling, information on flow meter repair or replacement, conversion formulas, watering requirements, chemigation, pump efficiency, and contact information for local organizations and agencies. Project partners include all Republican Basin NRDs, USDA NRCS and the University of Nebraska Extension. All irrigators in the Republican Basin will be mailed a copy of the guide by Spring 2007.

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### Remote Meter Reading.

The Middle Republican NRD, in cooperation with the Upper Republican NRD, Southwest

Public Power District and McCook Public Power District, received \$19,100 in funding from the USDA NRCS Conservation Innovation Grant program. The grant will assist in a pilot program to retrofit 24 existing meters on electric wells to send the meter pulse over power lines. The PPDs will collect these pulses daily and send data to the MRNRD. With this new system, usage reports will be available to Project Collaborators approximately one day after the meter is read. The pilot project will include 24 active meters, which will be read daily. The project funds the purchase and installation of equipment to remotely read selected customer meters within Southwest and McCook Public Power District for water usage accounting purposes. As part of the project, a web tool will be designed that will allow producers to check their daily water usage via the internet.

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### EQUIP Special Incentive.

funded by: DNR, Republican Basin NRDs, & USDA NRCS. More than five dozen landowners near the Republican River have offered to stop irrigating about 5,500 acres in return for financial incentives. The state and the Upper Republican, Middle Republican, and Lower Republican NRDs came up with nearly \$1.7 million for their incentives. Under the Natural Resources Conservation Service program, using conservation easements, farmers will receive \$100 an acre for three years to stop irrigating. The state and the NRD will provide one-time payments of \$375 an acre. A conservation easement is filed and the acres are permanently retired.

5

### Riparian River Project, Funded by the Interrelated Water Management Plan Program

The Middle Republican NRD has joined the Lower and Upper Republican NRDs as partner in a 3-year project to physically remove excessive native and invasive plant species from a study/demonstration area of at least one mile of river frontage in each of the three NRDs and process trees into wood chips. The project will also report differences in water availability and evaluate the cost and effectiveness of secondary management to ensure establishment of desired riparian function and habitat diversity. Southwest NE RC&D coordinated the proposal submission. Project partners include DNR, UN-L, University of NE West Central Research and Extension Center, Nebraska Game and Parks and Nebraska Forest Service. Republican NRDs contribution is approximately \$50,000

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### Republican River Augmentation Appraisal,

The objectives of the project, funded in part by the Interrelated Water Management Plan Program, are to identify potential augmentation water supplies to the Republican River and to conduct a technical appraisal of an augmentation project utilizing those supplies determined to be practical for the purpose of achieving and maintaining compliance with the Republican River Compact and the Republican River Compact Settlement Agreement when considered in conjunction with other ongoing activities in the basin. The study would first identify practical

### FY 06-07 PROJECT COST & FUNDING

Project #	Cost	NRD Contribution
1	\$100,000	\$50,000
2	\$62,438	\$21,980
3	\$42,235	\$23,135
4	\$1,782,000	\$330,000
5	\$999,600	\$50,000
6	\$170,000	\$34,000
<b>TOTAL</b>	<b>\$3,156,273</b>	<b>\$509,115</b>

augmentation water supplies, both ground and surface water, with the potential to significantly increase Republican River flows, in effect increasing Nebraska's allocation under the compact. For those supplies determined to be practical a technical appraisal of hydrologic properties would be conducted to quantify streamflow augmentation potential for each source of supply. The infrastructure requirements of each potential augmentation project will be compiled. Hydrologic properties and infrastructure needs will be utilized to construct cost estimates for each potential augmentation project. The impact of each augmentation project upon Nebraska's compact allocation and consumptive use in both the short and long term will be quantified. The effect of each augmentation project on Nebraska's ability to comply with its compact obligations will be determined by applying the compact sub-basin allocations and accounting procedures. The final task of the project will be to compile a cost to benefit analysis for each of the potential augmentation sources later for other natural hazard and planning purposes.

# 2006 Groundwater Usage

As of January 1, 2007, there are currently 3,034 regulated wells in the district which water a total of 313,197.35 certified acres. The Average water use for irrigation district-wide was 14.85 acre inches in 2004. In 2005, producers self-regulated an additional 30%, pumping an average of 8.78 acre inches. Preliminary numbers for 2006 show an average that is still well below regulations at 10.27 acre inches.

## 2006 Certified Acres

Total Certified Acres		
County	Certified Acres	Number of Wells
Frontier	74,132.00	619
Hayes	67,993.60	481
Hitchcock	38,839.15	528
Lincoln	76,467.10	524
Red Willow	55,765.50	882
<b>TOTAL ACRES</b>	<b>313,197.35</b>	<b>3,034</b>
Quick Response Acres		
Frontier	24,479.70	245
Hayes	16,003.60	149
Hitchcock	24,068.10	379
Lincoln	7,702.30	57
Red Willow	35,972.00	597
<b>TOTAL QR ACRES</b>	<b>108,225.70</b>	<b>1,427</b>
Platte Area Acres		
Frontier	838.20	4
Lincoln	2,549.50	14
<b>TOTAL PA ACRES</b>	<b>3,387.70</b>	<b>18</b>

## 2006 Groundwater Use by County

County	Use	Water Usage	Irrigated Acres	Average Use
Frontier	Irrigation	451,990.14	54,829.7	8.24
Hayes	Irrigation	687,807.60	66,724.6	10.31
Hitchcock	Irrigation	318,476.03	33,479.3	9.51
Lincoln	Irrigation	873,678.22	75,042.6	11.64
Red Willow	Irrigation	118,374.19	12,390.5	9.55
<b>Average Usage District-wide</b>				<b>10.11</b>

*All 2006 data is preliminary*

Have you checked us out on the web?  
You'll be suprised at what you find at:

HTTP://WWW.  
MRNRD.ORG

## Happenings in Brief

- In 2006, five new directors were elected the Board. The November 7th ballot listed eleven candidates running for a seat on the Middle Republican NRD Board. Elected to the board were Josh Friesen (Wallace), Benjie Loomis (Maywood), Dan Nelsen (Moorefield), Brad Randel (Indianola), Marty Schurr (Maywood), and Kevin Fornoff (Hayes Center, incumbent). The district thanks Don Roberts, Kelly Wertz, Mike Peters, Dennis Hoyt, and Duane Dodson for their years of service.
- The 20th Annual Southwest Nebraska Water Conference was held in March. More than 100 folks attended the conference co-sponsored by the MRNRD.
- Over 100 applications for conservation practices were received and nearly \$150,000 in cost-share dollars was allocated to district landowners.
- Frank and Patricia Stehno of 0 were awarded the 2006 MRNRD Honor Conservation Award.
- In 2006, 1,031 chemigation systems were certified, a slight increase from 934 systems in 2005. Of these, 85 new permits were granted and 66 permits were cancelled. Nearly 500 systems were spot-checked or inspected by MRNRD technicians.
- The Middle Republican NRD, through the Nebraska Game and Parks Commission, makes the WILD Nebraska program available to landowners for establishing new wildlife habitat as well as improving existing habitat. In 2006, no new applications were received, but the MRNRD paid out \$8,838.75 through the WILD NE program to landowners with existing contracts.
- Nebraska Attorney General Jon Bruning presented \$69,000 for environmental education efforts to the Nebraska Association of Resources Districts. The money was made available through the Attorney General's Environmental Court Ordered Settlement Fund. Each individual district received \$3,000. In 2006, the Middle Republican NRD used these funds to purchase an Enviroscape Watershed/Nonpoint Source model, which teaches the watershed concept in addition to point and nonpoint source pollution. Students learn about best management practices by using felt buffer strips as vegetation, clay to create berms and other methods to show conservation and water pollution prevention measures at work. The model will be available for district teachers and students to check out, and classroom demonstrations will be possible.

# Natural Resources Education

THE MIDDLE REPUBLICAN NATURAL RESOURCES DISTRICT has a wealth of resources available to district educators and community groups. Our lending library includes books, activity guides, videos, games, a ground water flow model, stencils and other materials that provide informative and factual information to compliment natural resource studies. Topics range from animals to trees and water. These curriculum activities involve students in fun, hands-on activities designed to increase their knowledge of their natural environment.

The District sponsored or participated in the following educational programs in 2006:

## NATURAL RESOURCES EDUCATION

The MRNRD continues to support and sponsor outdoor education programs such as the Children's Groundwater Festival, 5th Grade Conservation Craze, and the McCook 7th Grade Outdoor Science Day. Over 500 students received Burr Oak trees as part of the district's Seedlings to School program, in celebration of Arbor Day. Schools also received curriculum developed by the National Association of Conservation Districts in honor of Soil and Water Stewardship Week. In 2006, the NRD assisted with range and land judging contests.

## SCHOLARSHIPS

The MRNRD annually awards three types of scholarships, the college scholarship, summer camp scholarship, and the educator scholarship.

Kay Kaczor of Curtis and Matthew Wiest of Moorefield each received the \$200 college scholarship. Both Kaczor and Wiest graduated in 2006 from Medicine Valley High School. Kaczor, the daughter of Waneta Storm and Joesph Kaczor, is attending Chadron State College, where she will major in Agri-business Administration. Kaczor held many leadership roles in the Medicine Valley FFA Chapter for her

four years of high school. She told the NRD Board, "I believe that my agricultural background will help me achieve all of [my] goals."

Wiest attends NCTA, where he is studying turf management. He is the son of Ronald and Joan Wiest. Wiest told the NRD Board that, "I am the last of seven children. All of my brothers and one sister have attended NCTA and I want to follow in their footsteps...I have worked hard in being a part of the community and hope to continue to do so by volunteering in different capacities."

There were no Summer Camp or Educator Scholarship applications received by the MRNRD in 2006.

## NEBRASKA ENVIROTHON

In 2006, the Middle Republican NRD co-sponsored the second Mid-Plains Regional Envirothon Training Session with the Twin Platte NRD. This educational seminar brought together students from eight schools throughout southwest Nebraska with natural resources professionals in the fields of forestry, range, soils, aquatics, cultural resources, wildlife, and policy. In addition, the district sponsored the Mid Plains Regional Envirothon Contest and provided technical assistance at the Nebraska Envirothon in May at Bunker Hill near Hastings, NE.



**DURING MRNRD'S FALL CONSERVATION CRAZE, 5TH GRADE STUDENTS FROM ACROSS THE DISTRICT WERE EXPOSED TO INSTRUMENTS USED TO LAY OUT CONSERVATION PRACTICES.**



**DISTRICT STUDENTS FROM WAUNETA-PALISADE HIGH SCHOOL WON THE 2006 NEBRASKA ENVIROTHON COMPETITION. WITH DISTRICT SPONSORSHIP, THEY WENT ON TO COMPETE AT THE UNIVERSITY OF MANITOBA IN WINNIPEG, CANADA. THE TEAM INCLUDES, FROM LEFT, BRENNAN KEISER (16), LUKE WRIGHT (17), STACEE WRIGHT (16), KATIE ERICKSON (16), & JESSE SKELTON (16), TEAM ADVISOR TERESA HAYES. (NOT PICTURED). THE ENVIROTHON TESTS HIGH SCHOOL STUDENTS IN TOPICS SUCH AS RANGE, SOILS, POLICY, AQUATICS, WILDLIFE, AND FORESTRY AT THE ENVIROTHON TRAINING SESSION.**

## Conservation Practices

Funding continued to be available during the fiscal year 2006-07 for cost-share assistance from the Nebraska Natural Resources Commission. The Middle Republican Natural Resources District locally administers the Nebraska Soil and Water Conservation Fund. Normally the program pays 50% of the total cost to install soil and water conservation practices while the landowner pays the remaining 50%. In addition, the district provides Local Conservation Funds to supplement the NSWCF. Practice requirements and standards are similar between the two programs, including the decommissioning of abandoned wells, water meter installations, terraces, diversions, grass seeding, reuse pits, planned grazing systems, and improved irrigation systems.

Program	Local		State	
	# Apps	Cost Share	# Apps	Cost Share
Irrigation Water Management	7	\$17,786.50	0	0
Terraces	8	\$11,702.17	7	\$18,829.69
Trees	17	\$19,319.90	4	\$8,442.25
Decommission Wells	18	\$3,724.64	0	0
Grass Seeding	0	0	5	\$4,126.57
Planned Grazing Systems	1	\$3,002.32	38	\$72,361.33
<b>Total</b>	<b>51</b>	<b>\$55,536.00</b>	<b>54</b>	<b>\$103,760.00</b>

## Tree Program

In 2006 the Middle Republican NRD sold 29,784 trees, with the district tree planting crew planting 20,769 and landowners hand planting 9,015 trees. Along with the trees, the MRNRD sold over 30 miles of conservation mulch (that's 161,014 feet) to help conserve moisture and protect the new seedlings.

The district tree planting crew works from March to June getting the tree

seedlings ready and planted.

Over 500 tree seedlings were also given to district grade school students by the Middle Republican NRD to celebrate Arbor Day. The District began this educational program nearly fifteen years ago.

Since 1972 Middle Republican NRD has sold over 1.6 million trees.

## 2006 NRCS ACCOMPLISHMENTS

The Middle Republican Natural Resources District cooperates with the USDA Natural Resources Conservation Service (NRCS) and contributes to their programs by providing field office secretarial assistance, part-time technical assistance, and an irrigation water management specialist.

In 2006, the district continued an agreement entered into with the Nebraska Association of Resources Districts (NARD), which allows the district to continue to hire personnel to support Farm Bill activities at NRCS offices in the district. Using a match from our existing services the district was able to receive \$10,000 in federal funds to provide this

support. Five part time employees worked with NRCS employees to assist with planning and layout of conservation practices.

In 2006, the District entered into a cooperative agreement with the NRCS to provide a Conservation Technician for the McCook Field Office.

The NRD depends on each of the NRCS county offices to help us carry out and implement our conservation programs. The table below shows progress reporting items for 2006 from federal programs. The NRCS notes that over \$1.5 million in EQIP funds were obligated during the year within the MRNRD only.

Practice	Totals
General Customers Assisted	1,623
Clients Applying a Practice	1,293
EQIP/SWCA Applications Received	272
EQIP/SWCA Contracts Signed	145
EQIP Funds Obligated	\$1,500,000
Farmstead Windbreaks (Linear Feet)	161,014
Livestock Pipelines (Feet)	256,848
Improved Irrigation Efficiency (Acre-feet)	18,629
Terraces (Linear Feet)	797,984
Crop Acres w/Conservation Planned	40,193
Range w/Grazing Systems Planned	38,626
Range w/Grazing Applied	33,471

*Submitted by Doug Whisenhunt, District Conservationist*

## The 2006 MRNRD Annual Report

The Annual Report is distributed once a year district-wide and inserted in the Winter Sprinkles and Splashes newsletter.

**Board of Directors:** Joseph Anderjaska, Hayes Center; Kevin Fornoff, Hayes Center; Josh Friesen, Wallace; Gayle Haag, Bartley; Ben Loomis, Maywood; Stanley Moore, Bartley; Jerry Mustion, Culbertson; Dan Nelsen, Moorefield; Brad Randel, Indianola; Marty Schurr, Maywood; and Rick Spencer, Culbertson

**\*\*All directors are elected on an at-large basis.**

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