



**UPPER BIG BLUE
Natural Resources District**

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20 January 2012

Kent Zimmerman
Nebraska Department of Natural Resources
301 Centennial Mall South
Lincoln, Nebraska 68509-4676

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JAN 23 2012

DEPARTMENT OF
NATURAL RESOURCES

Dear Kent,

The Upper Big Blue NRD Board of Directors adopted the 2012 – 2022 Master Plan for the NRD at yesterday's Board Meeting. A copy for DNR is enclosed.

Sincerely,

John C. Turnbull
General Manager



**Upper Big Blue
Natural Resources
District**

**Master Plan
2012 - 2022**

January 19, 2012

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DEPARTMENT OF
NATURAL RESOURCES

MASTER PLAN
2012 - 2022

Introduction

This Master Plan for the Upper Big Blue Natural Resources District presents the goals and Objectives relating to the 12 purposes of Districts as stated in the Revised Statutes of Nebraska, Section 2-3229. In accordance with Section 2-3276, the Master Plan is to be updated at least every ten years, or more frequently if major changes in planning and development of objectives occur before the end of the period.

This Master Plan takes Groundwater quantity and quality regulations into account. They have undergone several revisions since the Quantity Regulations were originally adopted in 1979.

This Master Plan was adopted by the Board of Directors on - January 19, 2012.

No attempt is made in the Master Plan to present current plans or budgets, or to present background information on resources and needs. Such information about the natural resources of the District is available from many other sources. Comprehensive data and information is also on file at the District office. Individual project plans and studies are on file for planned, as well as completed projects. Historical data concerning past programs, projects, staffing, and funding are also in the District files.

The details of District programs, activities, and administrative policies are published in the following publications and documents, which are periodically updated.

Long Range Plan	Annual Reports
Annual Budget	Audits
Programs and Cost-Share Practices	Operating Policies
Rules and Regulations	Personnel Policies

UPPER BIG BLUE NRD
MASTER PLAN – 2012 - 2022

The Upper Big Blue Natural Resources District is a political sub-division of the State of Nebraska. The District was created on July 1, 1972, along with 23 other NRDs across the state. The Districts cover the entire state, including all urban and rural areas. The Districts are governed by elected Boards of Directors that set individual District policies, approve programs and projects, set budgets and approve expenditures. Each District has a General Manager who reports directly to the Board. The General Manager of each District manages a staff that conducts the day to day activities to carry out policies, programs, and projects.

MISSION STATEMENT: The Upper Big Blue Natural Resources District shall be a leader in conserving, protecting, developing, and managing the natural resources of this District for the health and welfare of the people of the District.

RESPONSIBILITIES: The Upper Big Blue Natural Resources District is a multi-purpose, local unit of Nebraska Government for management, development, and protection of the soil and water resources. The basic responsibilities of the District, which are authorized by statute, are listed below, according to this District's priorities:

1. Development, Management, Utilization, and Conservation of Ground Water and Surface Water, and Water Supply for any Beneficial Uses
2. Soil Conservation, Erosion Prevention and Control
3. Flood Prevention and Control (Structural, such as dams, levees, channels, and storm sewers)
4. Pollution Control (Water and Land quality)
5. Prevention of Damages from Flood Water and Sediment (Non-structural such as greenbelts, and zoning)
6. Development and Management of Recreational and Park Facilities
7. Forestry and Range Management
8. Development and Management of Fish and Wildlife Habitat
9. Drainage Improvement
10. Solid Waste Disposal (Landfills or incineration) and Sanitary Drainage

METHODS: The methods to meet these responsibilities are:

1. Leadership
2. Information and Education
3. Technical Advice and Assistance
4. Cost-Sharing
5. Construction and Operation by the District
6. Monitoring, Data Collection, and Research
7. Regulation
8. Formulating and maintaining public and private partnerships

GOALS: The priorities and goals are the framework for all District activities, programs, practices, and regulations. The board follows the priorities and goals in establishing policies and budgets. The staff does the same in carrying out the day to day activities.

A. Groundwater Conservation and Management

The District's Master Plan states "**the primary goal of the Upper Big Blue is successful long-term water management, for both quantity and quality.**" Therefore, the District strives to provide an adequate supply of acceptable quality groundwater to fulfill the reasonable groundwater demands within the District for domestic, agricultural, manufacturing or industrial, and other uses deemed beneficial by the District Board of Directors.

Groundwater quantity - The Control Area (now known as the Groundwater Management Area #1) was declared on December 9, 1977 and has the following goals:

- To encourage, promote, and regulate the efficient management and conservation of groundwater and to significantly reduce the rate of decline in the groundwater table.
- To hold the District groundwater level above the 1978 level through various District programs and regulations.
- In the small region outside of the Groundwater Management Area #1, the goal is to provide an adequate water supply for existing users, as well as domestic users.

Groundwater quality - The Special Protection Area (now known as the Groundwater Management Area #2) was declared on September 23, 1993, with long range goals are:

- To reduce the potential for nonpoint source contamination of groundwater through education, research, management practices and incentives that would not adversely affect the economy of the area.
- To develop and implement an appropriate system of monitoring and evaluation of nonpoint source groundwater contamination including indicators such as nitrates in groundwater and the unsaturated zone, use of best management practices and other factors that are indicators of the rate of nonpoint source groundwater contamination.
- To encourage the use of best management practices to reduce deep percolation and to support research and adoption of equipment and techniques that have potential for reducing groundwater nitrates.

Objectives

- Provide information and education and consider cost-sharing to encourage groundwater users to do the following:
 - a - Attain the most economical use of groundwater
 - b - Use crop rotation
 - c - Control runoff
 - d - Construct water storage and land treatment where needed
 - e - Use irrigation scheduling
 - f - Use surface water where available
 - g - Check and maintain pumping plant efficiency
 - h - Keep records
 - i - Install flow meters (irrigation and urban)
 - j - Alternative irrigation systems (pivot conversions or sub-surface drip systems)
 - k - Sample soil for nitrogen carryover
 - l - Set realistic yield goals
 - m - Complete full nutrient analysis
 - n - Use nitrogen flow regulators
 - o - Split nitrogen applications
 - p - Use fertigation/Chemigation
 - q - Proper lawn and garden watering and fertilization
 - r - Proper decommissioning of abandoned wells

- Monitor the groundwater conditions by:
 - a - Measuring spring groundwater levels District-wide in the established network of existing wells.

 - b - Measuring seasonal changes in groundwater levels using dedicated, continuous recorder wells.

 - c - Monitoring groundwater quality annually, District-wide in the established network of existing wells.

 - d - Monitoring seasonal changes in groundwater quality using of dedicated water quality monitoring wells.

 - f - Work cooperatively with other agencies to collect and evaluate groundwater data.

- Regulate the use and protection of groundwater through:
 - a - The implementation of Groundwater Management Area Quantity regulations to reduce conflicts between users and to manage the decline of groundwater.
 - b - The implementation of Groundwater Management Area Quality regulations to stabilize and reduce nitrate contamination of groundwater.
 - c - The implementation of Chemigation regulations to reduce the risk of contamination of groundwater through irrigation systems.
 - d - The implementation of irrigation runoff regulations to conserve groundwater and to reduce conflicts between neighbors.
- Provide necessary budget, staff and other assistance to carry out an effective management and regulatory program.
- Conduct studies and research to better understand and manage groundwater in the District.
- Advocate groundwater management by Natural Resources Districts at the local level.
- Assist in the planning and development of domestic water supplies where requested by local units of government or citizen groups.
- Encourage other agencies to conserve groundwater when implementing their programs, such as groundwater remediation plans.
- Cooperate with municipalities on wellhead protection areas.
- Promote and publicize the conservation and wise use of groundwater, through an extensive and comprehensive public relations effort.

B. Surface Water Conservation

The District goal is to store, conserve, and protect surface water for beneficial uses as determined by the Board of Directors, such as domestic, agricultural, and manufacturing.

Objectives

- Develop multi-purpose surface water projects consistent with local desires for water conservation, water use, flood control, groundwater recharge, recreation, and fisheries and wildlife habitat.
- Construct, and/or cost-share on dams designed to maximize conservation water storage.
- Encourage soil conservation practices as a method of improving water quality in streams and lakes.
- Determine surface water project priorities consistent with the greatest long term benefits.
- Obtain funding for surface water projects from private, other local, state, and federal sources to supplement the District tax requirement for such projects.
- Develop management agreements for surface water projects with affected units of local government and encourage such governments to assume the management, operation, and maintenance responsibilities connected with these projects.
- Promote, publicize, and offer technical advice and assistance for surface water conservation.

C. Soil Conservation

The District goal is to maximize soil and water conservation efforts in order to preserve the resources for future use while maintaining production today.

Objectives

- Prevent accelerated erosion through a voluntary land treatment program, and encourage minimum or reduced tillage.
- Implementing erosion or sediment control regulations where necessary to reduce conflicts between neighbors.
- Discourage channel straightening and dredging, unless steps are taken to prevent detrimental effects.
- Minimize and control erosion of soil through improved conservation practices, conversion of steep slopes with erosive soils to non-cultivated uses, protection of stream banks, and improved land management.
- Maintain soil nutrient levels for productive land use and reduction of water pollution through improved soil management practices.
- Cooperate with local units of government in implementing necessary erosion control practices, as needed, on all residential or commercial development, industrial development, road construction, and other non-agricultural sites.
- Promote, publicize, and offer technical advice and assistance to promote soil conservation.
- Obtain funding for soil conservation from private, other local, state, and federal sources to supplement District funds.

D. Flood Prevention and Control

The goal of the District is to reduce flooding and flood damages to acceptable levels, while making the best use of flood plain land. Flood plain management is of prime importance, as in many cases, it is the most practical way to reduce flood damages.

Objectives

- Encourage flood plain management as a necessary step in creating the proper balance between structural and non-structural methods of flood protection.
- Create a greater awareness of flood plain problems and potential solutions through local planning, education and information programs.
- Sponsor, construct, operate, and maintain flood control projects, where feasible, to protect property from flood damages. Design and plan for multi-purpose uses of flood control projects where ever possible. Acquire grants and other funding to supplement District funding.
- Consider assisting communities, on a case by case basis, with flood control projects by offering technical and administrative assistance, offering cost-share, and acquiring grants or other funds. Encourage multi-purpose uses of flood control projects.
- Promote public linear parks, greenbelts, and open space in flood plains as an alternative to allowing real estate development and building construction, if lands have the potential of changing from agricultural to developed areas.
- Consider, on a case by case basis, sharing the consulting services and costs with other local governments in connection with the planning of linear parks, greenbelts, and open space in flood plains.
- Consider, on a case by case basis, acquiring grants for, and sharing the land rights costs of flood plain buyouts with other local governments.
- Encourage local cities and villages to assume sponsorship of all municipal stormwater management projects. Consider requests for assistance on a case by case basis.
- Discourage any creek or river straightening or shortening project within the District's boundaries. Limit channel projects to those necessary for flood control. Discourage drainage improvements designed to develop additional real estate, or cropland, because of potential conflicts between property owners.

E. Pollution Control

The goal of the District is to minimize the misuse and pollution of our natural resources, to protect and enhance the quality of the land, surface water, and groundwater within the District's boundaries.

Objectives

- Protect ground and surface water from point and non-point sources of pollutants (see also "Groundwater Conservation and Management".)
- Inform and educate the public to make the citizens aware of potential and existing pollution and the need for prevention.
- Encourage other agencies to take water conservation and beneficial uses into account in cleanup efforts.
- Promote regional efforts toward managing solid waste, both urban and rural. Encourage the sound planning and development of solid waste disposal sites in order to adequately protect land and water quality. Encourage recycling of solid waste.

F. Parks and Recreation

The goal of the District is to improve and increase the outdoor recreation opportunities in the region, especially in conjunction with multi-purpose water projects.

Objectives

- Plan recreation use on District funded projects unless the project falls under a land treatment program. The level of recreation provided depends on the scope, size, and cost of the project.
- Manage the five existing developed park and recreation facilities and develop more developed park sites on major multi-purpose projects where the land is held in title by the District.

Developed public use sites may include roads and trails, improved parking areas, picnic areas and shelters, drinking water, boat ramps, playgrounds, camping sites, trash service, and restroom facilities.

- Establish and manage primitive public use areas on undeveloped District projects and properties throughout the District.

Primitive public use areas are to provide access for walking, and may include fishing or hunting where practical. Off-road unimproved parking is to be furnished for traffic safety. Roads, improved trails, picnic areas and shelters, drinking water, boat ramps, playgrounds, improved camping sites, trash service, and restroom facilities are not provided, maintained, or encouraged.

- Consider providing cities and villages, on a case by case basis, with planning and financial assistance for multi-use parks and recreation improvement and development that stresses natural resources such as tree plantings, wildlife habitat, and open spaces. Public use areas that have aspects of soil and water conservation are to have a priority. Ball fields, tennis courts, swimming pools, and similar facilities need to be planned and funded by others.
- In flood plains, promote public linear parks, greenbelts, and open space for public access, by offering planning and financial assistance to counties, cities, and villages.
- Cooperate with counties, and state and federal agencies, in public use area development and management where their activities are consistent with those of the District.
- Provide information and education to promote parks and recreation uses of public lands.

G. Forestry and Range Management

The District goal is to maintain and improve the quality of woodlands and grasslands in this region for soil and water conservation, as well as livestock production, timber, and wildlife.

Objectives

- Provide technical advice on forestry and grassland management. Encourage tree planting for windbreaks and other conservation purposes, and native grass plantings for soil erosion prevention. Encourage proper range and pasture management to provide for better mixes and stands of grass, while increasing productivity.
- Provide a tree planting program to assist landowners in planning for tree plantings, offer seedling trees for sale, and to provide a planting service for windbreak, Christmas tree or wildlife plantings.
- Consider providing cities and villages, on a case by case basis, with planning and financial assistance for community tree, shrub, and native grass plantings.
- Discourage the conversion of existing tree plantings, woodlands, and grasslands to cropland or other uses.
- Promote proper tree trimming and pruning, and vegetation control undertaken by communities and power districts.
- Encourage outdoor classrooms and environmental education in order to show the importance of trees and grasses in conservation.

H. Fish and Wildlife Habitat

The goal of the District is to conserve and improve the fish and wildlife habitat found in the District.

Objectives

- Provide technical and financial assistance for private landowners to develop and maintain new fish and wildlife habitat.
- Develop fisheries and wildlife habitat, where practical, on District projects.
- Obtain funding for habitat programs from private, other local, state, and federal sources.
- Discourage practices by public entities and individuals that result in the unnecessary destruction of permanent vegetation and trees.
- Encourage private landowners to preserve the remaining wetlands where practical. Discourage dredge and fill activities, and conversion to croplands, unless there are reasonable wetland mitigation sites available.
- Encourage state and federal agencies and private landowners to work together to solve wetland habitat needs and irrigation runoff control, as well as working together to solve lowland flooding problems.
- Promote fish and wildlife habitat on private and public lands



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