

LITTLE BLUE NATURAL RESOURCES DISTRICT

# LONG RANGE IMPLEMENTATION PLAN

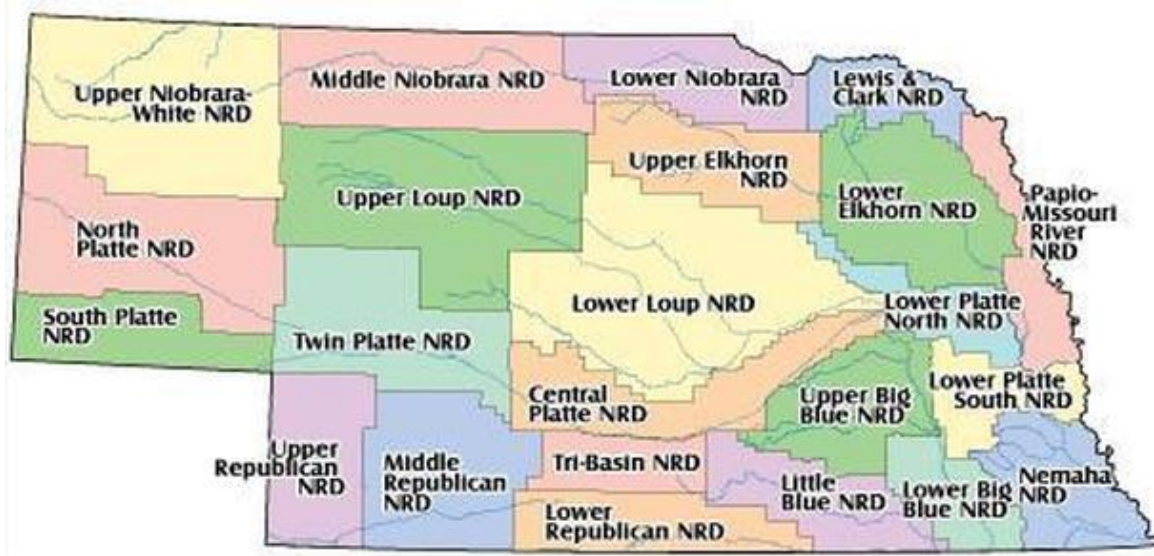


FOR FISCAL YEARS  
2020-2024

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## Purpose of Plan

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The legislation which created the natural resources districts in 1969 (LB 1357) recognized that the conservation, protection, development and utilization of the state's resources was essential to the health and welfare of the citizens of the state. Nebraska Rev. Stat. §2-3277 requires districts to develop Long-Range Implementation Plans to summarize the district's projects, programs, and activities planned for the next one to five years, and to highlight the financial and human resources required to meet those goals.

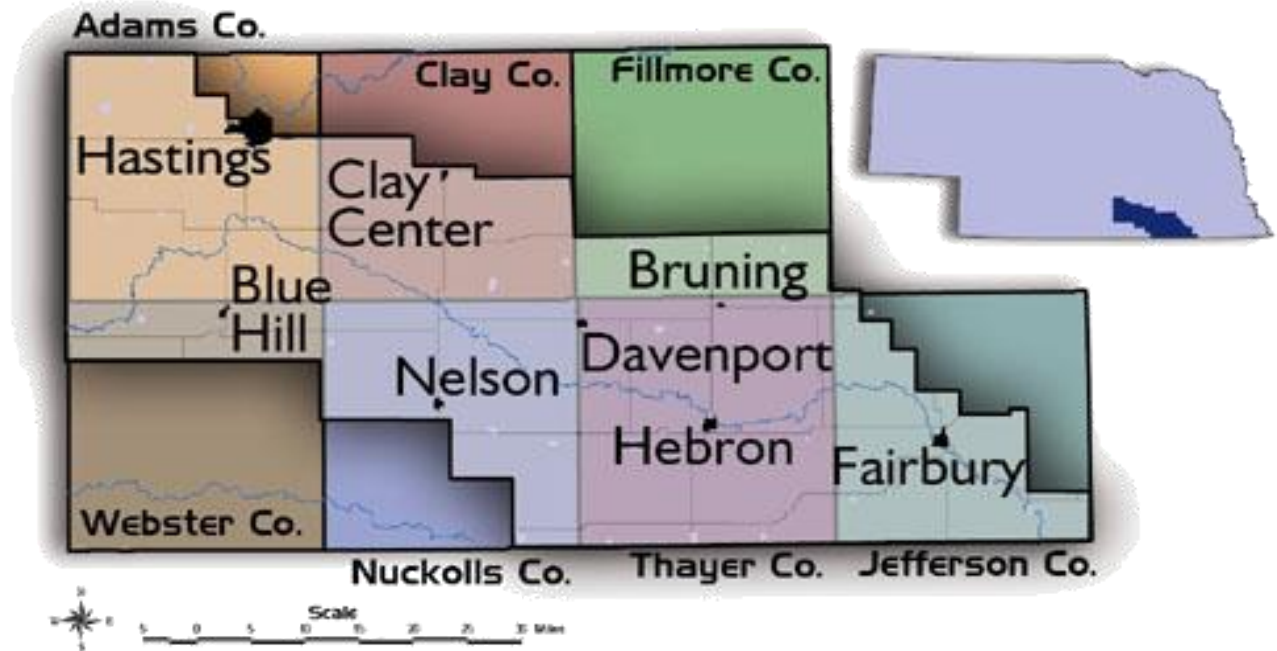
This Long-Range Implementation Plan of the Little Blue Natural Resources District (NRD) is designed to fulfill the requirements of state law and provide an overview of the Board's objectives for the orderly conservation and management of our natural resources. The District relies on the support of various governmental agencies and local entities, and especially the ingenuity and cooperation of landowners and producers to develop and implement the necessary programs and activities. This document is also designed to provide the public with an understanding of the various natural resources challenges we face, our resources needs, as well as District goals to promote a sustainable social and economic environment.

## District Location

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The Little Blue is one of the 23 Natural Resource District's in Nebraska. It lies in the south-southeast area of Nebraska and encompasses the eastern 90% of the Little Blue River Basin. All or parts of seven counties make up the Little Blue District: Thayer 24.02%, Jefferson 13.34%, Fillmore 6.00%, Clay 13.49%, Nuckolls 16.6%, Webster 6.00%, and Adams 20.44% Counties. The total area of the Little Blue District is approximately 1,537,280 acres.

# LITTLE BLUE NRD



## Our Purpose

The purpose of the Little Blue Natural Resource District is to develop and execute, through the exercise of powers and authorities granted by law, plans, facilities, works, and programs relating to:

- Erosion prevention & control
- Prevention of damages from flood water & sediment
- Flood retention and control
- Soil conservation
- Water supply for all stakeholders
- Development, management, utilization & conservation of groundwater and surface water
- Pollution control
- Solid waste disposal & sanitary drainage
- Drainage improvement & channel rectification
- Development & management of fish and wildlife habitat
- Development of management of recreational & park facilities
- Forestry & range management

# Summary of Conservation and Environmental Partners

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- **Nebraska Association of Resources Districts (NARD)**
  - Coordination of Natural Resources Districts Activities
  - Manages NRD Insurance and Retirement Programs
  - Legislative Representation and Lobbying for NRD Interests
  - Training for NRD Employees and Boards
  - Coordination of Resources Issues with Other State Agencies
- **Nebraska Department of Environment & Energy (NDEE)**
  - Surface Water Quality & Sampling
  - Groundwater Quality & Sampling
  - Chemigation
  - Beach Monitoring
  - Public Water Supply Regulations (includes rural water districts)
- **Nebraska Department of Natural Resources (NDNR)**
  - Well Registrations
  - Surface Water Permits and Administration
  - Groundwater Management Oversight
  - Dam Construction Permits and Dam Safety
  - Flood Plain Management & Flood Insurance
  - Administration of Funds: Soil and Water Conservation Funds, Water Quality Funds, Well Decommissioning Funds
  - Project Development Funding through Water Sustainability Fund
- **Nebraska Department of Health and Human Services (NHHS)**
  - Water Well Standards and Licensing
  - Nebraska Game and Parks Commission (NG&PC)
  - Wildlife Habitat
  - Parks & Recreation
  - Fisheries
- **Nebraska Department of Agriculture (NDOA)**
  - Buffer strip programs
- **USDA Natural Resources Conservation Service (NRCS)**
  - Technical Services for Conservation Practice Design & Implementation
  - NRDs Local Contact in County Offices
- **US Corps of Engineers**
  - Waters of the US - Project Permits (River and Stream Impacts)
  - Drainage Projects
- **US National Weather Service**
  - Rainfall reporting
- **US Fish & Wildlife Services (USFWS)**
  - Federal Wetland Basin Management
  - Wetland Improvement Programs



- **US Environmental Protection Agency (USEPA)**
  - Environmental Quality Activities
- **Nebraska Emergency Management Agency (NEMA)**
- **Federal Emergency Management Agency (FEMA)**
  - Pre-Disaster Hazard Mitigation
  - Disaster Relief and Reconstruction
- **Nebraska Forest Services (NFS)**
- **US Forest Service (USFS)**
  - Nursery Stock at Halsey Forest
  - Technical Assistance on Forest Management
- **Rainwater Basin Joint Venture (RWBJV)**
  - The RWBJV is a Quasi-Governmental entity with an advisory board made up of Federal, State, Local government agencies, plus private landowners, people in business, and wildlife interests. Funding for the wetland restoration and acquisition projects comes through numerous wildlife grants. Work done on both private and public lands.
- **US Geological Survey (USGS)**
  - Stream Gage Monitoring, Geologic Studies
- **University of Nebraska Lincoln**
  - Research, Studies, Data, Public Education, Technical Assistance.



## Board of Directors

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The board of directors is elected to protect and preserve a broad scope of natural resources within the district. The Little Blue Natural Resource District is governed by a 17-member board of directors, locally elected from 8 sub-districts and one At-Large position.

<b>Subdistrict</b>	<b>Board Members/Address</b>	<b>Delegate Positions</b>
1	Mason Hoffman, Roseland	Secretary
1	Robert Trausch, Juniata	
2	Warren Brakhahn, Hastings	
2	Charles Rainforth, Hastings	
3	Zach Hollister, Hastings	
3	Everett Kellogg, Hastings	
4	Kevin Kissinger, Glenvil	Treasurer
4	Jesse VonSpreckelson, Clay Center	
5	Lyle Schroer, Lawrence	
5	Warren Taylor, Glenvil	
6	Lyle Heinrichs, Shickley	
6	Steve Shaw, Edgar	
7	Alan Wiedel, Hebron	Vice-Chairman
7	Joseph Hergott, Hebron	
8	Bill Glenn, Fairbury	
8	Jay Meyer, Daykin	
At-Large	Marlin Kimle, Kenesaw	Chairman

## Current Programs and Projects

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In the following pages, you will find a brief description of the programs, projects, and activities of the district. These activities support the District's ongoing efforts to protect lives, protect property, and protect the future of precious natural resources for the good of our residents.

### Education and Information:

It is critical that all constituents of the Little Blue NRD understand the importance of conserving, protecting and properly managing our natural resources to sustain the social, physical, and economic viability of our area. Education is a key component of the District's program to inform, and develop appreciation and collaboration for, the wise management of our resources. In that regard, the District uses the following tools to meet its educational goals: Water/Earth Jamboree for 5<sup>th</sup> and 6<sup>th</sup> graders; Earth Festival; outdoor classrooms; teacher workshops and scholarships; 4-H and FFA camp scholarships; high school/college scholarships; land and range judging contests; Envirothon; free trees on Arbor Day; presentations; field demonstrations; community meetings; producer training events and conferences; civic club and organization presentations; news releases; website; conservation awards; Nebraska Rainfall and Information Assessment Network (NeRAIN); Project Sense (sensor-based nitrogen management); state fair booth; Husker Harvest Days.

### Water Quantity and Quality:

The District goal is to assure an adequate quality supply of water for multiple uses, through the proper conservation, management and development of the districts water resources, and has been accomplished through these listed programs: Continuous groundwater data collection from the dedicated monitoring network; groundwater level monitoring; water quality sampling; administration of regulations governing the districts water quality and quantity subareas; promotion of water resources technologies and tools; decommissioning of wells; free nitrate testing; irrigation runoff controls; investigations of groundwater recharge possibilities; high capacity well permits; administration of chemigation program; meter maintenance; ultra-sonic meter well testing program; cost share programs for soil moisture sensors; and wellhead protection program for municipalities.

### Soil Conservation, Erosion and Flood Control:

It is the districts intent to utilize the lands to their fullest capability and to ensure that the future generations have quality lands by continual conservation stewardship through the following programs: Develop programs that aid in soil erosion and enforce the Erosion and Sediment Control Act; promote conservation tillage and soil health; continue to offer funds for conservation construction, dams, and water quality projects.



### Urban Parks and Recreation Trails Assistance Program:

Working with the districts communities is vital for a strong commitment for special projects that aid in reducing and preventing soil erosion, flooding and other related resource problems in urbanized areas with the following programs offered: community tree resource program; urban conservation program; and urban park and recreation trails assistance programs.

### Tree and Wildlife Enhancement:

An essential need throughout the district is quality tree and wildlife plantings that benefit landowners with lower energy costs, aid in comfort and property protection, provide landscape aesthetics and offer an environment that supports wildlife. The following programs offer such benefits: Tree and weed barrier program; grassland drills and no-till drills rental program; work with other agencies for wildlife and wetland improvement programs.

### Recreational Facilities for Public Use:

The staff continues to operate and maintain the districts five recreation areas that offer swimming, fishing, and other water-based recreation, camping, picnicking, trails, golf, archery, and educational opportunities. The current list of recreation areas includes Buckley Creek, Liberty Cove, Lone Star, Prairie Lake, and Roseland Lake Recreation Areas. The district also provides support to the Village of Ayr for operation of the Crystal Lake Recreation Area near Ayr, Nebraska.

### Public Water Supplies:

A major function of the Little Blue NRD is management of its rural water projects. Providing an adequate supply of good quality water to areas that have a limited supply or undesirable aquifer characteristic for potable water supply has been a long-standing priority of the District. The District maintains two rural water projects known as the Little Blue Public Water Project North and Little Blue Public Water Project South Projects. These projects serve over 400 rural customers through a network of 240 miles of buried pipeline, and include three booster stations and two elevated water towers.

# District Proposed Funding

## PROJECTED REVENUES

BUDGET CATEGORIES	ACTUAL REV.	PROJECTED REVENUES				
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Cash, Investments, County Balance	\$ 571,941	\$ 327,796	\$ 300,000	\$ 300,000	\$ 320,000	\$ 340,000
Local Funding	\$ 296,388	\$ 238,002	\$ 230,000	\$ 240,000	\$ 240,000	\$ 240,000
State Grants and Funding	\$ 333,525	\$ 904,000	\$ 400,000	\$ 500,000	\$ 600,000	\$ 750,000
Federal Funding	\$ 102,349	\$ 102,000	\$ 125,000	\$ 200,000	\$ 300,000	\$ 400,000
Investment Income	\$ 1,648	\$ 5,000	\$ 4,800	\$ 4,800	\$ 4,900	\$ 4,900
Special Assessments ( Rural Water)	\$ 255,059	\$ 415,474	\$ 400,000	\$ 384,526	\$ 369,052	\$ 353,578
Miscellaneous	\$ 301,041	\$ 6,800	\$ 12,500	\$ 14,000	\$ 14,000	\$ 14,000
Property Taxes	\$ 1,719,444	\$ 1,750,000	\$ 1,780,556	\$ 1,811,112	\$ 1,841,668	\$ 1,872,224
<b>TOTAL BUDGETED REVENUES</b>	<b>\$ 3,581,395</b>	<b>\$ 3,749,072</b>	<b>\$ 3,252,856</b>	<b>\$ 3,454,438</b>	<b>\$ 3,689,620</b>	<b>\$ 3,974,702</b>

## PROJECTED EXPENDITURES

BUDGET CATEGORY	ACT EXP.	PROJECTED EXPENDITURES				
	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Administration & Personnel	\$ 1,131,565	\$ 1,233,412	\$ 1,160,000	\$ 1,190,000	\$ 1,210,000	\$ 1,210,000
Director's Expense	\$ 17,420	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Director's Per Diem	\$ 19,270	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000
Dues & Membership	\$ 31,530	\$ 32,601	\$ 33,000	\$ 35,000	\$ 35,000	\$ 36,000
Professional Fees	\$ 30,459	\$ 25,238	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Operations and Maintenance	\$ 360,143	\$ 437,675	\$ 420,000	\$ 380,000	\$ 409,929	\$ 414,118
Development on District Holdings	\$ 3,368	\$ 24,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
Taxes	\$ 3,580	\$ 4,450	\$ 5,320	\$ 6,190	\$ 7,060	\$ 7,930
Office Equipment	\$ 5,744	\$ 13,500	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
Research and Education	\$ 34,584	\$ 58,575	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000
Water Management Activites	\$ 53,106	\$ 297,500	\$ 200,000	\$ 210,000	\$ 224,000	\$ 224,000
Payment to DEE (Formerly DEQ)	\$ 3,847	\$ 8,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Program/Project Costs	\$ 1,194,098	\$ 1,192,468	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Miscellaneous Expense	\$ 123,505	\$ 37,900	\$ 40,000	\$ 50,000	\$ 50,000	\$ 55,000
Special Assessment (Rural Water Projects)	\$ 255,059	\$ 415,474				
<b>TOTAL BUDGETED NEEDS</b>	<b>\$ 3,267,278</b>	<b>\$ 3,835,793</b>	<b>\$ 3,030,320</b>	<b>\$ 3,043,190</b>	<b>\$ 3,107,989</b>	<b>\$ 3,119,048</b>

## Administrative Activities and Objectives

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- The District develops an annual budget to address administrative and operational needs for projects, activities and regulatory functions of the agency. The budget must be submitted to the state by September 20<sup>th</sup> of each year.
- The Little Blue NRD has worked with the Beehive database over the past several years to consolidate information and manage the data needs which facilitate the District's programs. The database helps to organize and display districts forms, mapping layers, well permits, chemigation permits, certified irrigated acres, mailing info, etc. The database allows the District to consolidate multiple program spreadsheets making tract records much more complete and trackable.
- An objective of the FY 2019 plan was to complete our newly updated and user-friendly website. We are continuing with our program and project updates to make the site fully functional. When completed, the site will provide interactive social media, fillable online forms, monthly updates, and layered mapping for water quantity and quality, along with other valuable info within the district. The District continues to work toward integrating the Beehive database and the website to provide better opportunities for constituent interaction, reporting to the District and data compilation.

## LBNRD Groundwater Quality Program

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The Nebraska Legislation gave NRDs authority for managing and controlling non-point pollution. Non-point pollution is generally characterized by pollution which occurs over a broad area with a non-specific point of discharge. The most significant source of groundwater pollution in the District is nitrates from commercial nitrogen fertilizer. In some areas, the levels exceed the maximum contaminant level of 10 ppm (parts per million) allowed by the state and federal government. High nitrates are a potential hazard to humans and livestock.

Other sources of pollution can include high Iron, Magnesium, Sodium, Selenium, Chloride, and TDS (total dissolved solids) which can be a concern within the District.

While all forms of non-point pollution can be a concern, high nitrates remain the priority pollutant for the District. Because of the nitrate issues, the Board of Directors adopted the necessary rules, regulations, boundaries, and controls for the District. The District's program goal is to prevent rising nitrate levels district-wide and lower average nitrate levels in areas where groundwater pollution already exists. The plan uses a Sub Area and Phased approach, with increasing levels of management activities or restrictions set aside for areas where higher nitrate concentrations occur in the groundwater. Because of the nature of nitrate pollution, reversing the trends is a challenging venture which requires many years of careful and intensive management to solve the problem.

The District continues to work with farmers, agriculture business operators, and the general public to educate and further reduce high nitrates in groundwater through proper fertilizer management.

## 2019 Nitrate Results

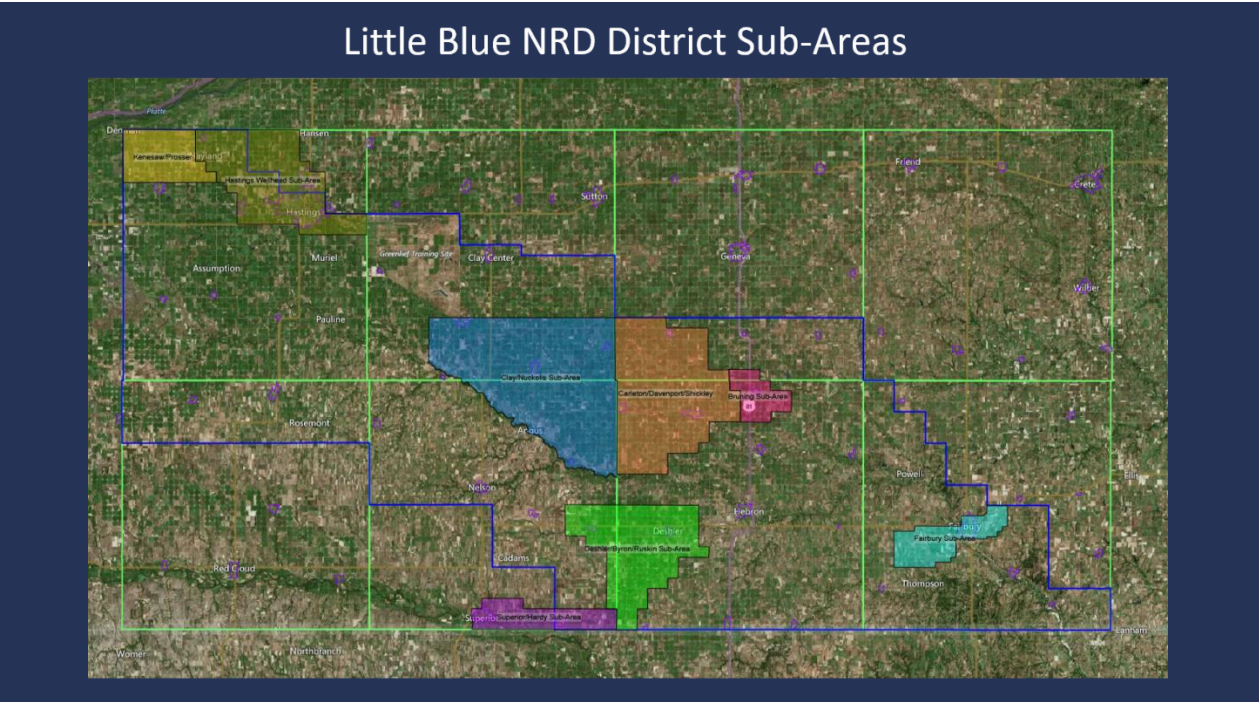
The District focused its 2019 nitrate testing efforts in and around the established subareas of the District. You can see in the below table that most sub-areas that are over the 10ppm maximum contaminate level, therefore it is imperative that we continue to make efforts to reduce or stop the nitrate levels rising further.

The district is also studying Sub-Areas and areas outside of the Sub Areas as to see how this problem continues to spread. While most of these areas continue to rise, the efforts to learn why the nitrates continue to rise is something we are very passionate about. The Little Blue district is finding that there are many variables when concerning water sampling for nitrates and the district is seeking ways to minimize inconsistency with detailed monitoring such as: uniformity with time-of-day sampling, sampling during identical pivot cycles, and sampling during identical times of the growing season. These sampling methods will help to minimize differences in test results and help us to better understand how nitrates are moving through the soil profile and within the groundwater. An additional variable is deep soil core sampling. Streamlining our deep soil core sampling will help us to improve our understanding about different management practices and how they affect the accumulation and movement of nitrates through the soil. We're uncertain how the biology, chemistry, and physical properties of the soil profile interact to contribute to nitrate movement—future testing will incorporate more soil property data to assist with a better understanding of nitrate movement and how it affects water quality.

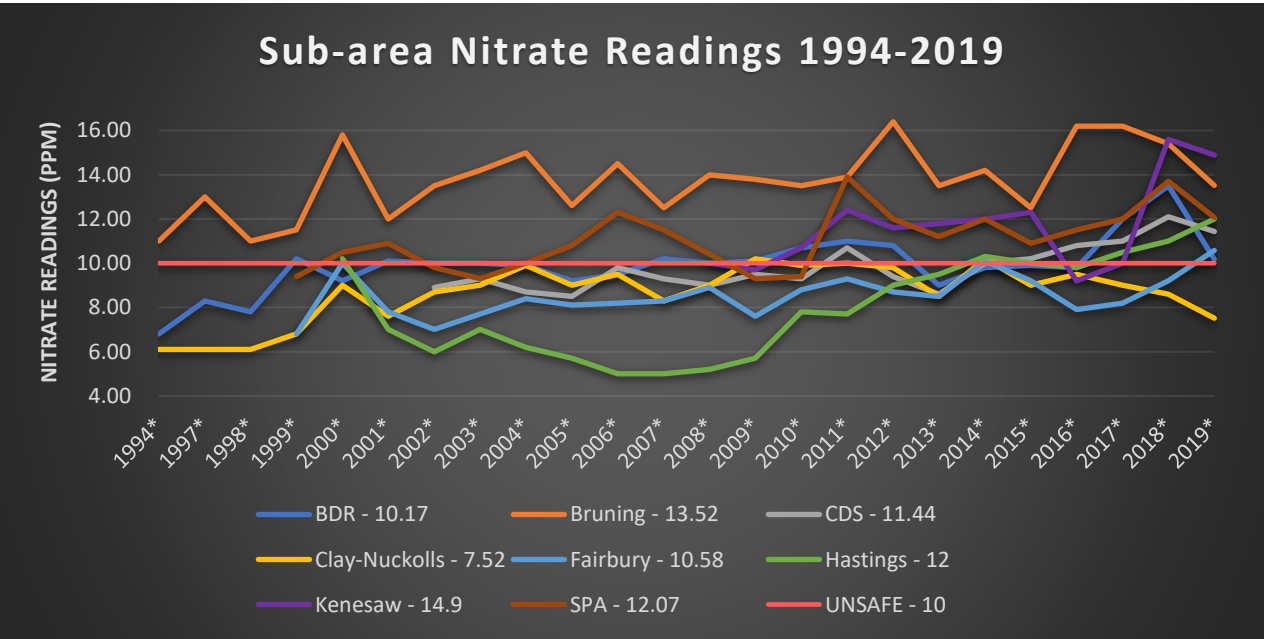
Summer 2019 Water Sampling Results		
Area Sampled	Number of Samples	Average Nitrates (ppm)
Bruning Sub-Area	21	13.52
CDS Sub-Area	19	11.44
BDR Sub-Area	15	10.17
Clay Nuckolls Sub-Area	26	7.52
Fairbury Sub-Area	8	10.58
Hastings Sub-Area	2	12
Kenesaw Sub-Area	17	14.9
Superior/Hardy Sub-Are	4	12.07
Outside Sub-Areas	21	7.02



# 2019 Nitrate Sample Map



## Long-Term Nitrate Levels (ppm): 1994-2019



## Future Objectives & Plans of Action

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### *OBJECTIVE: PROVIDE LOCAL FUNDING TO LANDOWNERS TO ENCOURAGE THE INSTALLATION OF WATER QUALITY PRACTICES.*

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*The Little Blue NRD provides cost-share funds for water quality practices to be utilized throughout the district. The funds are generated through the collection of fees levied by the Nebraska Department of Agriculture for pesticide registration and applicator licenses. The funds generated are distributed by the Department of Natural Resources. The funds typically range from \$45,000 to \$55,000 per year.*

*Practices that are available for producers include: Low Angle or Drop Nozzles (NRCS design regulators required, conversions only, not new) Chemical and Fertilizer Applicator Control System, Nitrogen Inhibitor Equipment Practice and Variable Rate Irrigation (Equipment Only).*

### *PLANNED ACTIONS:*

- ☐ Promote and utilize water quality funds throughout the district to support environmental improvements.
- ☐ Limit cost-share to one contract per producer to spread benefits throughout the district.
- ☐ Continue to search for new cost-share practices which provide water quality benefits.
- ☐ Promote soil sampling efforts and adherence to fertilizer recommendations for crop production to assure efficient nutrient use and reduce overuse of fertilizers which may cause risk to surface and groundwater supplies.

## OBJECTIVE: CARRY OUT AN EFFECTIVE MONITORING PROGRAM FOR THE DISTRICT'S WATER SUPPLIES.

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*The District has authority for both groundwater quality and groundwater quantity. The District began monitoring groundwater levels in 1974 and has expanded its monitoring well network over the years to assess the impacts of groundwater uses better. It also installed a dedicated monitoring network of 50 wells scattered across the principal aquifers of the District to evaluate the effects of daily groundwater pumpage. Groundwater quality sampling began in the mid-1980s and has also expanded as evidence of groundwater contamination has continued to grow in the District. Both monitoring efforts are critical in determining the historical groundwater levels trend and evolving water quality problems.*

### PLANNED ACTIONS:

- ☐ Continue to gather groundwater levels through the biannual and dedicated monitor networks to evaluate trends and determine appropriate response actions.
- ☐ Continue to gather groundwater quality samples to evaluate trends and determine appropriate response actions.
- ☐ Evaluate monitoring networks to ensure that the monitoring sites are a suitable representation of the aquifer conditions.
- ☐ Study well construction records and characteristics to identify the wells which can offer the most reliable water quality monitoring network.
- ☐ Identify and secure additional monitoring sites if existing sites are lost for any reason.
- ☐ Utilize the data gathered to make informed decisions about regulatory needs and actions
- ☐ FY2019 and FY2020: collect subsoil vadose samples to document nitrate movement through the soil profile, compare the results with similar data collected in 2014, and analyze the data collected to determine next steps in water quality areas.

## OBJECTIVE: EFFECTIVELY CONSERVE, PROTECT AND PROMOTE WISE UTILIZATION OF THE DISTRICT'S WATER SUPPLIES.

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*The Nebraska Groundwater Management and Protection Act requires the NRD to develop and implement a groundwater management plan. The plan includes management of both groundwater quality and groundwater quantity. In addition to outlining the process for monitoring the status of the quality and quantity within the District, the plan establishes a framework for rules and regulations to manage water development and use. Currently, the Little Blue NRD Water Resources Committee is developing an Integrated Water Management Plan based on the input of a voluntary stakeholder group that met from 2015 through 2017 to discuss and evaluate inter-related surface and groundwater issues.*

### PLANNED ACTIONS:

- ☐ Implement actions and programs as prescribed in the Groundwater Management Plan approved by the State in December 2017.
- ☐ Implement the Rules and Regulations for Enforcement of the Groundwater Management Area as adopted August 14, 2018 and effective September 15, 2018.
- ☐ Cooperate with the State in the administration and management of an area of northwest Adams County determined to impact river flows of the Platte River in accordance with the Platte River New Depletions Plan.
- ☐ Gather sound science-based data to use in making future management or regulatory decisions.
- ☐ Participate with the NRDs which are collaborating on the Blue Basin Model to create a tool capable of assessing water trends and the impacts of conservation and future development.
- ☐ Provide cost assistance for the decommissioning of abandoned water wells.
- ☐ Administer the District's chemigation program to protect water supplies.
- ☐ Provide technical assistance to landowners to build support for effective management strategies.
- ☐ Review the water plans of the District once every five years to determine if updates are necessary.

## OBJECTIVE: ENCOURAGE THE CONSERVATION, PROTECTION AND ENHANCEMENT OF THE SOIL RESOURCES IN THE LITTLE BLUE BASIN.

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*The Little Blue NRD provides technical support and financial aid to landowners to implement conservation practices across the district using funding provided through the State's Nebraska Soil and Water Conservation Program (NSWCP) and the District's Little Blue Soil and Water Conservation Program (LBSWCP). Typically, NRCS assists with program signup, design and check out. Funding received for NSWCP is dependent on the State budget but typically ranges from \$75,000.00 to 100,000.00 annually. Funding for LBSWCP ranges from \$150,000 to \$200,000 annually. Eligible practices include: Terrace Systems, Terrace Underground Outlets, Water Impoundment Dams, Grade Stabilization Structures, Diversions, Grassed Waterways, Water and Sediment Control Basin, Planned Grazing Systems, Dugouts for Livestock Water, Pasture Planting and Range Seeding, Critical Area Planting (Grass), Windbreaks, Windbreak Renovations, Irrigation Water Management and Repair Practices.*

*The District recently concentrated discussions on soil health for long-term soil enhancement and productivity, and to address a growing concern about groundwater quality.*

### PLANNED ACTIONS:

- ☐ Utilize the NSWCP and LBSWCP programs to help get appropriate conservation practices installed on Highly Erodible Lands.
- ☐ Administer cost-share programs to protect soil and water resources of the District.
- ☐ Periodically review administrative policies, including but not limited to, practice priorities, cost-share percentages, maximum assistance, and application procedures.
- ☐ Continue to work with district producers in solving erosion issues on their property. Promote and construct, where feasible, dams and diversions to assist with problems of gully erosion.
- ☐ Support with increasing state funding assistance for conservation programs.
- ☐ Continue to seek cost-share program options that provide resources protection.
- ☐ Conduct a survey of producers for their input on new cost shareable practices.
- ☐ Sponsor soil health demonstrations to focus on soil productivity and water quality benefits.
- ☐ Promote cover crop use as a way of creating crop diversity, building soil humus, break weed cycles and increase rainfall infiltration.



## OBJECTIVE: PROMOTE THE PROTECTION OF SOIL FROM WIND AND WATER EROSION.

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*In the past, the NRD has worked hard to educate the public on the importance of protecting soil from wind and water erosion. Media such as newspaper articles, radio announcements, and the District newsletter have been used to get the message out in the past.*

### PLANNED ACTIONS:

- ☐ Use local media and the District's web site to educate the public on the importance of protecting soil from wind and water erosion.
- ☐ Continue to use District newsletter as an information tool.
- ☐ Develop more information through electronic media options as potential tools for educating the public on erosion concerns.
- ☐ Build public awareness of Highly Erodible Lands (HEL) and why it is crucial to manage such lands with care and protect soils from degradation and productivity loss.
- ☐ Support Farm Bill measures which create opportunities for landowners to implement reasonable management practices and land retirement programs to protect highly erodible lands.



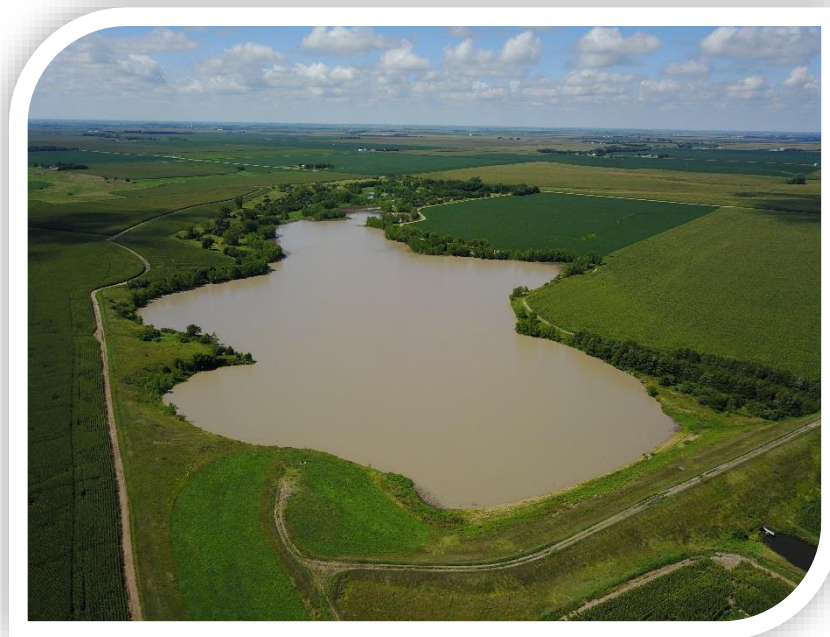
## OBJECTIVE: PARTNER WITH PRIVATE LANDOWNERS TO INSTALL FLOOD CONTROL STRUCTURES.

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*The Little Blue NRD has provided cost-share assistance for over 100 private dams throughout the district. These projects help to reduce flooding, reduce erosion and sediment deposition, and reduce bank erosion while providing many other public and private benefits. Developing adequate land treatment above these structures sites is critical to reduce erosion and sedimentation and extend the functional life of a dam. Land treatment can also reduce pesticides and fertilizers contamination, which is particularly important if a dam is used for watering livestock.*

### PLANNED ACTIONS:

- ☐ Evaluate the success of dams constructed in the past to determine the impact and benefits.
- ☐ Investigate and evaluate potential dam sites. Work with local NRCS offices to do preliminary review and estimates.
- ☐ Encourage producers to pursue multipurpose flood control projects on their land.
- ☐ Establish conservation practices upstream of dams to protect the long-term value of the projects.
- ☐ The Board will review the cost-share for dam program ever three years.
- ☐ Guide landowners about proper care and maintenance of private structures.



## OBJECTIVE: INSPECT ALL DISTRICT OPERATED STRUCTURES TO ASSURE THAT THEY ARE SAFE AND FUNCTION PROPERLY.

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*The Little Blue NRD is responsible for maintaining flood control structures in the District. Most of the structures are classified as a low hazard by the State of Nebraska; however, the NRD does maintain significant and high hazard structures. To assure that the structures are functioning correctly and safely, the NRD conducts periodic inspections. The State of Nebraska also does regular inspections of dams, and those reports are also incorporated into the District's inspection program.*

### PLANNED ACTIONS:

- ☐ All structures will be inspected as weather conditions and runoff dictates. Inspections will be conducted for all high-hazard structures at least biannually, and low and significant hazard structures annually.
- ☐ Evaluate and document any deficiencies in the physical project characteristics, operations and/or maintenance activities of dams for which the NRD is responsible.
- ☐ Coordinate dam inspections with the State of Nebraska DNR.
- ☐ Provide NRD staff with adequate training to assure that dams are adequately operated and maintained.
- ☐ Continue photo journals of all dam inspections.
- ☐ Educate the public on the importance of inspecting and maintaining dams on private land.
- ☐ Provide guidance to landowners who own dams in the care and maintenance of their dams.
- ☐ Inform landowners regarding concerns or problems caused by their use or alteration of a structure and instruct them on the needed corrective action.

## OBJECTIVE: MAINTAIN DISTRICT WATERSHED DAMS AND LEVEES FOR THE PUBLIC GOOD.

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*The public investment in District watershed dams, levy projects, and district lands is of great value to the residents of the District. The proper maintenance of these structures and projects is necessary to extend their useful life and provide continued multiple public benefits. The District will strive to operate all District projects and District lands for the purposes for which they were developed and in the best possible condition to extend their life and serviceability.*

### PLANNED ACTIONS:

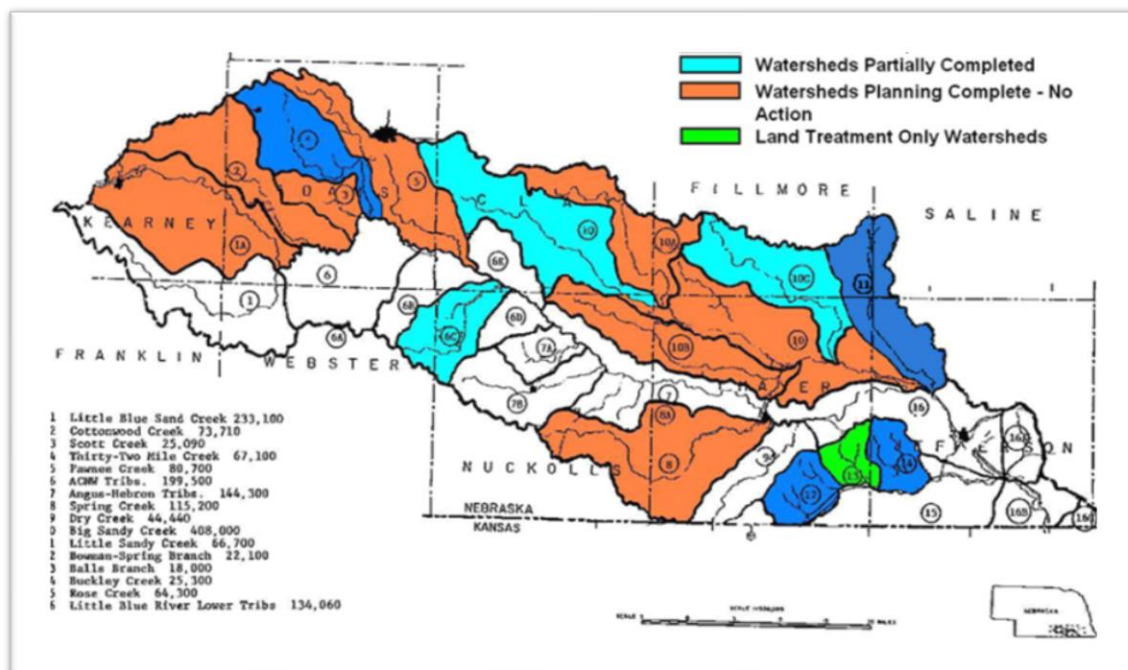
- ☐ Engage in timely repairs and correction of deficiencies to assure structural integrity and longevity.
- ☐ Annual reports will be prepared on each project noting how any project deficiencies were corrected for insurance purposes.
- ☐ Inspect projects during and following any significant storm event which causes the structures to operate to assure functionality are as designed.
- ☐ The District will develop emergency plans for any high hazard class District structures to assure the protection of residents which live within the breach route of such reservoirs.
- ☐ Ensure that emergency plans for high-hazard dams are reviewed and updated as needed. The High-Hazard MARC Dam Plan was updates in FY 2018.
- ☐ District lands, generally associated with watershed projects, will be inspected several times each year and action taken to eliminate noxious or invasive weeds, address conservation needs and remove any unsightly or safety hazards.
- ☐ Any appropriation rights from reservoirs of the District shall be reviewed at least every five years for conformance to the terms of the agreement, and more often if conflicts occur.

## OBJECTIVE: EVALUATE WATERSHEDS WITHIN THE LITTLE BLUE BASIN AND DETERMINE IF NEW FLOOD CONTROL PROJECTS ARE NEEDED AND FEASIBLE.

Flood control structures have always been a priority for the Little Blue NRD. Over the years, the District has investigated watersheds and developed plans where appropriate to provide flood control and other multipurpose benefits. Proposals may include flood control structures which give an opportunity for water-based recreation in the District. Although several developmental watershed plans have been completed, there are still some watersheds that have not been evaluated and planned.

### PLANNED ACTIONS:

- ☐ Utilize Light Detection and Ranging (LiDAR) Data to help identify and conduct initial planning for potential structure sites.
- ☐ Review watersheds within the NRD and determine if there is merit in the development of a watershed plan.
- ☐ Work with private engineers on cost estimates and design.
- ☐ Apply for cost-share funds to assist the building of flood control structures.
- ☐ Investigate potential stream flow augmentation projects to help maintain base flows in the streams and rivers and support Blue River Compact flows during the cropping season.
- ☐ Pursue other flood control projects such as channels, dikes and diversions which protect lives, property and public infrastructure.



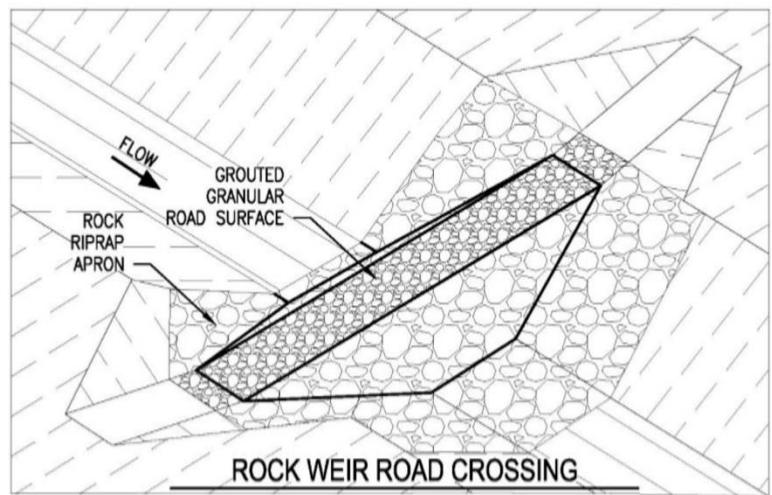


## OBJECTIVE: EVALUATE OPPORTUNITIES TO ENHANCE GROUNDWATER RECHARGE FOR AQUIFER REPLENISHMENT AND STABILITY.

*The Little Blue NRD is situated in an excellent area to achieve groundwater recharge because the soils tend to have good infiltration rates and because the amount of rainfall received provides ample supply for recharging. Efforts are underway to capture some of the precipitation where it falls and provide structures which support groundwater recharge. Such projects include low-level in-stream weirs, off-channel diversions, and oxbow reconnections.*

### PLANNED ACTIONS:

- ❑ Work with local landowners and private engineers to identify potential project sites and develop structural designs which foster quality recharge projects.
- ❑ Investigate surface water transfer and storage projects to enhance groundwater recharge in areas where aquifers may be viable receiving vessels.
- ❑ Apply for cost-share monies to assist the building of water control structures for recharge.
- ❑ Collect data to evaluate the effectiveness of the project's concepts, quantify recharge benefits, identify operation and maintenance issues; alternate test designs; identify potential water quality issues related to recharge concepts, and share results with others considering recharge.



### SPECIFIC PLANNED ACTIONS for FY 2020:

- ❑ Complete groundwater recharge pilot weir projects on Sand Creek in Adams County.
- ❑ Complete groundwater recharge oxbow reconnection projects on Big Sandy Creek in Thayer County and Scott Creek in Adams County.

## OBJECTIVE: ADDRESS EROSION COMPLAINTS ON PRIVATE LANDS.

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*In accordance with the Nebraska Erosion and Sediment Control Act, the District approved sediment control plan and associated rules and regulations were adopted in 2017. The plan is used to address sediment and erosion problems on private land. District staff inspects complaints to determine if violations of the District's standards are occurring. If warranted, the NRD requires that measures be implemented to reduce erosion on the property and eliminate sediment damage on neighboring lands. The program also governs construction sites during development.*

### PLANNED ACTIONS:

- ☐ Accept erosion and sediment complaints as necessary.
- ☐ Investigate all complaints to determine if violations of the Act and District rules are occurring.
- ☐ Assure that any complaints are handled in a fair and expeditious manner.
- ☐ Work with landowners to find the best and most cost-effective solutions to address erosion issues.
- ☐ Work with local NRCS and landowners to assure required work is completed and the problem corrected.



## OBJECTIVE: CONTINUE THE EXISTING PARTNERSHIP WITH NRCS.

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*The Natural Resources Conservation Service has been a key partner of the Little Blue NRD since 1972. The District currently works with offices in seven counties that encompass the NRD. District funded clerks are assigned to Adams, Clay, Fillmore, Jefferson, Thayer, Nuckolls and Webster Counties and the District's local contact for conservation efforts. NRCS typically provides the technical assistance for Nebraska and Little Blue Soil and Water Conservation Programs and has also helped the NRD with designing dams, tree plantings, and other conservation efforts. On larger projects such as watershed planning and larger dam design, the NRD may work directly with a Technical Service Provider (TSP) funds provided by NRCS.*



### PLANNED ACTIONS:

- ☐ Continue to provide clerical assistance to the Adams, Clay, Fillmore, Jefferson, Thayer, Nuckolls and Webster Counties.
- ☐ Utilize NRCS to provide technical assistance services for conservation practice design, layout, and construction.
- ☐ Partner with NRCS to plan and design dams and other conservation projects.
- ☐ Participate in the EQIP working Group.
- ☐ Work with NRCS and NARD to obtain and utilize funding that is made available through the Technical Service Provider program.

## OBJECTIVE: SUPPORT COMMUNITIES THROUGH VARIOUS URBAN CONSERVATION ASSISTANCE PROGRAMS.

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*These programs provide technical and financial assistance to citizen groups and governmental agencies in their efforts to reduce and prevent soil erosion, flooding and related resources problems in urbanized areas. Programs are also available to provide financial assistance to governmental agencies in their efforts to establish, develop and improve public parks, recreation areas, and trails and to conduct urban forestry projects. The District will provide technical and financial assistance on eligible projects sponsored by citizen groups, private organizations or governmental agencies, which conform to proper conservation and protection of natural resources, and when appropriate, create recreation opportunities for district residents.*

### PLANNED ACTIONS:

- ☐ Review community requests for conservation and recreation project assistance.
- ☐ Develop and administer Inter-Local Agreements between the District and cities and villages for project developments.
- ☐ Periodically review urban conservation program offerings, practice lists and cost-share percentages to assure reasonable opportunity exist to address conservation needs.
- ☐ Seek alternate funding opportunities for the cooperative agency projects.
- ☐ Develop a historical summary of participation in urban conservation programs to assure compliance with interlocal agreements.
- ☐ Support community's efforts to protect and enhance water systems to deliver safe potable water supply to their constituents.
- ☐ Work with the District's State Forester to complete tree inventories for communities in the District.
- ☐ Support community's efforts to develop sound forestry programs which include tree planting, removal, and maintenance.

## OBJECTIVE: PROVIDE PUBLIC INFORMATION ON NATURAL RESOURCES CONSERVATION, PROTECTION AND MANAGEMENT, AND REGULATORY REQUIREMENTS.

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*The District uses a variety of methods to make information on water issues available to the public including newsletter articles, news releases to local media, meetings, and specific mailings. Since the NRD administers many regulatory programs, it is critical that those impacted are informed of any requirements placed on them by the NRD. Education is also a key component. With more regulatory requirements it is necessary to expand programs to target water users.*

*Current educational events: Water and Earth Jamboree at Liberty Cove and Clay County Fairgrounds; Water Festival in Jefferson County; Land and Range Judging Sponsors; and support Statewide programs such as: Envirothon, Husker Harvest Days Booth, State Fair Booth.*

### PLANNED ACTIONS:

- ☐ Continue to incorporate information on the District's programs into local media releases.
- ☐ Continue to sponsor the Water and Earth Jamborees, Water Festival, Land and Range Judging Programs throughout the District.
- ☐ Provide public information on new programs, particularly those that include regulatory requirements.
- ☐ Seek opportunities to create information and education programs that are specific to surface water, groundwater and integrated surface and groundwater.
- ☐ Make sure that the public is provided access to water quality and quantity data collected by the District.
- ☐ Develop education programs that promote the sensible use of fertilizers, pesticides, and other potential contaminants.
- ☐ Continue to certify all producers in water quality management areas, to be in compliance with the Groundwater Management Plan.
- ☐ Develop a Facebook page and other social media tools.
- ☐ Keep updating district brochures and factsheets of programs and projects.
- ☐ Utilize the NRD's newsletter and website to provide the public with information regarding water programs and issues.
- ☐ Investigate the opportunities for an electronic newsletter.
- ☐ Continue to develop educational and informational programs targeted at youth, young adults and elderly.



## OBJECTIVE: SUPPORT PROGRAMS THAT ADDRESS SOLID WASTE DISPOSAL THROUGHOUT THE DISTRICT.

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*The District has been one of the sponsors for Household Hazardous Waste, Electronic Recycling, and Tire Recycling throughout the district. The recycling programs have been well received by residents of the NRD and have reduced materials in the solid waste stream, supported repurposing of resources and protected the environment around us.*

### PLANNED ACTIONS:

- ☐ Continue to work with the Trailblazer RC&D, counties, and communities with household hazardous waste, electronic recycling, and tire recycling programs.
- ☐ Several electronic recycling and tire recycling events are scheduled in the Little Blue NRD for FY 2020.
- ☐ Promote recycling as an essential means of reducing the waste stream and protecting the environment.
- ☐ Continue to seek grants which would support additional recycling events.
- ☐ Continue to actively engage in recycling projects with communities.
- ☐ Utilize recycled products in operations when available and economically reasonable to do so.



## OBJECTIVE: INCREASE AWARENESS ABOUT THE BENEFITS OF TREES AND STRIVE TO INCREASE TREE PLANTING IN THE LBNRD.

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*The District offers tree planting services for windbreaks, shelterbelts, and other plantings. The forestry resources of the District have been under pressure in recent years due to land use conversions and invasive species. Drought and difficulties with nursery stock have also plagued the sale of trees and shrubs. Landowners have had limited interest in establishing a new tree planting due to high land and crop prices and other priorities for the property. This struggle is one area that presents a challenge to the District and other agencies with forestry responsibilities.*

### PLANNED ACTIONS:

- ☐ The District will increase public awareness about the critical benefits of trees in the natural environment and strive to increase the planting of desirable trees and shrubs by 25% in the next five years.
- ☐ Provide quarterly information regarding the value of trees and tree plantings in providing shade, wind protection, livestock protection, wildlife habitat and timber resources.
- ☐ The District will increase tree sales in the area by 2,500 trees each of the next five years.
- ☐ The NRD will continue its tree planting services program and strive to improve nursery stock storage and handling operations to achieve optimum survival of new plantings.
- ☐ Work with at least two communities each year to promote urban tree planting programs in our cities and villages.
- ☐ Provide at least one educational opportunity annually for landowners to demonstrate proper tree care and the management of forestry resources for value-added benefits.

## OBJECTIVE: IMPROVE FISH AND WILDLIFE HABITAT THROUGH PUBLIC EDUCATION, COOPERATIVE PROGRAMS, AND LAND MANAGEMENT.

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*The wildlife habitat resources of the District have been under extreme pressure in recent years due to land use conversions, intensive agriculture, limited crop diversity and other agriculture practices. Landowners have had limited interest in establishing habitat due to high property taxes and the economic benefits of land conversions. These pressures create a challenge to the District with wildlife habitat responsibilities.*

### PLANNED ACTIONS:

- ☐ Work with state agencies and local wildlife conservation groups to identify programs that offer competitive opportunities for the establishment of wildlife habitat on private lands of the District and implement such programs to enhance wildlife populations.
- ☐ Focus efforts for wildlife habitat development on ten odd areas and sensitive environmental sites each year.
- ☐ Manage all District lands and projects to maximize fish and wildlife productivity. In that regard, the District will reduce invasive species on District lands, focus on prairie re-establishment and inter-seed one 10-acre watershed site each year with legumes.
- ☐ Continue the vegetation management activities on District properties.
- ☐ Provide a representative of the District to serve as an active member on the Rainwater Basin Joint Venture Management Board, seeking ways to restore and enhance the wetland basins of the area in line with the JV's long-range plan.
- ☐ Work with the Nebraska Game and Parks to improve fisheries management activities on the District's recreation areas.

## OBJECTIVE: PROVIDE SPECIALTY CONSERVATION EQUIPMENT TO LANDOWNERS.

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*The District provides several pieces of specialty conservation equipment for use by the public. This equipment includes grassland drills, tree planting machines, and a wetland disk and cattle-handling coral equipment in cooperation with the Rainwater Basin Joint Venture. The proper maintenance of this equipment is necessary to extend their useful life and provide continued public conservation benefits.*

### PLANNED ACTIONS:

- ☐ Continue to make specialty conservation equipment available to landowners.
- ☐ Maintain all equipment in good repair and serviceability for the benefit of its patrons.
- ☐ Replace machinery as needed to assure specialty conservation equipment is readily available.
- ☐ Evaluate the desirability of acquiring additional specialty equipment for conservation purposes as needed.
- ☐ Support the use of specialty wetland equipment to enhance landowner opportunities for economic returns on at-risk cropland/wetlands.





## OBJECTIVE: OPERATE AND MAINTAIN PUBLIC RECREATION AND PUBLIC USE AREAS.

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*The District will strive to operate all District owned and managers recreation lands and projects in the best possible condition to provide outstanding outdoor recreation opportunities for the public. The District will also continue to support the development of trails and recreation facilities in cooperation with partner agencies to enhance outdoor recreation opportunities for District constituents and promote healthy lifestyles.*

### PLANNED ACTIONS:

- ❑ The District will continue to provide and maintain high-quality recreation facilities associated with District's recreation areas and public use areas to offer valuable recreation opportunities for the public.
- ❑ The NRD will make additional improvements at recreation areas as budget and public interests dictate.
- ❑ The LBNRD will evaluate and amend recreation area rules and regulations as needed.
- ❑ The District will provide ongoing insurance coverage for Crystal Lake Recreation Area north of Ayr in support of the Village of Ayr's project.
- ❑ Open the now completed Prairie Lake Recreation Area facilities for public use to support various recreation activities in Adams County.
- ❑ Investigate the possibilities of new water-based recreation facilities in the District.
- ❑ Assist communities with outdoor recreation projects and public trails, as appropriate.



**OBJECTIVE: PROVIDE ADEQUATE QUALITY POTABLE WATER SUPPLY TO MEET THE NEEDS OF THE RURAL WATER DISTRICT RESIDENCE AND EXAMINE ADDITIONAL OPPORTUNITIES TO DEVELOP RURAL WATER OR REGIONAL WATER SUPPLY SYSTEMS AS THE NEEDS ARISE.**

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*The rural water projects of the Little Blue NRD have provided significant social and economic value to the eastern one quarter of the District and an area of northern Kansas.*

**PLANNED ACTIONS:**

- ☐ The District will provide professional management and operational services to assure that the public water projects function as designed and provide continued quality service to all customers.
- ☐ Maintain the existing projects to provide the longest life and serviceability possible.
- ☐ Complete negotiations with the City of Fairbury to secure additional water to meet the demands for rural water constituents.
- ☐ Keep a record of new applications for water service until more water is either purchased from Fairbury or wells added to the project are accomplished.
- ☐ Meet with the city of Fairbury every five years to evaluate the current water purchase agreement, operational matters and water conservation measures.
- ☐ Continue to utilize the calling system for emergency needs to customers.
- ☐ Evaluate the high water demands during the summer months to assure that the project can meet the customer's requirements.
- ☐ Inspect 5 percent of all meters each year and other key project components that have served their useful life and may need to be replaced.
- ☐ Continue to monitor water quality conditions and assist communities which are experiencing water quality problems to identify potential water sources.
- ☐ Assist communities with water quality or quantity problems to investigate options for alternate water sources, water treatment, potential regional water supply projects, or other innovative solutions, as needed.
- ☐ Communicate with water customers through newsletters and fact sheets highlighting current water quality information and water conserving practices.
- ☐ Keep evaluating new meter technology to create system efficiency and accountability and examine remote read meter options.





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