



Fall 2015

Volume 29, Issue 4

# Tri-Basin Topics

*A quarterly publication of Tri-Basin Natural Resources District*

## 2015 Annual Report

### **2015 Project Highlights**

Tri-Basin NRD took advantage of high flows in the Platte River during fall 2014 and spring and summer of 2015 to protect future groundwater supplies in the district. The NRD and the Nebraska Department of Natural Resources (NDNR) contracted with Central Nebraska Public Power and Irrigation District (CNPPID) to divert high flows from the Platte River in the fall of 2014 and again in spring and summer of 2015. Water was diverted into Elwood Reservoir and the E-65 Canal. More than 15,000 acre-feet were diverted



**Elwood Reservoir in June 2015.**

last fall and 16,000 acre-feet were diverted this spring at a cost of nearly \$1.3 million, divided equally between the NRD and NDNR. The purpose of these diversions was to recharge groundwater supplies and to re-time the excess streamflows, which will return to the Platte and Republican Rivers as tributary baseflows over the next several years. Tri-Basin NRD will receive credit for augmenting streamflows to fulfill the requirements of our joint integrated water resources management plans (IMPs) in those basins.

In addition, Tri-Basin NRD is partnering with the State of Nebraska, CNPPID, two other NRDs, and the Platte River Recovery Program in the J-2 Reservoir Project. The project consists of constructing two reservoirs along the Platte River in northwest Phelps County and northeast Gosper County. Participation in the project is intended to provide TBNRD a cost-effective way to meet offset requirements for the Platte River.

Also in the Platte Basin, the North Dry Creek Streamflow Augmentation project utilizes groundwater to augment streamflows of North Dry Creek, a tributary of the Platte

River. The purpose of the project is to help the State of Nebraska fulfill its commitment to the Platte River Recovery Implementation Program to reduce shortages to Platte River flow targets by offsetting impacts to Platte streamflows resulting from post-July 1, 1997 water uses within Tri-Basin NRD. The project includes two augmentation wells and two observation wells.

TBNRD directors are moving forward with plans to construct a streamflow augmentation project, similar to the North Dry Creek project described above, on Turkey Creek in Gosper County in order to offset depletions in the Republican Basin portion of the district. It is anticipated that two wells will be drilled along the creek. An observation well has already been drilled in conjunction with the project; it will provide background data that will be helpful in assessing the impact of the project. The first augmentation well in this project will be drilled this fall.

In the Little Blue Basin portion of Tri-Basin NRD, directors have continued to make progress on the proposed Sand Creek Reservoir project in eastern Kearney County. The district is negotiating agreements with landowners affected by the reservoir footprint. The reservoir, which will be constructed on Sand Creek about five miles east of Minden, will store water for the purpose of groundwater recharge. The Kearney County Board of Commissioners will also participate in the project in order to use the dam to complete a portion of 38 Road.

Tri-Basin NRD completed work on a new Improvement Project Area (IPA) in 2015. The Odessa IPA in northern Phelps County is a drainage ditch that diverts water to the Platte River, alleviating high groundwater and cropland flooding problems faced by landowners in the area.

### **Protecting Our Groundwater**

TBNRD staff measure water levels in irrigation and dedicated observation wells each year in order to monitor groundwater quantity throughout the district. Tri-Basin has installed at least one dedicated observation well in every township in the district. Data loggers in the observation wells automatically measure water levels at regular intervals. Intensively measuring our aquifers provides Tri-Basin NRD directors with data they need to discern trends in water levels and make better informed decisions about our

groundwater supplies. Those trends prompted Tri-Basin NRD directors to enforce irrigation groundwater pumping limits in Union Township (5N-22W) in Gosper County in 2009 in an effort to protect the declining groundwater supply there. More recently, directors are concerned with declining groundwater levels in May Township in Kearney County (6N-13W) and Elk Creek Township in Gosper County (5N-23W). They are meeting with representatives from these townships to discuss options for addressing these declines during the fall of 2015.



**Conservation Tree Planting in Tri-Basin NRD.**

Tri-Basin NRD also operates a district-wide Groundwater Management Area to protect groundwater quality. The NRD has regulated fertilizer application to protect groundwater quality since 1989. District staff have worked cooperatively with farmers and agronomists for more than 25 years to help improve the timeliness, efficiency and effectiveness of fertilizer application. These efforts have resulted in stable or declining nitrate-nitrogen levels in groundwater supplies throughout the district. In 2015, TBNRD staff sampled 257 irrigation wells for nitrate levels and 88 irrigation wells for atrazine levels.

Chemigation is the process of applying fertilizer and ag chemicals through irrigation systems. In Gosper, Phelps, and Kearney counties, this program is permitted and overseen by Tri-Basin NRD staff to assure that groundwater supplies are protected from contamination. The district issued 119 new chemigation permits and 1768 renewals in 2015. District staff inspected safety devices on 665 center pivots in 2015, insuring that groundwater supplies are protected from contamination by fertilizer and ag chemicals.

Rural residents in Gosper, Phelps and Kearney Counties need to know whether they have safe drinking water. The district offers a program that allows rural residents to have their household drinking water tested for nitrates and bacteria free of charge once a year. More information on this program is available by calling Tri-Basin NRD at 1-877-995-6688.

### **Conservation Cost-Share Assistance**

Tri-Basin NRD provides and administers cost-share funds for many soil and water conservation practices, including

well decommissioning, soil moisture sensors, irrigation well flowmeters, conservation tree plantings and conversion of irrigated cropland to dryland cropland and grassland. In fiscal year 2014-2015, Tri-Basin NRD approved \$37,278.21 in local funding for conservation tree planting cost-share, \$109,947.01 in state-funded NSWCP cost-share funds for other conservation practices, and \$45,500.00 in cost-share for well decommissioning.

### **Managing Financial Resources Wisely**

TBNRD's total operating expense budget for July 1, 2015 to June 30, 2016 is \$1,238,928.74 with the levy set at .040357 per \$100 valuation. An owner of a house valued at \$100,000 will pay just \$40.35 in 2015 to protect this area's natural resources.

### **Planting Trees for Future Generations**

Each year, Tri-Basin NRD sells conservation trees and shrubs for windbreak and habitat plantings. In 2015, 6,644 trees and shrubs were planted by the NRD's contractor and 1,804 trees and shrubs were sold for hand-planting. Tri-Basin NRD also provides free tree seedlings for several educational events and for local Arbor Day celebrations. The district distributed 1,113 free trees to district residents in 2015. Tri-Basin staff also help landowners diagnose tree diseases and fungal blights and decide on treatment methods.

### **Educating and Informing Local Residents**

Each winter, Tri-Basin NRD joins Central Nebraska Public Power & Irrigation District, Holdrege Area Chamber of Commerce and UNL Extension to host the Holdrege Water Conference. At this event, agricultural producers and agribusiness professionals gather to discuss current water issues relevant to the TBNRD area. Other adult information and education programs include Nitrogen Management classes for agricultural producers and the weekly Natural Resources Report on KRVN 880 radio station.



**Ron Wunibald of the Nebraska Department of Environmental Quality leads a session at Water Jamboree.**



In September, Tri-Basin NRD holds the Rainwater Basin Conservation Day for eighth grade students at Sacramento-Wilcox Wildlife Management Area. Over 200 students attend this event each year to learn about geology, wetlands, soils, trees and wildlife. Tri-Basin also collaborates with other agencies to hold a "Water Jamboree" for area fifth grade students every April at Harlan County Reservoir. Water conservation topics are presented in hands-on sessions to approximately 500 students who attend this event.

Adventure Camp about the Environment is a summer camp for middle school students, sponsored by Nebraska's NRDs. Tri-Basin NRD offers up to six full scholarships each year for students in the district to attend this camp.

### About Tri-Basin NRD

Nebraska's Natural Resources Districts (NRDs) were established in 1972 to protect our natural resources. This system for managing natural resources through locally elected officials is unique to Nebraska.

Locally, Tri-Basin Natural Resources District was formed by consolidating the Phelps, Gosper, and Kearney County Soil and Water Conservation Districts. TBNRD is unusual because it encompasses portions of three different river basins: the Republican River Basin, the Platte River Basin, and the Little Blue River Basin.

Tri-Basin NRD is governed by a Board of Directors with 13 members, 12 of whom are elected from designated sub-districts and one at-large member.

### 2014 Active Irrigation Wells

County	Total Number of Irrigation Wells	Certified Irrigated Acres
Kearney County	2,119	228,570.33
Phelps County	2,168	257,873.39
Gosper County	746	93,431.92
Total	5,033	579,875.64
Basin	Total Number of Irrigation Wells	Certified Irrigated Acres
Republican Basin	1,606	189,647.14
Platte Basin	2,601	298,761.85
Little Blue Basin	826	91,466.65
Total	5,033	579,875.64

### Republican Basin Water Use\*

Irrigation System	2008	2009	2010	2011	2012	2013	2014
Pivots	6.88	7.11	5.05	6.63	13.88	12.46	6.11
Gravity	11.79	12.42	8.62	10.86	21.33	22.84	11.34
Pivot/Gravity	8.06	7.79	5.31	7.20	14.28	15.05	6.54
Drip Tape							7.60
Weighted Avg.	8.26	8.36	5.82	7.57	15.36	14.25	6.72

\*All Republican Basin irrigation wells are metered. Metered water use is also reported from wells in the Platte and Little Blue Basins. Data updated February 4, 2015.

## TBNRD Staff to Inspect Meters

Tri-Basin NRD staff are beginning annual irrigation meter inspections. Each year, NRD staff inspect and take readings from meters in about one-third of the townships in the District.

This year we will be doing inspections in Ranges 16W, 20W, and 23W, along with 5N-22W (Union Township in Gosper County) and 6N-13W (May Township in Kearney County).

If you have irrigation wells in these townships and you put your meters in storage for the winter, you can call the Tri-Basin NRD office at 1-877-995-6688 to schedule an inspection. If there is no meter at the site when TBNRD staff come to inspect, you will receive a letter requesting access to the meter for inspection.



## Ryan to Serve on TBNRD Board

Jeff Ryan has been appointed as subdistrict six director, replacing Dave Nickel, who resigned from the NRD board because he and his wife moved to Kearney. Ryan will serve the remainder of Nickel's term, until December 2016. He is the fourth generation of his family to live on the family farm, three miles north of Heartwell. His wife, Laura, owns a yoga studio in Kearney. They have three children: Emma, 15; Jack, 10; and Jake, 10.

Ryan graduated from Minden High School in 1991 and from the University of Notre Dame in 1995 with a bachelor of science in biology. He has served as a director for the Nebraska Corn Growers Association and was president of the Kearney/Franklin County Corn Growers Association for ten years. He is also a member of Holy Family Catholic Church in Heartwell. In his free time, he enjoys golf, reading, and spending time at the lake with family and friends.

Ryan says being on the Tri-Basin NRD board is important to him because, "I realize the importance of water and maintaining water levels, not only for our generation, but for generations to come."



**Irrigation Water Management (Water Use) Forms for 2015 are ready. If you would like to have your reports mailed to you, call our office at 1-877-995-6688. (All forms will be mailed mid-October.) Reports are due November 20, 2015.**



Fall 2015

# Tri-Basin Topics

Non-Profit Permit  
U. S. Postage  
PAID  
Holdrege, NE 68949  
Permit No. 220

**Tri-Basin Natural Resources District**  
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[www.tribasinprd.org](http://www.tribasinprd.org)

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*Nebraska's NRDs: Protecting Lives, Protecting Property, Protecting the Future*

# CALENDAR

- October 12..... NRD Closed for Columbus Day
- October 13.....NRD Board Meeting, 7:30 p.m.\*
- November 10.....NRD Board Meeting, 7:30 p.m.\*
- November 11 ..... NRD Closed for Veteran's Day
- November 26-27.....NRD Closed for Thanksgiving
- December 8.....NRD Board Meeting, 1:30 p.m.\*
- December 25.....NRD Closed for Christmas
- January 1.....NRD Closed for New Year's

\* Times are tentative. All meetings are at TBNRD office in Holdrege unless otherwise noted.

## TRI-BASIN NRD BOARD OF DIRECTORS

- David Olsen, Chairman ..... Minden, NE
- Bradley Lundeen, Vice Chairman ..... Wilcox, NE
- Joe Bilka, Treasurer ..... Holdrege, NE
- Todd Garrelts, Secretary ..... Holdrege, NE
- Brian Bergstrom..... Axtell, NE
- Mike Cavanaugh..... Minden, NE
- Ed Harris..... Loomis, NE
- Phyllis Johnson..... Bertrand, NE
- Joe Larson..... Loomis, NE
- David Raffety ..... Kearney, NE
- Larry Reynolds ..... Lexington, NE
- Jeff Ryan..... Heartwell, NE
- Ray Winz ..... Holdrege, NE

## TRI-BASIN NRD STAFF

- Charles Brooks ..... Land Resources Coordinator
- Tammy Fahrenbruch ..... Office Manager
- Lori Hagan ..... Elwood Office Secretary
- Nolan Little ..... Water Resources Manager
- Carie Lynch..... Administrative Secretary
- Nate Munter..... Land Resources Technician
- Ruth Nielsen ..... Minden Office Secretary
- Patrick Nott ..... Water Resources Technician
- Tami Reese ..... Holdrege Office Secretary
- Nicole Salisbury ..... Information Coordinator
- Esther Smith ..... Office Clerk
- Destinee Steinke ..... Educational Event Coordinator
- John Thorburn ..... General Manager
- Jeff VanEperen..... Seasonal Field Technician

A mailing list is maintained and requests to be placed on the list should be sent to the above address. Comments and suggestions may be addressed to the General Manager.

***Get Tri-Basin Topics in your inbox instead of your mailbox!***

To request an electronic version of this newsletter, send an email [nsalisbury@tribasinprd.org](mailto:nsalisbury@tribasinprd.org).