



# Master Plan

2009

Approved December 10, 2009

## ***Introduction***

***Nebraska has been blessed with abundant natural resources and has acted prudently through the establishment of the natural resources districts to place responsibility for protection and management of these resources in the hands of local conservation leaders.***

***This Master Plan has been prepared by the Upper Niobrara White Natural Resources District under the direction of the General Manager and approved by the District Board of Directors in December of 2009, in accordance with Nebraska Statutes Section 2-3276. It replaces similar Master Plans issued in December of 1989 and November 1999.***

***Our Master Plan highlights past accomplishments, explains current programs and projects, points out challenges and opportunities for the future and will chart a course of action for the next ten years.***

## *History*

Thirty-seven years ago Nebraska took a bold step forward in natural resources management. In July 1972, over 150 watershed conservancy districts, soil and water conservation districts and other local resources agencies merged into 24 natural resources districts (currently 23, due to a consolidation within the Papio-Missouri River NRD). These NRDs, divided along watershed boundaries, are still unique in the nation. They were granted broad responsibilities and given a local property taxing authority to carry out the development, protection and management of the resources in their respective areas.

The Upper Niobrara White NRD lies in the northwestern part of the state along the South Dakota and Wyoming borders. The UNWNRD covers all or part of 4 counties and is governed by an 11-member board of directors which is elected by the constituents of the District.

The Nebraska Legislature gave the NRDs statutory authorities to carry out their mission. As stated in Nebraska Statute Section 2-3229: "The purpose of natural resources districts shall be to develop and execute, through the exercise of powers and authorities contained in this act, plans, facilities, works and programs relating to:

- 1) erosion prevention and control,
- 2) prevention of damages from floodwaters and sediment,
- 3) flood prevention and control,
- 4) soil conservation,
- 5) water supply for any beneficial uses,
- 6) development, management, utilization, and conservation of ground water and surface water,
- 7)
- 8) pollution control,
- 9) solid waste disposal and sanitary drainage,
- 10) drainage improvement and channel rectification,
- 11) development and management of fish and wildlife habitat,
- 12) development and management of recreational and park facilities,
- 13) Forestry and range management."

NRDs were empowered to provide for effective planning, development and management of the State's natural resources. To accomplish this goal NRDs were given authority to levy property taxes. The current property tax levy is not to exceed 4.5 cents per 100 dollars valuation. Additional taxing authority is allowed to fund ground water management programs. This funding mechanism has allowed districts to fund a variety of natural resources programs and hire the personnel to successfully see these programs through. In light of the current pressures on the agricultural sector and increases in land valuations which in turn are reflected in increased real estate tax bills, the management philosophy of the Upper Niobrara White NRD is to not request more tax dollars than absolutely necessary.

Within the next 10 years, the Upper Niobrara White Natural Resources District will strive to meet new challenges by working together with ranchers, farmers, urban dwellers and other private and public agencies. Combining proven methods and creative new approaches, the district will attempt to provide effective conservation programs and practices for the benefit of the entire district.

## *Description of The Upper Niobrara White Natural Resources District*

### **Location**

The total amount of land acreage in the Upper Niobrara White Natural Resource District is 4,475,520. The Upper Niobrara White Natural Resource District includes all or portions of the following counties: Dawes County (100%), Box Butte County (100%), Sheridan County (100%), and northern portions of Sioux County (80%). The District is 104 miles wide and 69 miles long.

### **Population**

There are ten municipalities within the District. The population trends for the four county District, since 1960, are showing a gradual decline in population. The population of the four counties has declined from 32,848 people in 1960 to 28,891 people in 2000. Box Butte County experienced a 36% growth in population between 1970 and 1980, primarily due to industrial growth in the Alliance area, but has seen a 9% decline from 1990 to 2000. The agricultural-based populations of Sheridan, Dawes and Sioux Counties have shown a significant decline between 1980 and 1990. Declines have slowed from 1990 to 2000 with Dawes County seeing a slight increase in population. Sioux County has lost over 40% of its population in the last 40 years.

#### **U.S. CENSUS BUREAU INFORMATION – TOTAL POPULATION BY COUNTY**

| County    | 1990   | 1995   | 2000   |
|-----------|--------|--------|--------|
| Box Butte | 13,130 | 13,000 | 12,158 |
| Dawes     | 9,021  | 8,900  | 9,060  |
| Sheridan  | 6,750  | 6,500  | 6,198  |
| Sioux *   | 1,549  | 1,500  | 1,475  |
| Total     | 30,450 | 29,900 | 28,891 |

\* Sioux County information is for entire county

The following table shows the comparison of urban versus rural population densities for the District and the comparison of urban versus rural housing. A little more than 58% of the entire population of the District is in urban areas in Box Butte and Dawes Counties. With the exception of Sioux County, there are more urban housing units than rural houses in the District.

#### **2000 CENSUS INFORMATION – URBAN VS. RURAL COMPARISONS BY COUNTY**

| County    | Population |       | Housing Units |       |
|-----------|------------|-------|---------------|-------|
|           | Urban      | Rural | Urban         | Rural |
| Box Butte | 9,952      | 2,206 | 4,511         | 1,023 |
| Dawes     | 6,741      | 2,319 | 2,936         | 973   |
| Sheridan  | 3,407      | 2,791 | 1,822         | 1,389 |
| Sioux     | 279        | 1,196 | 192           | 677   |

## ***Governing Body***

The Upper Niobrara White Natural Resource District is governed by a board of 11 directors elected by voters in a general election. Each director serves a four-year term. The District is divided into five sub-districts with two directors from each sub-district and one at large.

## ***General Physical Setting***

### ***Drainage and Topography***

The State of Nebraska has been separated into eight regions of similar physical features by the staff of the Conservation and Survey Division. All eight of these regions are represented within the boundaries of the Upper Niobrara White NRD. These are the Plains Region, the Dissected Plains Region, the Valleys Region, the Sand Hills Region, the Rolling Hills Region, the Bluffs and Escarpments Region, the Valley Side Slopes Region and Large Reservoirs.

Five major drainage areas shape the topography of the District. These include the Hat Creek and White River basins in the northwest part of the District; the Niobrara Valley through the center of the District; the Snake Creek drainage area in Box Butte County; and the Sand Hill area of southern Sheridan County.

Streams in the District range from intermittent to perennial. The perennial streams have surface flows all year long in contrast to intermittent streams that are dry for some part of the year. The flow in perennial streams, after the spring runoff period, is primarily due to ground water discharge. The White River and Hat Creek are perennial streams that carry runoff from the District northward into South Dakota. Hat Creek drains northern Sioux County. The White River drains east central Sioux County and northern Dawes County.

The Niobrara Valley of southern Sioux County, southern Dawes County and northern Sheridan County is drained by the Niobrara River and its tributaries. The Niobrara River is a perennial stream flowing eastward from Wyoming. Runoff water and ground water discharges provide year-round base flow. The Snake Creek, Hemingford and Box Butte Creek systems drain most of Box Butte County toward the southeast. A number of intermittent streams disappear into the Sand Hills at the southeast corner of Box Butte County.

For planning purposes, the District can be divided into five distinct topographic areas: the Sand Hills, the Box Butte and Niobrara Valleys, the Pine Ridge, the White River Valley and the Sioux Tablelands. The topography of the District is varied, consisting of escarpments, plains, rolling hills, valleys and tablelands. Each topographic region has its unique characteristics with regard to ground water, soils, runoff, land use, natural vegetation and population.

The Sand Hills areas are found in southern Sheridan County, in a small area of west central Sioux County and along the eastern and southern edge of Box Butte County. The Sand Hills

consist of rolling sand dunes stabilized by thin grass cover. The dunes have blocked development of any integrated drainage systems so that the area now consists of a series of enclosed drainage basins.

The Hat Creek-White River drainage systems have eroded a deep basin, which is bounded by the Pine Ridge escarpment along the southern edge. The footslopes along the base of the escarpment contain several areas of Badlands topography.

The Pine Ridge area included the Pine Ridge Escarpment and a portion of the northern Niobrara Valley. The feature called the ridgeline is actually along the crest of the escarpment.

The majority of the Box Butte County is tableland, which is characterized by generally flat surfaces with a few topographically high erosional remnants, such as Box Butte, for which the county is named. Other areas of tableland are located north of the Niobrara River in Dawes and Sheridan County.

Sioux County, from Harrison to the Box Butte County border south of the Niobrara River, is rolling uplands similar to much of the High Plains Region. It is referred to as the Sioux Uplands.

Flat areas along streams include floodplains and terraces. Terraces are extensively developed along the major streams in the District. Mirage Flats is an example of a large terrace, which was developed along the Niobrara River in Sheridan County.

## ***Soils***

### ***Soil Descriptions***

Topography and parent materials strongly influenced the development of the soils in the region. Loamy soils have developed on the flat areas of loess, alluvium and weathered siltstone. The loam soils produce the principal agricultural areas in Box Butte, southern Dawes and central Sheridan Counties. The steep areas of exposed bedrock, such as found in parts of the Pine Ridge, are typified by thin soil cover.

The Sand Hills soils are characterized as thin, fragile soils developed on the sand dunes. These soils are always in danger of blowing away if the vegetative cover is destroyed. For the most part, they are highly permeable and allow rapid downward migration of water.

The Box Butte and Sheridan tablelands (including Mirage Flats) are covered by loamy soils developed from eolian silt (loess) and siltstone. These areas support the majority of intensely irrigated agricultural irrigation development.

The Pine Ridge and Sioux uplands are characterized by silty and sandy soils developed from siltstone and sandstone parent materials. These soils support rangeland with some limited irrigation development.

The Pierre Plains, in northern Sioux and Dawes County, are covered by heavy clay soil developed from the Pierre Shale. This is an important rangeland and dryland farming area. Pump irrigation is rare because a suitable aquifer is not present.

The Pine Ridge Escarpment is covered with natural pine forest cover. Soils are thin and easily eroded on the steep west and south facing slopes. Areas of bare rock outcrop are common, and many areas of badlands occur in this zone. These exist as exposed silt and clay because erosion continues to remove all topsoil and vegetation.

North facing slopes have deeper soils and the most productive forest. The footslopes along the base of the Pine Ridge Escarpment contain silty and sandy soils derived from siltstone, claystone and sandstone. Many areas of badlands occur in this zone. These areas exist as exposed silt and clay because erosion continues to remove all topsoil and vegetation. The footslope areas generally support only rangeland.

The flood plains and low terraces of the streams are covered by alluvial soils, which are generally loamy. These areas are suitable for irrigation where water is available, either from wells or surface systems.

### ***Land Use***

Land use information for the Upper Niobrara White NRD was derived primarily from the databases of the Nebraska Natural Resources Commission and the Soil Conservation Service databases. The Nebraska Department of Agriculture Statistics Service provided the source of agricultural land use information.

General land use information for the entire District is shown on Table 1-0 and is based on 1995 Conservation and Survey Division information. Over 85% of the District acreage is used for rangeland and dry cropland. This usage has little impact on ground water. Irrigated cropland, which has the highest impact on ground water usage, makes up only 4% of the District area. Urban areas, which include predominantly residential, commercial and industrial usage, cover only 15.5 square miles of the four county area or less than 0.2% of the District.

**Table 1-0  
DISTRICT LAND USE  
(Based on 2008 Data)**

| <i>Land Use</i>       | <i>Acres</i>           | <i>Percentage</i> |
|-----------------------|------------------------|-------------------|
| Rangeland             | 2,616,242              | 58.5              |
| Irrigated Agriculture | 284,000                | 6.3               |
| Dry Agriculture       | 1,126,050              | 25.2              |
| Barren (Badlands)     | 9406                   | 0.2               |
| Wetlands              | 50520                  | 1.1               |
| Forrest               | 355,970                | 8.0               |
| Urban                 | 9,920                  | 0.2               |
| Water                 | 23,412                 | 0.5               |
|                       | Total: 4,475,520 Acres |                   |

***Surface Waters***

***Rivers and Reservoirs***

The principal surface drainage ways in the District are Hat Creek, White River, White Clay Creek and the Niobrara River. The White River supplies water to Lake Whitney and the Whitney Irrigation District in Dawes County. Diversions from the Niobrara River supply surface water from Box Butte reservoir for irrigation in the Mirage Flats Irrigation District in west central Sheridan County. Both of these rivers are gaining streams in the District, principally from ground water. A detailed investigation of stream-aquifer relationships is needed to determine their precise interrelationships to understand the impact that ground water withdrawals will have adjacent to or in the vicinity of the river systems.

***Lakes***

Box Butte County contains nine Sand Hills lakes located on the extreme eastern edge of the county. The waters in these lakes have poor fishing potential, are shallow, medium to moderately alkaline and total about 5,228.75 acres. There are also several intermittent, slightly alkaline, marsh-type lakes located directly south of Alliance.

Sheridan County contains the largest number of lakes in the south half and extreme northeast corner of the County. There are about 521 lakes, of which only 215 are permanent bodies of water of more than 9.88 acres. The 521 natural lakes have a total area of 16,363.32 acres. Sheridan County has more permanent Sand Hills lakes than any other Nebraska county. However, about 80% of the lakes are strongly alkaline with a pH of 9.3. The remainder of the lakes are non-supportive of fishes, 3% are borderline and 5% supportive. For the most part, the connection between the Sand Hills lakes and the regional water table needs more definition. In some areas the lakes represent perched water conditions, whereas in other others the lakes appear to be surface expression of the water table. Additional definition is needed in order to predict the impacts of development on these environmentally sensitive areas.

## *Wetlands*

Copies of recent wetland delineation maps prepared by the Army Corps of Engineers and by the NRCS are available in the local NRCS offices. These maps are useful for locating natural and manmade wetlands. They also can be used for local water table delineations and potential impact studies of ground water changes on wildlife and endangered species.

## *Accomplishments*

Over the last ten years, management has taken a more proactive approach, implementing new programs and creating a higher profile for the District. With broad responsibilities, we need to be in several places at once and this has been accomplished by a well-trained and adaptable staff. We have much to offer the public and we must do all we can on many fronts. The accomplishments of last ten years show what we are capable of doing. We must expand on these accomplishments, serve the people and protect natural resources to the best of our ability.

## *Fiscal Year 2008-09*

### *Conservation on the Ground*

| Cooperators | Amount      | Nebraska Soil & Water Conservation Program                                   |
|-------------|-------------|--|
|             |             | Practice   |
| 28          | \$68,071.36 | Planned Grazing System   |
| 69          | \$73,033.10 | Windbreaks   |
| 12          | \$23,626.07 | Irrigation water management  |
| 0           | 0           | Repair of practices  |
| 1           | \$902.00    | Range seeding & pasture planting   |
| 0           | 0           | Constructing grade stabilization structures                                  |
| 0           | 0           | Constructing water impoundment dams  |
| 0           | 0           | Constructing terrace systems   |
| 1           | \$1,300.00  | Constructing dugouts for livestock water                                     |
| 0           | 0           | Constructing underground return pipe from irrigation tailwater recovery pits |
| 0           | 0           | Windbreak renovation   |
| 0           | 0           | Constructing diversions  |
| 0           | 0           | Total  |

- \* Administered 9 Wildlife Habitat Improvement Program contracts totaling \$9,981.38
- \* Initiated, developed and administered \$2,455.00 cost share through the UNWNRD Natural Resources Enhancement Fund Program
  - | 1 Cooperator received \$855.00 for Irrigation Water Management Program
  - | 2 Cooperators received \$1,600.00 for Domestic Well Program
- \* Initiated developed and administered 6 Corners For Wildlife Program
  - | \$2,530.32 worth of new Wildlife Habitat
  - | \$2,400 trees and shrubs
- \* Machine planted 25,822 seedlings
- \* Distributed 208,032 hand plant seedlings
- \* Installed 206,147 linear feet or 39 miles of fabric weed barrier
- \* Replaced 17 blue grass lawns with Buffalo grass by assistance of DEQ grant \$7,131.45.

### ***Public Education***

- \* Established rapport with all forms local media
  - | Newspapers
  - | Radio
  - | Television
- \* Developed UNWNRD Website
- \* Developed UNWNRD Brochures
- \* Conducted Public Information Meetings
- \* Hold an annual Water Issues Meeting
- \* Host an annual Water Conservation Festival attended by approximately 120 students
- \* Awarded \$1,099.00 in scholarships to 6 high school students for range camp
- \* Delivered conservation presentations to students from grade school through college
- \* Sponsored Bird Banding Programs by Rocky Mountain Bird Observatory
- \* Sponsored No-till Summer Field Day and Winter No-till Conference attended by 90 producers

### ***Groundwater Information***

- \* Sampled 167 wells for water level program – Spring & Fall
- \* Sampled 811 irrigation wells for nitrates
- \* Sampled over 100 domestic wells for nitrates

### ***Groundwater Protection***

- \* Updated District wide Ground Water Management Area August 17, 2008
- \* Implemented Integrated Management Plan effective June 17, 2009
- \* Cost-shared \$108,530.42 for 95 flow meters funded by Bureau of Reclamation Grant
- \* Approved 1196 Chemigation sites and performed 690 Chemigation inspections
- \* Cost shared \$9,542.50 for the decommissioning of 28 abandoned wells

## ***Partners***

- \* Nebraska Department of Environmental Quality
- \* Nebraska Department of Natural Resources
- \* Nebraska Game and Parks Commission
- \* Nebraska Forest Service
- \* City of Chadron
- \* City of Alliance
- \* City of Gordon
- \* City of Crawford
- \* City of Hemingford
- \* City of Harrison
- \* City of Hay Springs
- \* UNL Cooperative Extension
- \* Panhandle Research Integration for Discovery Education (PRIDE)
- \* Whitney Irrigation District
- \* Area Keep America Beautiful Groups
- \* USDA United States Forest Service
- \* Nebraska Natural Resources Commission
- \* Box Butte, Dawes, Sheridan and Sioux County Commissioners
- \* Chadron State College
- \* UNL Conservation and Survey Division
- \* Pheasants Forever
- \* National Wild Turkey Federation
- \* Ducks Unlimited
- \* Rocky Mountain Elk Foundation
- \* USDA Natural Resources Conservation Service
- \* Environmental Protection Agency
- \* Mirage Flats Irrigation District
- \* Northwest Rural Public Power
- \* Panhandle Rural Electric Association
- \* Bureau of Reclamation
- \* USDA Farm Service Agency
- \* Nebraska Emergency Management
- \* Niobrara Valley Sod Farm

## ***Initiatives***

- \* Implemented amendments to the district wide Ground Water Management Area for the purpose of ground water quality education and management, and ground water quantity education and management

- \* Implemented high capacity water well metering program
- \* Certified ground water irrigated acres
- \* Implemented ground water allocations where triggered
- \* Refined and added to a ground water model of Box Butte County for management purposes in partnership with DNR
- \* Created Natural Resources Technician position
- \* Expanded Information and Education Program
- \* Corners for Wildlife Program
- \* Began surface water model in sub-area five in partnership with DNR. Niobrara River above Dunlap Diversion
- \* Extending Box Butte ground water model into sub-area 5

## ***Programs and Current Activities***

The following summary of District programs and current activities will be the stepping stones to accomplishing the district goals in future years. The Natural Resources Conservation Service offices in each county provide engineering and technical services to the District to accomplish many local conservation goals.

### ***Water Quantity and Quality*** **GOAL**

**Maintain and protect the water resources to meet future needs for domestic, agricultural, urban, industrial, recreational, and fish and wildlife uses.**

#### **OBJECTIVES**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>◆ Develop and implement programs which reduce point and non-point source of pollution.</li> <li>◆ Conduct timely ground water level measurements, gather pumpage data, and evaluate aquifer responses to pumpage.</li> <li>◆ Cooperate with other agencies to evaluate ground and surface water quantity and quality data.</li> <li>◆ Conduct ground water quality monitoring efforts to track trends and identify problem areas.</li> <li>◆ Offer technical assistance in the management of ground and surface</li> </ul> | <ul style="list-style-type: none"> <li>water for effective long-term conservation and utilization.</li> <li>◆ Encourage proper development and conservation of ground and surface water.</li> <li>◆ Implement the District's Ground Water Management Plan and update as needed.</li> <li>◆ Enforce Ground Water Management Area Rules and Regulations.</li> <li>◆ Administer a chemigation inspection program to reduce potential contamination from pesticides and fertilizers injected through irrigation systems.</li> </ul> |
|---|---|

- ◆ Promote proper decommissioning of abandoned wells.
- ◆ Examine opportunities for enhancing ground water recharge.
- ◆ Examine and promote technological developments which support water resources protection.
- ◆ Enforce irrigation and runoff rules and regulations.
- ◆ Assist in domestic and municipal wellhead protection to safeguard public health.
- ◆ Sponsor structural projects which capture peak surface water flows for agricultural, recharge, recreation, and fish and wildlife purposes when environmentally sound.
- ◆ Continue weekly crop water use report during the irrigation season.
- ◆ Hire a Department of Environmental Quality employee to assist area landowners with environmental concerns and cooperate with on joint issues of concern.
- ◆ Be active in legislation concerning water issues.

## *Information and Education*

### GOAL

**Inform and educate staff, directors and constituents about natural resources issues that impact the district and State. Promote public awareness of conservation needs and responsible natural resources management**

### OBJECTIVES

- ◆ Make information available to the general public and schools about the programs of the District.
- ◆ Utilize the news media through the county newspapers, special topic newsletters, news releases and public service announcements to inform the public about conservation endeavors.
- ◆ Develop youth awareness with programs within the school system.
- ◆ Assist teachers with information in local and state conservation education programs.
- ◆ Provide scholarships and educational grants to students, 4-H and FFA youth.
- ◆ Support Outdoor Classrooms through technical and financial assistance.
- ◆ Sponsor youth programs and contests.
- ◆ Keep the public informed of new and current research data relating to District activities.
- ◆ Educate the public regarding the proper use, handling, storage and application of pesticides and fertilizers to protect land and water quality.
- ◆ Educate the public on the hazards of improper disposal of solid waste and promote wise disposal practices.
- ◆ Sponsor field demonstrations and educational workshops.
- ◆ Continue awards programs for outstanding contributions to the conservation movement.
- ◆ Provide resources material at county fair booth promotions and trade shows.
- ◆ Be active in formulation of applicable resources legislation.

- ◆ Train and educate the staff, board and the agricultural sector on strategies for enhancing general soil health to increase effective rainfall, reduce erosion and compaction.
- ◆ Promote no-till cropping activities through annual winter meetings and summer field tours.
- ◆ Host an annual water issues meeting to educate and inform area constituents.

## ***Soil Conservation and Erosion Control***

### **GOAL**

**Accelerate soil conservation by identifying problems and proposing remedies. Develop and administer programs aimed at reducing erosion problems in rural and urban areas and make recommendations for action with the assistance of governmental agencies and landowners**

### **OBJECTIVES**

- ◆ Encourage landowners to use conservation practices on erodible lands.
- ◆ Promote no-till and proper residue management practices.
- ◆ Support federal government cost share programs and provide NRD cost share.
- ◆ Support long term maintenance plans of rangeland, pasture and forest resources.
- ◆ Utilize the District's tree program to accomplish land protection and increase wildlife habitat.
- ◆ Be active in legislation concerning soil conservation and erosion control.
- ◆ Provide grass seeding equipment to private individuals, counties, townships and cities.
- ◆ Administer the District's Erosion and Sediment Control Program.
- ◆ Accelerate land treatment to reduce non-point pollution.

## ***Floodwater Control and Sediment Management***

### **GOAL**

**Reduce the threat of property damage, sediment deposition and loss of life through the management of overland floodwater runoff**

### **OBJECTIVES**

- ◆ Promote and sponsor private flood control dams, road dams and other flood control measures through cost share incentives.
- ◆ Study the watersheds of the District for technically, economically and environmentally sound projects, which may include impoundment structures and/or accelerated land treatment.
- ◆ Promote, sponsor and construct floodwater impoundment structures when feasible projects exist.
- ◆ Promote vegetation and residue management to increase natural infiltration and reduce runoff.

## ***Drainage Improvement and Channelization***

### **GOAL**

**To assist in the development and management of natural watercourses which otherwise pose flood hazards and poor drainage, especially as these problems relate to urban areas.**

### **OBJECTIVES**

- ◆ Develop and administer programs which assist communities in drainage and channel improvement.
- ◆ Promote and encourage the removal of dead timber and debris from watercourses to maintain floodwater carrying capacity.
- ◆ Promote and provide assistance for vegetative buffer strip establishment along watercourses for sediment retention and stabilization of slopes.
- ◆ Provide technical guidance when requested for measures that stabilize channels and banks of watercourses.
- ◆ Review and scrutinize plans associated with Corps of Engineers 404 Permits which involve draining of wetlands, straightening creek channels and changing water courses where it is felt these measures will have a detrimental impact on the stability of the natural environment.
- ◆ Assist with removal of invasive vegetation in water ways.

## ***Forestry Management and Tree Planting***

### **GOAL**

**Promote management of existing timber resources. Promoting tree planting within the District for multipurpose conservation benefits.**

### **OBJECTIVES**

- ◆ Increase tree planting to provide additional benefits such as land protection, windbreaks and wildlife shelter and landscape beautification.
- ◆ Assist communities in developing urban conservation and tree resources programs.
- ◆ Provide information to assist tree owners in maintaining and improving their existing tree sites.
- ◆ Cooperate with Cooperative Extension Foresters in promoting and enhancing existing timber resources.
- ◆ Cooperate with Nebraska Forest Service in promoting proper forest management and tree planting.
- ◆ House an area forester so local landowners have better access to professional forest management assistance.

## ***Recreation, Fish and Wildlife Management***

### **GOAL**

**To pursue development of recreational facilities to meet the needs of residents and visitors to the District and to implement programs and practices, which enhance wildlife habitat and maintain healthy wildlife populations**

**OBJECTIVES**

- ◆ Cooperate with landowners and the Nebraska Game and Parks Commission to develop new areas and manage existing habitat sites on private lands.
- ◆ Promote and support development, management and maintenance of fish and wildlife habitat on public and private lands and waters.
- ◆ House a Nebraska Game and Parks Commission wildlife biologist for better access by area landowners.
- ◆ Participate in the State Corners for Wildlife Program.
- ◆ Promote and support trout stream restoration and enhancement projects.
- ◆ Promote and support development of recreational facilities in conjunction with construction of proposed projects.

***The Future...  
Challenges and Opportunities***

The Upper Niobrara White NRD faces a challenging future where the legislature, in their wisdom, places more responsibility on our unique form of local government. This local control, while very appropriate, places huge responsibilities on the shoulders of the 11 elected Directors who must make tough decisions. Bold leadership based on sound science will be necessary to confront unpopular issues, which threaten to impair long term protection of our natural resources. The Board of Directors must be well informed and unselfish in order to make far-reaching decisions for the good of all. The staff must be well trained, progressive and flexible to carry out their roles as promoters of environmental stewardship, implementers of change and natural resources educators. Budgetary constraints will continue as more demands

are placed on the district and taxpayers resist local property tax increases. Aggressive efforts must continue to secure grants and outside dollars to meet the challenges. Sustainability in agriculture will require producers to look at long term health of the soil and water. The District's challenge will be to foster the adoption of management practices that are sustainable for the long term. All natural resources are interrelated and are best managed on a comprehensive basis with programs that recognize these relationships. Land is being subdivided as more people seek to get a place with some space for themselves. This has many impacts to the landscape that must be addressed. Programs that are flexible and adaptive will be most successful. Many of the rural communities are faced with challenges as infrastructures degrade and revenues for improvements are in short supply. We must help with those improvements that impact the environment. We must make ourselves available to other private and government organizations,

because it is together that we can most effectively address the challenges. The challenges are many and the dollars are tough to find, but the natural resources needs are vital to present and future generations.

**Soil and Water Conservation** programs have been the backbone of the Upper Niobrara White NRD activities and will remain important in the future. In recent years, water quantity and quality issues have become increasingly significant. **Ground Water Quality** is relatively good with nitrate nitrogen levels lower than other intensively irrigated areas of Nebraska and the United States. We are addressing the non-point source pollution issue through a district wide Information and Education effort with a focused I & E program in the heavily irrigated areas of the district. District Rules and Regulations are in place if water quality enforcement is needed.

**Ground Water Quantity** has been in steady decline in two of the six sub-areas. Allocations are in place in these two sub-areas. All active high capacity wells are now metered, no new irrigated acres are permitted and a moratorium has been placed on high capacity well construction. We are expanding and continuing to refine a predictive computer model to aid in the

development of additional management strategies. The majority of the District has been designated as Fully Appropriated by the Nebraska Department of Natural Resources.

**Recreation and Wildlife** are increasingly important in northwest Nebraska and we recognize their role as a vital source of revenue to the economy of the district. We must promote the diversification of landowner's incomes through opportunities created by our unique natural resources. A Nebraska Game and Parks Commission wildlife biologist is housed at the District office.

**Range and Forestry** resources are extremely valuable in this District and we must promote their wise and sustainable management. A Nebraska Forest Service forester is housed at the NRD office.

**Floodwater and Sediment** damage continues to be a part of our responsibility. A new nonstructural approach will come into play with less reliance on dams. This approach requires long term planning on our part. A DEQ employee is housed at the District office.

**Board of Directors****Sub-District***James Irwin**1**Rich Zochol**1**Curtis Roth**2**Dale Berndt**2**Dave Kadlecek**3**Dale Anderson**3**John Burke**4**Tod Dorshorst**4**James Lees**5**Larry Teahon**5**Steve Sandberg**At-Large***Main Office Staff***Lyndon Vogt, General Manager**Lynn Webster, Assistant Manager**Katie Harris, Administrative Secretary**Sheri Daniels, Water Resources Manager**Jason Moudry, Natural Resources Manager**Haley Anders, Natural Resources Technician**Sharyl Sapp, Natural Resources Technician***Field Office Secretaries***Glenda Cushing**Ann Cotton  
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