



Fall 2019

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Tri-Basin Topics

A quarterly publication of Tri-Basin Natural Resources District

2019 Annual Report and Long-Range Plan

New NRD Program Gives Irrigators Incentives to Conserve Groundwater

Water Conservation Incentive Program

This is the first year for the Tri-Basin NRD (TBNRD) Water Conservation Incentive Program (WCIP). The voluntary program is expected to increase irrigation efficiency and maintain or improve ground water levels.

Producers have the option to enroll up to 8000 NRD-certified irrigated acres in the program. If the enrollment limit is reached, there could be a savings to the district of up to 650 acre-feet of water per year. Landowners who will most likely be attracted to this option are those in phase two and/or phase three groundwater quantity management areas.

Participating landowners are paid for the equivalent of one acre-inch of water credit up to \$5 per acre per year with the option to sell additional credits to the NRD at a set price. Additionally, landowners will have the option to sell their water credits on the open market. Sales agreements are subject to board approval.

WCIP agreements are for five years and only parcels specifically selected by landowners are affected. The agreement commits the landowner to limit water use (allocation) on parcels they select.

Water Conservation Incentive Program Expansion

TBNRD is planning an expansion of the WCIP program to Central Nebraska Public Power and Irrigation District (CNPPID) customers. It will encourage irrigators who have parcels with both surface

water and groundwater (commingled parcels) to use canal water rather than groundwater on those fields. This has the dual benefit of reducing groundwater pumping and increasing groundwater recharge, which benefits both groundwater quality and quantity.

The expansion will use a different approach. Commingled water users will receive an incentive to use canal water versus ground water. CNPPID customers and landowners with individual surface water rights will be offered five-year contracts that pay the equivalent of the cost per acre of CNPPID water delivery, with the understanding that payments will be reduced by a set amount per acre inch of groundwater used during the contract period. If, however, CNPPID is unable to deliver the full amount of contracted water to a parcel for any reason, a landowner will be allowed to pump groundwater without penalty to make up the difference between what CNPPID is able to deliver and the full contract amount.

CNPPID charges \$34.61 to deliver nine inches of water to their irrigation customers (2019). Their prices are subject to annual increases. TBNRD will pay incentives to landowners based on the current delivery rate at the time of enrollment in WCIP. Due to budget limitations we won't be able to adjust our payments if CNPPID raises prices.

Landowners will be able to enroll up to 320 acres in WCIP. Only a total of 8000 acres will be eligible due to funding limitations. Applications will be ranked, if necessary, to select those which will provide the greatest benefit to groundwater resources.



Protecting groundwater supplies

Making sure future generations have an adequate supply of water is an important part of the mission of Tri-Basin NRD. We regularly measure our aquifers in order to track trends in our groundwater supplies. Tri-Basin NRD monitors groundwater levels through an extensive network of dedicated observation wells, with at least one well in each township in the district. These wells have automated sensors that measure groundwater levels twice a day. Detailed data on groundwater level trends is vital to NRD directors as they consider how to manage groundwater supplies to insure their sustainability.

In 2008 those trends prompted Tri-Basin NRD directors to enforce groundwater pumping limits in Union Township (5N-22W) within Gosper County to protect the declining groundwater supply there. More recently, directors became concerned about declining groundwater levels in May Township in Kearney County (6N-13W), Elk Creek Township in Gosper County (5N-23W), and Grant Township in Kearney County (5N-13W). These townships are designated as Phase Two for groundwater quantity management, with the hope that associated restrictions will arrest groundwater declines and preclude the need for additional restrictions.



Nolan Little, Tri-Basin NRD Water Resources Manager, measures the groundwater level in an observation well at the Funk Waterfowl Production Area in Phelps County.

Protecting the quality of groundwater

TBNRD has regulated fertilizer application to protect groundwater quality since 1989. District staff work cooperatively with farmers and agronomists to help improve the timeliness, efficiency and effectiveness of fertilizer application. This has resulted in stable or declining nitrate-nitrogen levels in groundwater supplies throughout the district.

- 202 irrigation wells tested for nitrate levels
- 29 irrigation wells tested for atrazine levels.

Tri-Basin NRD staff protects groundwater supplies from contamination by permitting chemigation, the process of applying fertilizer and ag chemicals through irrigation systems. This process allows farmers to “spoon feed” fertilizer to their crops as it is needed and reduces nitrogen leaching below the crop root zone into the aquifer.

- 109 new chemigation permits
- 2,016 renewal permits
- 680 inspections of chemigation safety devices

Planting Trees for Future Generations

Tri-Basin NRD sells conservation trees and shrubs for windbreak and habitat plantings. The district also provides hundreds of free tree seedlings for educational events and local Arbor Day celebrations. Tri-Basin staff help landowners diagnose tree diseases and fungal blights and decide on treatment methods.



Tri-Basin NRD Conservation Tree Sales							
	2012	2013	2014	2015	2016	2017	2018
Contractor-Planted	2,199	2,824	6,644	3,826	4,361	5,726	3205
Hand-Plant	2,266	3,017	1,804	2,064	2,080	2,225	3853

Preparing for disasters

Tri-Basin NRD, along with Phelps, Gosper and Kearney Counties, developed a district-wide Hazard Mitigation Plan. The plan outlines steps that would be taken in an emergency. The Federal Emergency Management Agency (FEMA) requires local governments to have a Hazard Mitigation Plan before it will provide federal disaster relief funding.

- Residents protected: 17,721

Providing conservation cost-share

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.

Fiscal year 2018-2019 cost-share paid:

- \$20,151.31 locally-funded conservation tree planting
- \$38,468.50 state-funded NSWCP for conservation practices
- \$11,375.72 well decommissioning cost-share (along with Nebraska Department of Natural Resources)

Managing Financial Resources Wisely

- Total operating expense budget: \$1,599,411.43 (July 1, 2019 to June 30, 2020)
- Tax levy set at .021485 per \$100 valuation

An owner of a house valued at \$100,000 will pay just \$21.50 in 2020 to protect this area's natural resources.

Ensuring rural domestic water quality



Tri-Basin NRD wants rural residents in Gosper, Phelps, and Kearney Counties to have drinking water that is as safe as public water supplies. Any district resident who uses a rural household water well can ask NRD staff to sample their well once per year at no charge; the sample will be tested for nitrates and bacteria. For more information on this program, contact Tri-Basin NRD at (308) 995-6688.

- Domestic wells tested in 2018: 19

Educating about natural resources

- South Central Water Conference: Over 100 agricultural producers and agri-business professionals meet to discuss current water issues each January
- Nitrogen Management Classes are held annually for producers in Groundwater Quality Management Areas to learn about protecting groundwater
- Natural Resources Report: A weekly update on natural resources issues every Wednesday at 4:17 p.m. on KRVN 880 AM radio.
- Rainwater Basin Conservation Day: An outdoor event with sessions on conservation for about 200 district eighth grade students. This program has been held for over 70 years.
- Water Jambo-ree: A collaborative event for over 500 area fifth grade students that covers topics on water conservation, recreation, quality, and biology.
- Adventure Camp about the Environment: Tri-Basin NRD awards six scholarships each year to this collaboratively NRD sponsored natural resources camp.
- Land and Range Judging Contests: Tri-Basin cooperates with other NRDs to host or assist with these soil and range judging contests.



About Tri-Basin NRD

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

Tri-Basin NRD:

- Serves three counties: Gosper, Phelps, and Kearney
- Includes parts of three river basins: Republican, Platte, and Little Blue
- Governed by thirteen local directors.

2018 Active Irrigation Wells

County	Total Irrigation Wells	Certified Irrigated Acres
Kearney County	2116	228,566.15
Phelps County	2175	258,499.81
Gosper County	758	93,342.11
Total	5049	580,408.07
Basin	Total Irrigation Wells	Certified Irrigated Acres
Republican Basin	1616	190,260.62
Platte Basin	2609	298,511.05
Little Blue Basin	824	91,636.40
Total	5049	580,408.07

Republican Basin Water Use*

	Pivot	Gravity	Pivot & Gravity	Drip Tape	Weighted Average
2010	5.05	8.62	5.31		5.82
2011	6.63	10.86	7.20		7.57
2012	13.88	21.33	14.28		15.36
2013	12.46	22.84	15.05		14.25
2014	6.11	11.34	6.54	7.60	6.72
2015	8.28	15.79	9.39	12.17	9.3
2016	9.85	18.42	10.96	10.15	10.88
2017	7.18	14.16	8.11	8.34	7.88
2018	5.07	11.29	5.29	5.69	5.52

*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 7, 2019.

2019 Irrigation Water Management Forms

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 due November 19, 2019.

Attention Chemigators:

Remember to drain your main line check valve to prevent freezing. This will extend the life of the check valve and may help prevent check valve failure.

TBNRD Staff to Inspect Meters

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 15W, 19W, and 24W, and in 5-22 of Gosper County (Union Township).

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.



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

Tri-Basin Natural Resources District
1723 Burlington St. Holdrege, NE 68949
(308) 995-6688
email: tribasin@tribasinncrd.org
www.tribasinncrd.org

RETURN SERVICE REQUESTED

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

CALENDAR

October 8 NRD Board Meeting, 7:30 p.m.*
October 14 NRD Closed for Columbus
November 11 NRD Closed for Veteran's Day
November 12 NRD Board Meeting, 7:30 p.m.*
November 28-29 NRD Closed for Thanksgiving
December 10 NRD Board Meeting, 1:30 p.m.*
December 25 NRD Closed for Christmas
January 1 NRD Closed for New Year's
January 14 NRD Board Meeting, 1:30 p.m.*

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

TRI-BASIN NRD BOARD OF DIRECTORS

Bradley Lundeen, Chairman Wilcox, NE
Todd Garrelts, Vice Chairman Holdrege, NE
Robin Hinrichs, Treasurer Axtell, NE
Joe Bilka, Secretary Holdrege, NE
Brian Bergstrom Axtell, NE
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TRI-BASIN NRD STAFF

Amy Dutton Minden Office Secretary
Tammy Fahrenbruch Water Programs Coordinator
Lori Hagan Holdrege Office Clerk
Sasha Hahn Information & Education Coordinator
Nolan Little Water Resources Manager
Carie Lynch Administrative Secretary
Nate Munter Land Resources Coordinator
Patrick Nott Water Resources Technician
Nancy Pemberton Elwood Office Secretary
Tami Reese Holdrege Office Secretary
Dalton Refior Land Resources Technician
Esther Smith Office Assistant
John Thorburn General Manager
Jeff VanEperen 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.

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To request an electronic version of this newsletter, send an email shahn@tribasinncrd.org.