

MASTER PLAN



Revised, Updated, and Approved
by the Tri-Basin NRD Board of Directors December 13, 2022

FOREWORD

Section 2-3276 Reissue Revised Statutes of Nebraska, 1943 states: “By August 1, 1979, each Natural Resources District shall prepare and adopt a master plan to include but not be limited to a statement of goals and objectives for each of the purposes stated in Section 2-3229. The Master Plan shall be reviewed and updated as often as deemed necessary by the district, but in no event less than once each ten years. A copy of the Master Plan as adopted and all revisions and updates hereto shall be filed with the Natural Resources Commission.” This is the updated Master Plan for Tri-Basin Natural Resources District.

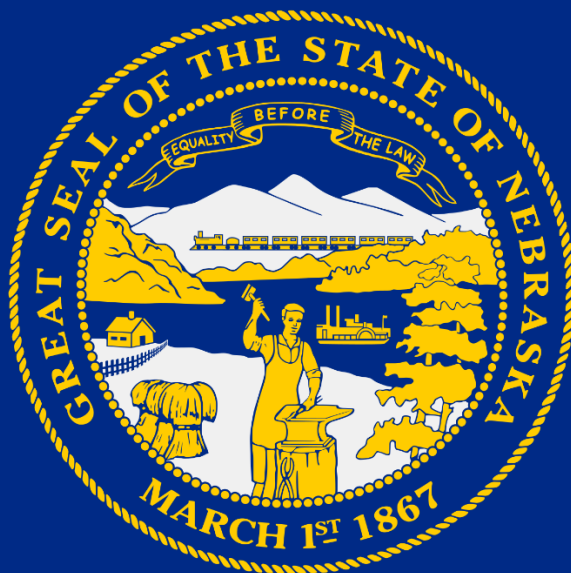




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INTRODUCTION

Natural Resources Districts (NRDs) were established in Nebraska to develop and implement programs for the management of natural resources. State law delegates the following areas of responsibility for NRDs: (1) erosion prevention and control, (2) prevention of damages from flood water and sediment, (3) flood prevention and control, (4) soil conservation, (5) water supply for any beneficial uses, (6) development, management, utilization, and conservation of groundwater and surface water, (7) pollution control, (8) solid waste disposal and sanitary drainage, (9) drainage improvement and channel rectification, (10) development and management of fish and wildlife habitat, (11) development and management of recreational and park facilities, and (12) forestry and range management.

These 12 areas of responsibility overlap, so they have been combined in the following manner for this plan (numbers in parentheses refer to the numbering of the various responsibilities listed above):

- Erosion prevention and control (1) and soil conservation (4).
- Prevention of damages from flood water and sediment (2) and flood prevention and control (3).
- Water supply for any beneficial uses (5) and development, management, utilization, and conservation of groundwater and surface water (6).
- Pollution control (7) and solid waste disposal and sanitary drainage (8).
- Drainage improvement and channel rectification (9).
- Development and management of fish and wildlife habitat (10) and development and management of recreational and park facilities (11).
- Forestry and range management (12).



CHAPTER I - GENERAL

A. Authority and Organization

LB 1357, passed by the Nebraska Unicameral Legislature in 1969, created the authority for natural resources districts. Section 2-3201, Revised Statutes of Nebraska, 1943, states:

“The legislature hereby recognizes and declares that it is essential to the health and welfare of the people of the State of Nebraska to conserve, protect, develop, and manage the natural resources of this state. The legislature further recognizes the significant achievements that have been made in the conservation, protection, development, and management of our natural resources and declares that the most efficient and economical method of accelerating these achievements is by creating natural resources districts encompassing all of the area of the state, as provided by this act.”

Tri-Basin Natural Resources District commenced operation on July 1, 1972, serving Gosper, Phelps, and Kearney counties. Tri-Basin NRD succeeded and assumed the assets and responsibilities of the Soil and Water Conservation Districts that had existed in those counties.

Tri-Basin Natural Resources District is governed by an elected Board of Directors. There are thirteen members on the board, two of whom are elected from each of six subdistricts, with one member elected at-large.





Current Board Members are:

Name	Town	Sub-district
Bradley Lundeen, Chairman	Wilcox	5
Todd Garrelts, Vice-Chairman	Holdrege	4
Joe Bilka, Secretary	Holdrege	4
Robin Hinrichs, Treasurer	Axtell	3
Brian Bergstrom	Axtell	3
Michael Cavanaugh	Minden	5
David Grimes	Minden	6
Ed Harris	Loomis	2
Joe Larson	Loomis	2
G. Reed Philips	Bertrand	1
David Raffety	Kearney	6
Larry Reynolds	Lexington	1
Jeff Ryan	Heartwell	At-Large



NRD staff (listed below) implement the District's various programs and projects. Additional staff are hired on a seasonal basis, as needed.

Dana Christensen.....	Water Resources Technician
Amy Dutton.....	Minden Office Secretary
Tammy Fahrenbruch.....	Water Programs Coordinator
Lori Hagan.....	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.....	Water Resources Technician

B. Inventory of Resources

Tri-Basin Natural Resources District encompasses Kearney, Phelps, and Gosper Counties in South Central Nebraska (See Figure 1). The district's area is 1,520 square miles. Population of the district is 17,549, according to the 2020 census. Nearly half of the people live in Holdrege or Minden, the remainder live in either rural areas or in towns with populations of 700 or less.

Topography varies from the hill and canyon country of southern Gosper and Phelps counties to the level valley of the Platte River to gently rolling plains on table lands found throughout the three-county area. Soils for the most part are deep and fertile. The Holdrege Soil series predominates,



although there are extensive sand hills along the south side of the Platte Valley in Phelps and Kearney counties. Soils in the Platte Valley vary greatly in texture and depth, but they are generally very productive.

Much of the district's crop land is well suited to irrigation. There are over 5,000 irrigation wells in the district, supplying water for 581,019 NRD-certified irrigated acres. The Central Nebraska Public Power and Irrigation District (CNPPID) also supplies diverted Platte River water to nearly 107,000 acres of crop land in the Platte basin.

Groundwater supplies vary greatly in the district. Generally, those areas of the NRD within or adjacent to the Central Nebraska Public Power and Irrigation District service area have experienced steady rises in groundwater levels since CNPPID began operation. Other areas of the NRD, especially the southwest and southeast corners of the district have experienced intermittent declines in groundwater levels.

Groundwater quality is a more immediate concern than groundwater quantity. Nitrate levels rose steadily throughout the 1980s and 1990s, but thanks to improved irrigation efficiency and improved timing of fertilizer applications by farmers in the district, they plateaued during the early 2000s and have remained stable since then.

CHAPTER II -- VISION, MISSION, GOALS AND OBJECTIVES

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’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, and forestry and wildlife habitat preservation. These tasks can only be accomplished by working cooperatively with local residents, agencies of local, state, and federal government, as well as adapting to and taking advantage of new and emerging technology.

Tri-Basin Natural Resources District will strive to fulfill its vision and mission over the duration of this plan. The District has developed a series of goals and objectives associated with the various purposes of the NRD as measures of progress made toward achieving the vision and accomplishing the mission of the NRD. This plan serves as an important guidance document for the NRD Board of Directors, although they are not constrained by it. New laws or technologies, natural disasters, or availability of state and federal funds for conservation programs could all lead to the NRD board changing its priorities for soil and water conservation during this planning period.

The 12 responsibilities of natural resources districts have been combined as noted in the introduction. They are as follows:

- A. Soil Conservation and Erosion Control
- B. Flood Prevention and Control
- C. Surface and Groundwater Supply and Management
- D. Pollution Control and Waste Disposal
- E. Drainage Improvement and Channel Rectification
- F. Recreation, Fish and Wildlife Management
- G. Forestry and Range Management





A. SOIL CONSERVATION AND EROSION CONTROL

GOAL: Every acre of land within the NRD will be managed to reduce soil erosion losses to rates that are less than soil loss tolerances defined by the Natural Resources Conservation Service (NRCS).

OBJECTIVES:

1. Tri-Basin NRD will continue to support NRCS and its mission of natural resources conservation. Tri-Basin NRD will employ secretaries in NRCS offices within the district to assist them in their duties. The NRD will also assist NRCS by providing technicians and seasonal help as needed, to the extent allowed by time and budget constraints.
2. The NRD will support conservation education programs of the Nebraska Association of Resources Districts. This will include sponsoring land judging and range judging contests as well as promoting and implementing other NARD programs.



3. The NRD will also continue to sponsor its own educational programs, such as Water Jamboree and Rainwater Basin Conservation Day, to promote conservation of soil and water to school children.



4. The NRD will enforce the rules and regulations of the Nebraska Soil Erosion and Sediment Control Act.

5. The NRD will administer the Nebraska Buffer Strip Act, the Nebraska Soil and Water Conservation Act and other programs that the district board of directors deem useful to accelerate implementation of soil conservation. The District will assist local, state, and federal agencies in promoting and implementing conservation buffer strips, terraces, no-till farming, and other soil conservation practices.





B. FLOOD PREVENTION AND CONTROL

GOAL: Develop flood damage prevention programs to protect the resources of the Tri-Basin area.

OBJECTIVES:

1. Tri-Basin NRD, with assistance from other state and federal agencies, will cooperate with and assist governmental subdivisions in flood prevention planning and flood control efforts within the district.
2. The NRD will not support residential or commercial development within a floodplain unless such developments fully conform with county zoning regulations.



C. SURFACE AND GROUNDWATER SUPPLY AND MANAGEMENT

GOAL: All water resources, whether their origin is groundwater or surface water, will be put to beneficial uses, managed efficiently, and utilized to preserve their quality and quantity.

OBJECTIVES:

1. Tri-Basin NRD, in cooperation with Central Nebraska Public Power and Irrigation District, will continue its present groundwater level observation program to track groundwater availability.
2. The NRD will cooperate with all political subdivisions, state and federal agencies, and the University of Nebraska on water resources research related to district groundwater and surface water resources.
3. The NRD will continue to administer cost-share programs that will encourage landowners to decommission wells and improve the efficiency of their irrigation systems.
4. The NRD will administer its groundwater management plan, joint integrated water management plans, and groundwater management rules and regulations in a fair and equitable manner to conserve groundwater supplies, protect streamflows, and preserve groundwater quality within the district.
5. The NRD will encourage conservation of groundwater and surface water by cooperating with UNL Extension, NDEE, NDNR, NRCS, and CNPPID in providing educational programs, demonstrations, and technical assistance to irrigators.

D. POLLUTION CONTROL AND WASTE DISPOSAL

GOAL: Prevent pollution and promote lawful and safe disposal of waste to protect natural resources within the Tri-Basin NRD area.

OBJECTIVES:

1. Tri-Basin NRD will administer its Groundwater Quality Management program as required by state statutes.



2. The NRD will administer the Nebraska Chemigation Act rules and regulations.
3. Tri-Basin NRD will work with local producers to help them apply nitrogen and other crop fertilizers in a manner that minimizes potential for leaching and groundwater contamination.
4. The NRD will promote proper disposal of all waste materials and take measures to prevent and prohibit illegal dumping on public property.
5. The NRD will assist local political sub-divisions in implementing wellhead protection areas to protect the quality of municipal water supplies.
6. Solid waste disposal and sanitary sewage facilities for urban areas will remain a primary responsibility of cities and villages. Any future NRD involvement in this area will be at the request of the cities, villages, or counties, unless mandated by state law.

E. DRAINAGE IMPROVEMENT AND CHANNEL RECTIFICATION

GOAL: Develop drainage systems that reduce damage from storm runoff water and high groundwater levels.

OBJECTIVES:

1. Tri-Basin NRD will encourage individual landowners to maintain natural drainage on their property to prevent flooding of adjacent property.
2. The NRD will cooperate with groups of landowners interested in collectively addressing drainage problems. The District will form Improvement Project Areas (IPAs) to address large drainage problems if interested landowners are willing to pay for development and maintenance costs. In exchange for landowners paying for contract labor and materials, Tri-Basin NRD will continue our policy to provide district labor and equipment for maintenance and repair work at district expense.
3. Invasive riparian vegetation reduces the water-carrying capacity of stream channels. Tri-Basin NRD will continue to work with the Platte Valley and Twin Valley Weed Management Areas to treat invasive plants like Phragmites and saltcedar in riparian zones within the district.
4. Tri-Basin NRD will work closely with county boards and road superintendents to evaluate and improve drainage along county roads.



F. RECREATION, FISH AND WILDLIFE MANAGEMENT

GOAL: Preserve, protect, and enhance wildlife habitat and provide residents of Tri-Basin NRD with fishing, hunting, and recreation opportunities by cooperating with landowners and local, state, and federal agencies.



OBJECTIVES:

1. The NRD will cooperate with communities in the district to develop parks and recreational facilities that benefit the general public, and which are consistent with ecologically sound best management practices for land and water management.
2. The NRD will cooperate with local, state, federal agencies, and non-governmental organizations to promote and implement programs and projects that create, enhance, and protect wildlife habitat on private land.

G. FORESTRY AND RANGE MANAGEMENT

GOAL: Improve the quality and productivity of all rangeland in Tri-Basin NRD for the benefit of livestock and wildlife, while encouraging tree planting to protect farmsteads, crop fields, and livestock.



OBJECTIVES:

1. Tri-Basin NRD will continue its tree planting program, establishing windbreaks, shelterbelts, living snow fences, wildlife habitat, and commercial tree plantings on public and private lands.
2. The NRD will cooperate with local political sub-divisions and civic groups to promote tree planting by providing free trees to schools, Arbor Day programs and by giving trees to parents of each baby born in the district.
3. The NRD will encourage proper management of rangeland to maintain or improve its productivity. To promote management of invasive plants in rangeland, Tri-Basin staff will assist landowners with planning for prescribed burns on rangeland.
4. The NRD will discourage the conversion of highly erodible rangeland for row crop production.



CHAPTER III AREAS OF PRIMARY CONCERN (PRIORITIES)

The goals and objectives of Tri-Basin Natural Resources District as stated in Chapter II are all realistic and obtainable. Budget limitations, staff availability, local concerns and public interest limit what can be accomplished during the ten-year period of this plan. For this reason, the NRD directors have established primary areas of concern, or priorities. These priorities are periodically reviewed as concerns change and some problems become more acute than others.

The current primary area of concern for Tri-Basin Natural Resources District is surface and groundwater supply and quality management, with an emphasis on preserving ample supplies of good quality groundwater and reducing depletions to baseflows of streams (integrated water resources management). The District-wide Groundwater Management Area requires considerable staff time and financial resources.



Another primary concern is administration of the Nebraska Chemigation Act. Although it is listed as an objective under the Pollution Control and Waste Disposal goal, it is also a major emphasis in water quality management.



Secondary priorities are, in order of importance: soil conservation and erosion control, drainage improvement and channel rectification.

Drainage improvement and channel rectification was upgraded from a low to medium priority during the 1999 Master Plan revision as increasing amounts of staff time was spent maintaining seven Improvement Project Areas designed to alleviate drainage and groundwater seepage problems.

Next in importance are recreation, fish and wildlife management, forestry and range management, and pollution control and waste disposal. Tri-Basin NRD cooperates with the Rainwater Basin Joint Venture to create, enhance, and protect wetlands for waterfowl and shorebirds. Tree planting and forestry have always been emphasized in this district. The NRD also works closely with Pheasants Forever creating upland habitat for game birds through their Corners for Wildlife program. These programs are important to the District and require a great deal of staff time during certain times of the year.



Pollution control and waste disposal, excluding chemigation, which has already been discussed, and flood prevention and control are important, but are also responsibilities of other state agencies and local subdivisions, so they are necessarily a lower priority at the current time.

It is interesting to note that, in the original Master Plan written in 1978, water quality was not mentioned. Integrated water management was not considered worthy of mention in the 1999 plan revision. These aspects of groundwater and surface water management are now major activities of and high priorities for the District. Drainage improvement was a low priority goal until the 1990s. These changes in emphases point out the need for a planning process that is flexible and adaptable to the changing needs of the District.



OTHER PLANS OF THE DISTRICT

This Master Plan is not a complete picture of the work done and progress made by Tri-Basin Natural Resources District. It is a part - the first step - of the overall planning process. Enabling legislation for this Master Plan included other planning requirements. The Nebraska Unicameral has also required Natural Resources Districts to initiate additional, more narrowly focused, planning efforts since the Master Plan was first required in 1978. The Groundwater Management Plan was completed in January 1986 and approved by the (then) Department of Water Resources. It has been revised and updated several times since then. The Soil Erosion and Sediment Control Act was passed by the Unicameral in 1986. Rules and Regulations governing this program on the district level were approved by the

Natural Resources Commission and went into effect July 1, 1987. Most recently, the District worked with the NE Department of Natural Resources to develop and update joint integrated water resources management plans (IMPs) for the Platte, Republican, and Little Blue basins. The Platte IMP was agreed upon in 2009 and updated in 2019, the Republican IMP was agreed to in 2012, and the Little Blue Voluntary IMP was initiated in 2019.

The Groundwater Management Plan and IMPs have been instrumental in shaping future water management programs. The NRD's Groundwater Management Rules and Regulations include rules based on guidelines set up in those plans.



Individual project plans are another important part of the overall planning process of the NRD. These plans are necessary to carry out specific projects approved by the District Board of Directors. They must be coordinated with other local agencies, and with appropriate state agencies, if state regulations, programs or funds are involved.

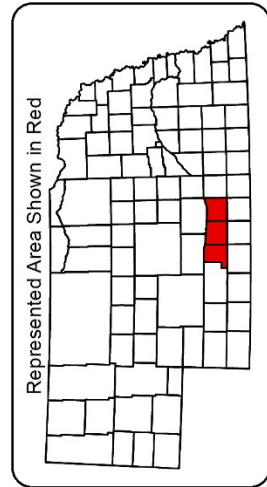
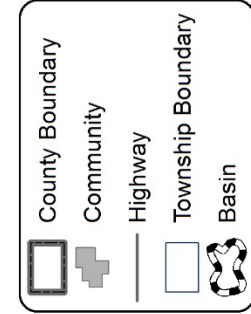
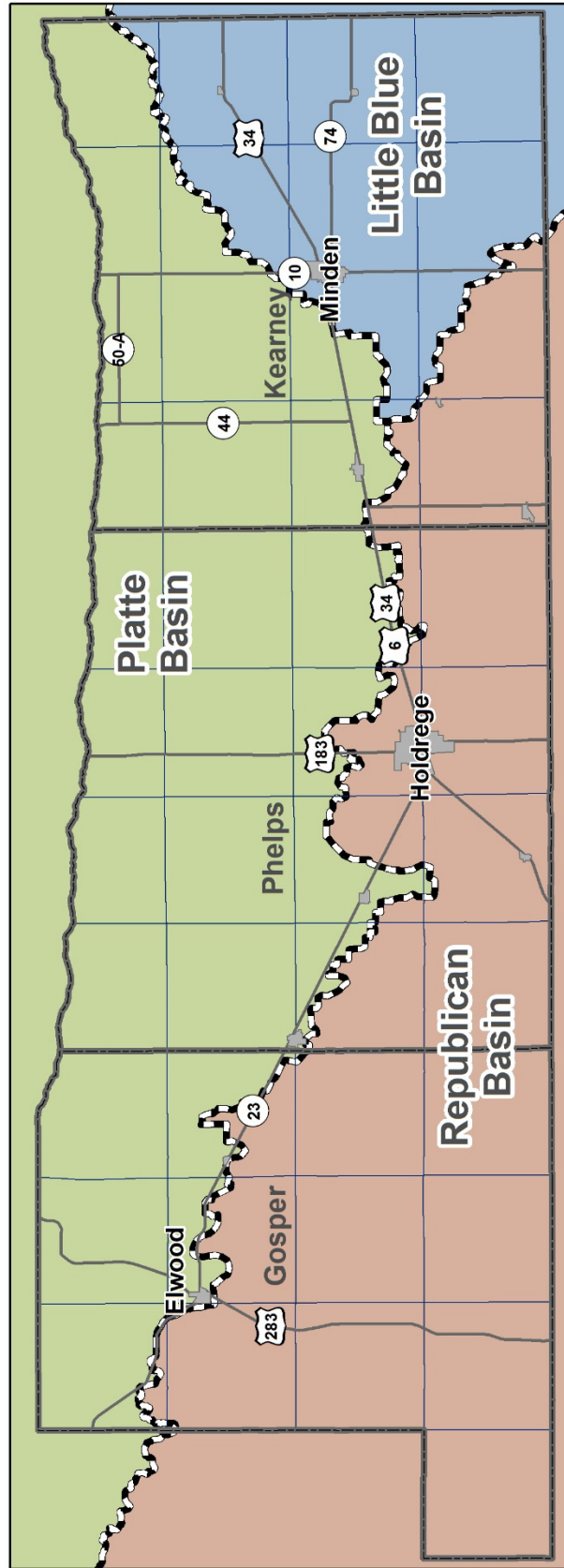
APPENDIX

GROUNDWATER MANAGEMENT RULES AND REGULATIONS

Nebraska Natural Resources Districts

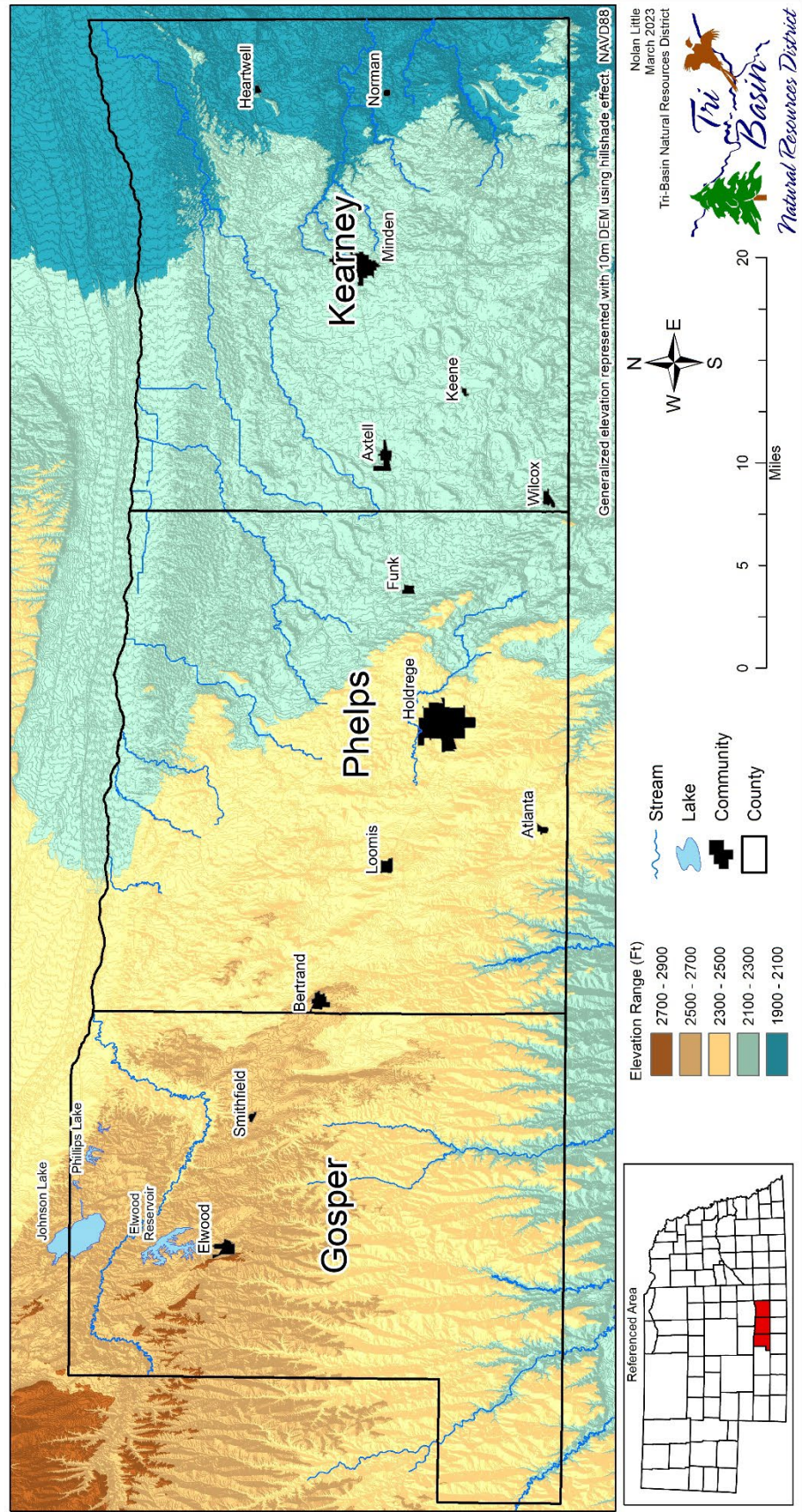
Tri-Basin Natural Resources District

Political and Hydrologic Boundaries



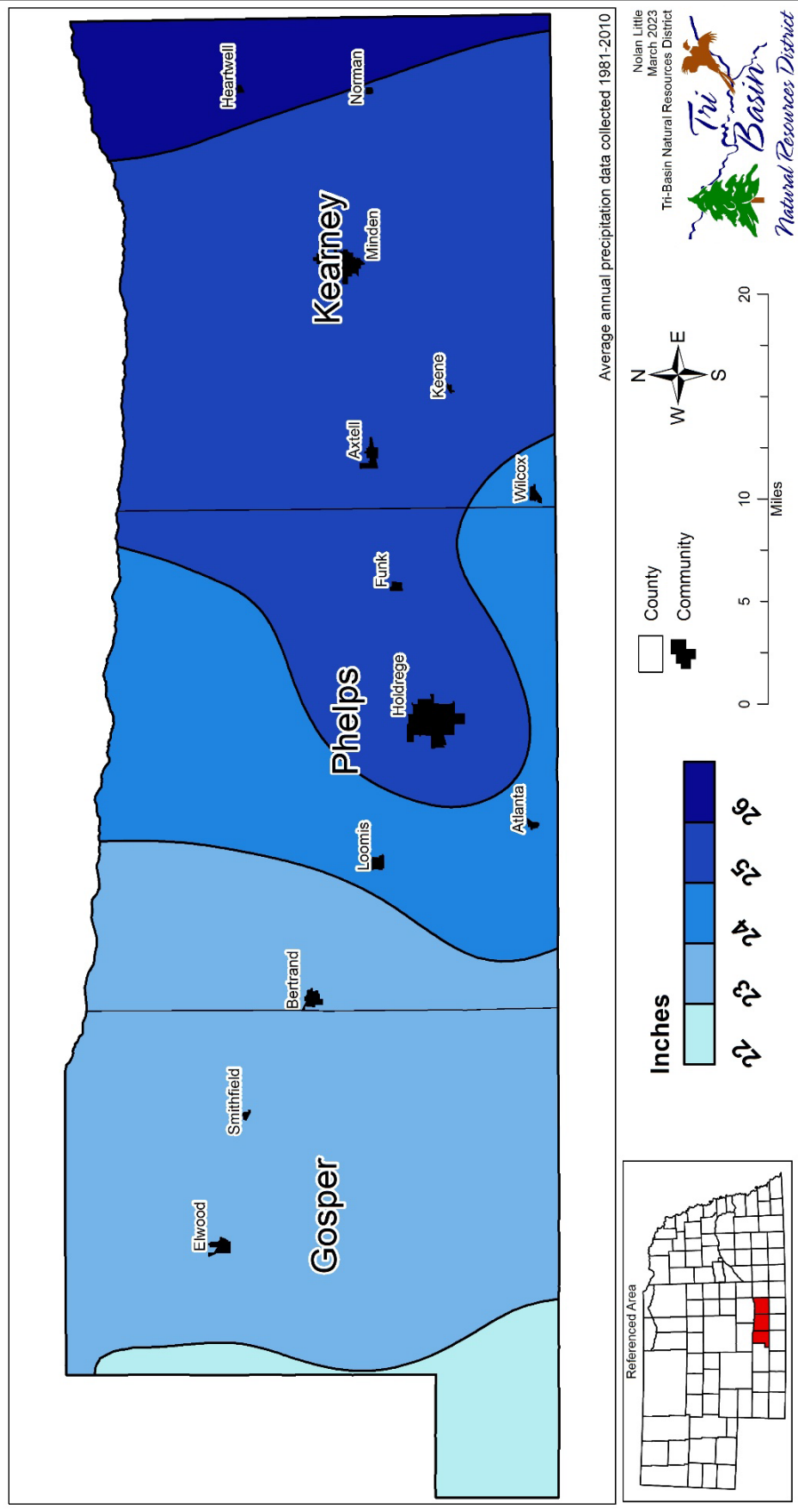
Tri-Basin Natural Resources District

Generalized Elevation



Tri-Basin Natural Resources District

Average Annual Precipitation



Tri-Basin Natural Resources District Election Sub-Districts

Approved December 14, 2021

