

Tri-Basin Topics

Fall 2023

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2023 Annual Report and Long-Range Plan

Tri-Basin NRD Vision

The vision (overall goal) for Tri-Basin NRD is to "work cooperatively with District residents to promote good stewardship of land and water resources."

Tri-Basin NRD Mission

Tri-Basin NRD's mission is to "manage, conserve and protect the District's land and water resources." This mission will be accomplished by protecting the quality and quantity of surface water and groundwater, reducing soil erosion and flooding, promoting agricultural best management practices, forestry, and wildlife habitat preservation. These tasks can only be accomplished by working cooperatively with residents and agencies of local, state, and federal government.

About Tri-Basin Natural Resources District

Tri-Basin Natural Resources District (NRD) protects lives, property, and the future of Gosper, Phelps, and Kearney counties through a wide-range of stewardship, management, and education programs—from tree planting to groundwater quality and quantity monitoring, from irrigation management to outdoor recreation and more. Activities and projects of Tri-Basin NRD are reviewed and approved by a locally elected board of directors. Tri-Basin NRD is one of 23 Natural Resource Districts across the state. For more information, visit tribasinrd.org or call (308) 995-6688.

Protecting Groundwater Supplies

Protecting and managing groundwater supplies is one of the most important jobs we do at Tri-Basin NRD. Our groundwater management goal is to ensure that "all groundwater supplies

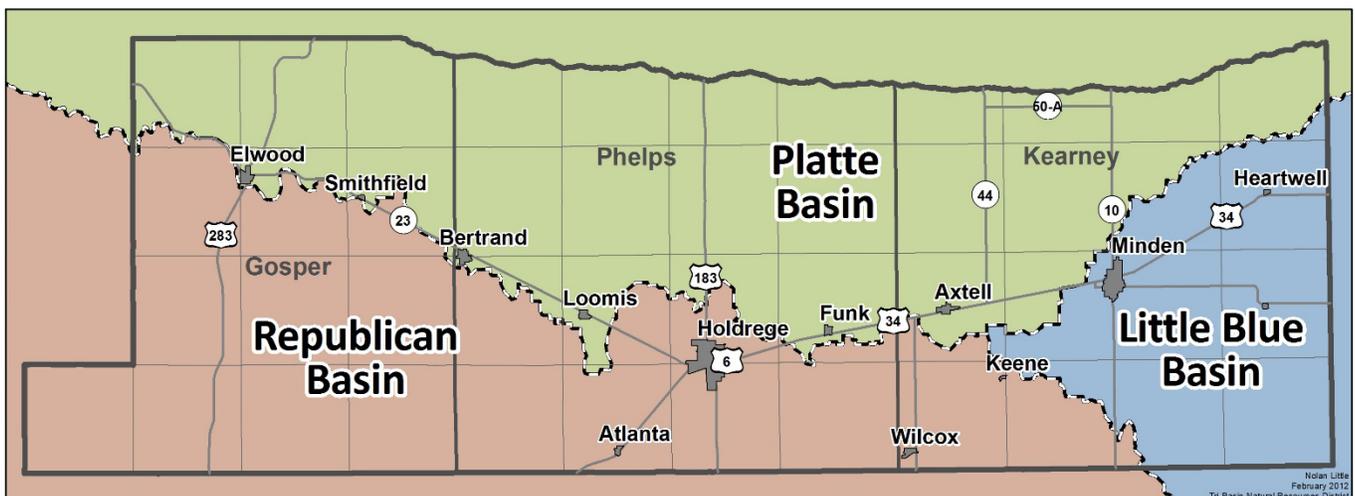
within the Tri-Basin NRD will be used in a beneficial manner, efficiently managed and properly utilized to preserve this vital resource forever." Achieving that lofty goal is made more difficult by the variability of weather on the Great Plains. Just in the past decade we have seen extremely wet (2019) and dry years (2012 and 2022).

Because our climate is so unpredictable, the Tri-Basin NRD Board of Directors began working with the State of Nebraska and Central Nebraska Public Power and Irrigation District (CNPPID) back in 2006 to divert excess flows from the Platte when available and allow that water to soak into the ground.

It seeps down into our aquifers, stored until irrigators need it during a drought. We have diverted over 140,000 acre-feet of water in the past eighteen years to ensure that our groundwater supplies remain viable, even during extreme drought.

Tri-Basin is also required to replace groundwater that is pumped by our irrigators, to the extent that it reduces streamflows in the Platte and Republican Rivers and their tributaries. The District currently operates three augmentation wells when needed to help sustain streamflows in the Platte and Republican River basins. We are also working cooperatively with Lower Republican NRD and Central NE Public Power and Irrigation District (CNPPID) to develop the Platte-Republican Diversion. This project will enable us to divert water from the Platte when there are excess flows that exceed levels necessary for all other water users. We want to transport that water through CNPPID's canal system to Turkey Creek, a tributary of the Republican River. Platte flows diverted into the Republican basin are counted as "imported water" in the

Basin Boundaries



Nolan Little
February 2012
Tri-Basin Natural Resources District

Republican River Compact calculations, so water that would otherwise flow down the Platte unused will help Nebraska fulfill our obligation to provide water to the state of Kansas.

Tri-Basin NRD is always looking for ways to help our irrigators improve their efficiency, so our agricultural economy and our drinking water supplies will be assured for the foreseeable future.

Tri-Basin's Water Conservation Incentive Program (WCIP) began in 2019. It rewards participating producers that are willing to limit their groundwater use. A second WCIP option is targeted at CNPPID customers, encouraging them to use canal water to the extent possible, even when they also have groundwater wells. The NRD board uses a ranking system to determine which WCIP applications will provide the greatest benefit. Landowners have enrolled 3,066.49 groundwater acres and 3,071.20 commingled acres in WCIP through the 2023 crop year.

Tri-Basin's board needs data to make timely and accurate decisions about groundwater management. The District started measuring groundwater levels in 1977, building on groundwater data collected by CNPPID and the University of Nebraska as far back as 1939. We now have a network of more than 200 irrigation wells and 137 dedicated observation wells that are measured at least twice yearly by NRD staff. Most dedicated observation wells also have automated sensors that record groundwater levels twice each day.

Local groundwater declines prompted Tri-Basin NRD directors to enforce groundwater pumping limits in Union Township (5N-22W), Gosper County in 2009 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. Tri-Basin NRD takes a proactive approach to groundwater management. It is our expectation that acting now will arrest groundwater declines and preclude the need for additional restrictions.

2023 Irrigation Water Management Forms

If you would like to have your reports mailed to you, call Tri-Basin NRD at 308-995-6688. Reports are due November 15, 2023.

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.

- 252 irrigation wells tested for nitrate levels in 2023.



Tri-Basin NRD staff protected 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. In 2023, Tri-Basin NRD issued:

- 122 new chemigation permits
- 2,345 chemigation renewal permits
- 918 inspections of chemigation safety devices

Attention Chemigators:

Please drain your main line check valve to prevent freezing and extend the life of the check valve.

Planting Trees for Future Generations

Tri-Basin NRD sells conservation trees and shrubs for windbreak and habitat plantings. The district provided 950 free tree seedlings for 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

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|--------------------|-------|-------|-------|-------|-------|------|
| Contractor Planted | 5,726 | 3,205 | 1,581 | 2,825 | 2,825 | 2498 |
| Hand-Plant | 2,225 | 3,853 | 2,307 | 2,890 | 2,540 | 3097 |

Preparing for Disasters

Tri-Basin NRD, along with Phelps, Gosper, and Kearney Counties, developed a district-wide All Hazard Mitigation Plan (AHMP). 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. This plan needs to be reviewed and updated every five years. Tri-Basin was awarded \$81,000 grant by FEMA in 2022. This grant covered 75% of the cost of updating the AHMP. The remainder of the expense was divided between TBNRD, Gosper, Phelps, and Kearney counties. The latest AHMP update was approved by FEMA in June 2023.

- Residents protected: 17,549

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 2022-2023 cost-share paid:

- \$35,860.10 for locally funded conservation tree plantings
- \$25,107.39 state funded NSWCP for conservation practices
- \$15,273.87 well decommissioning cost-share using state and local funds

Managing Financial Resources Wisely

Natural resources district budgets can vary considerably from year-to-year, due to funding for project construction, grant

awards and other capital expenditures. The district operating budget for FY 2023-24 is approximately \$1.6 million. The total budget for FY 2022-23 was \$2,468,535.12. The total budget for FY 2023-24 is \$2,149,727.54, which is a 13% decrease. Property tax asking in FY 2022-23 was \$1,118,141.02, whereas the tax asking for FY 2023-24 is \$1,378,301.12, which is an increase of only 23%. While the levy for 2023-24 decreased 14% due to a increase in property valuation. Future budgets for the next five years are expected to follow a similar pattern of variability in overall expenses but increases in property taxes and the operating budget should be in line with overall inflation.

- Total operating expense budget: \$1,658,486.78 (July 1, 2022, to June 30, 2023)
- Tax levy set at 0.024764 per \$100 valuation.

Tri-Basin NRD may need to acquire real estate by fee title for projects planned within the next five fiscal years. Land use easements will be needed if certain projects proceed.

An owner of a house valued at \$100,000 will pay just \$24.76 in 2023 to protect this area’s natural resources.

Personnel to Serve the District

Tri-Basin NRD’s personnel needs are currently met with a staff of eleven full-time employees and one part-time employee at the office in Holdrege as well as three full-time NRCS field office employees. Nolan Little was appointed to the newly created position of Assistant Manager in September 2023. The district doesn’t anticipate any other changes in staffing needs for the next five years.

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 2022-2023: 23

Educating about Natural Resources

It is important to inform students as well as adults about the need to conserve and protect our natural resources. Tri-Basin holds many educational events throughout the year.

- South Central Water Conference: Presented in cooperation with CNPPID, UNL Extension, Lower Republican NRD and USDA-NRCS. Agricultural producers and agri-business professionals met to discuss current water issues in February at the Phelps County Ag Center.



- Rainwater Basin Conservation Day at Sacramento WMA for seventh and eighth grade students.
- The Natural Resources Report is a weekly audio update on natural

resources issues every Wednesday at 4:17 p.m. on KRVN 880 AM radio.

- Nine in-person Nitrogen Management Classes were held across the district for producers with 204 attending.
- Water Jamboree is a collaborative event for fifth and sixth grade students. Attended by 363 students from 15 schools at Harlan County Lake

2022 Active Irrigation Wells

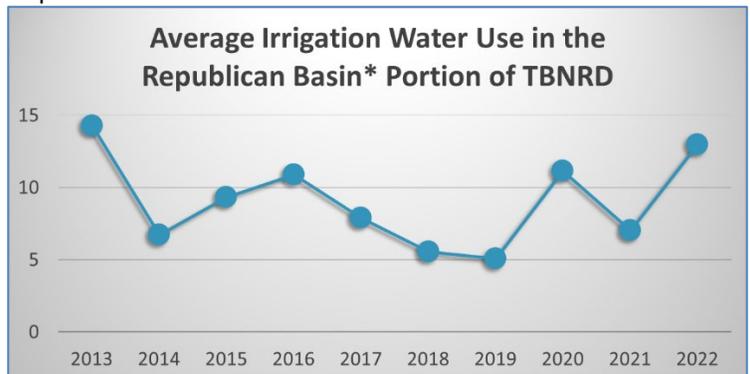
| County | Total Irrigation Wells | Certified Irrigated Acres |
|----------------|------------------------|---------------------------|
| Kearney County | 2,123 | 229,078.7 |
| Phelps County | 2,177 | 258,358.3 |
| Gosper County | 757 | 93,497.4 |
| Total | 5,063 | 581,276.6 |

| Basin | Total Irrigation Wells | Certified Irrigated Acres |
|-------------------|------------------------|---------------------------|
| Republican Basin | 1,619 | 190,420.7 |
| Platte Basin | 2,618 | 299,006.1 |
| Little Blue Basin | 826 | 91,849.8 |
| Total | 5,063 | 581,276.6 |

TBNRD Staff to Inspect Flow 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 16W, 20W, and 23W, 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 Tri-Basin NRD 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.



*All Republican Basin irrigation wells are metered. Metered water use is also reported from a limited number of wells in the Platte and Little Blue Basins.

Students at the Water Jamboree hearing about wildlife near the Harlan County Dam.

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Fall 2023



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

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RETURN SERVICE REQUESTED

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

Calendar

- October 9..... Columbus Day – Office Closed
- October 10 Board Meeting, 7:30 p.m.*
- November 10Veteran’s Day – Office Closed
- November 14 Board Meeting, 7:30 p.m.*
- November 23-24 Thanksgiving – Office Closed
- December 12 Board Meeting, 1:30 p.m.*
- December 25 Christmas Day - Office Closed
- January 1New Year’s Day - Office Closed
- January 9..... Board Meeting, 1:30 p.m.*
- January 15..... Martin Luther King Day – Office Closed
- February 1 South Central Water Conference
- February 13 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

- Todd Garrelts, Chairman..... Holdrege
- Joe Bilka, Vice Chairman Holdrege
- Robin Hinrichs, Secretary Axtell
- Jeff Ryan, Treasurer..... Heartwell
- Brian Bergstrom..... Axtell
- Mike Cavanaugh Minden
- David Grimes Minden
- Ed Harris Loomis
- Joe Larson Loomis
- Bradley Lundeen..... Wilcox
- Reed Philips..... Bertrand
- David Raffety Kearney
- Larry Reynolds Lexington

TRI-BASIN NRD STAFF

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

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