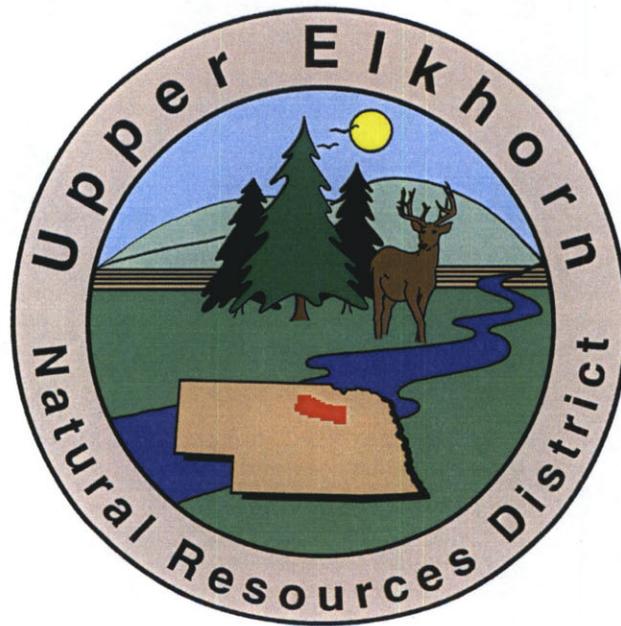


# Upper Elkhorn Natural Resources District Master Plan



2012

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DEPARTMENT OF  
NATURAL RESOURCES

## Forward

Legislative Bill 783, adopted by the Eighty-Fifth Legislature, Second Session states in section 2: “By August 1, 1979 each Natural Resources District shall prepare and adopt a master plan to include but not limited to a statement of goals & objectives for each of the purposes stated in Section 2-3229. The master plan shall be reviewed and updated as often as deemed necessary by the district, but in no event less than once each ten years. A copy of the master plan as adopted and all revisions and updates hereto shall be filed with the Natural Resources Commission.” The following is that plan for the Upper Elkhorn Natural Resources District.

## 10 Year Master Plan

Local Offices where the land and water development assistance and information can be obtained for the Upper Elkhorn Natural Resources District:

Upper Elkhorn Natural Resources District  
301 N. Harrison Street  
O'Neill, Nebraska 68763  
Phone: 402-336-3867  
Website: [uenrd.org](http://uenrd.org)

Antelope County Natural Resources Conservation Service  
1105 S Street  
Neligh, Nebraska 68756  
Phone: 402-887-4176 Ext. 3

Holt County Natural Resources Conservation Service  
107-A East Highway 20  
O'Neill, Nebraska 68763  
Phone: 402-336-3798

Rock County Natural Resources Conservation Service  
731 East 4<sup>th</sup> Street  
Ainsworth, Nebraska 69210  
Phone: 402-387-2242

Wheeler County Natural Resources Conservation Service  
415 Grand Ave  
Burwell, Nebraska 68823-0698  
Phone: 308-346-4399

## Governing Body:

An elected Board of Directors governs the Upper Elkhorn Natural Resources District. There are currently 15 board members representing the district. The district is divided in to seven sub-districts, with two board members elected from each of the (7) sub-districts and one member at large.

### Upper Elkhorn NRD Board of Directors

<u>Current Board of Directors-Subdistrict and Offices Held</u>
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Scott Beckman (VII)	Elgin, NE	
Jerry Childers, (IV)	Chambers, NE	Chairman, Loup Basin RC&D Alternate
James Dvorak, (II)	Atkinson, NE	North Central RC& D Alternate
Chris Dierks, (At Large)	O'Neill, NE	Loup Basin RC&D Representative
Gregg Felker, (III)	O'Neill, NE	Board of Directors Chairman
Curtis Gotschall, (II)	Stuart, NE	
Reg Green, (V)	Creighton, NE	NARD Alternate
Jerry Heithoff (VII)	Elgin, NE	
Ted Hughes, (VI)	Neligh, NE	NARD Representative & Northeast RC&D Alternate
Jim Keller, (I)	Newport, NE	North Central RC&D Representative
Jeff Krebs (VI)	Neligh, NE	
Tim Knuth, (V)	Royal, NE	Northeast RC&D Representative
Mike Russman, (IV)	Ewing, NE	Board of Directors Vice Chairman And Loup Basin RC&D Representative
Roy Stewart, (I)	Newport, NE	
Dale Wiles, (III)	O'Neill, NE	
***Claus Knuth	Royal, NE	Northeast RC&D Representative

**The Upper Elkhorn NRD, currently consists of the following staff:**

Staff

Don Caouette	Assistant Manager-O'Neill NRD Office
Marsha Hart	Administrative Secretary-O'Neill NRD Office
Joy Knapp	NRCS Secretary ~ Neligh NRCS Office
Kelly Kloppenborg	Water Resources Technician-O'Neill NRD Office
Tom Riley	Water Resources Manager-O'Neill NRD Office
Dennis Schueth	General Manager-O'Neill NRD Office
Beth Walsh	Info & Ed / Chemigation Coordinator-O'Neill NRD Office
Mary Zakrzewski	NRCS Secretary -O'Neill NRD Office
Laurie Delimont	NRCS Secretary ~ Ainsworth NRCS Office
Julie McBride	NRCS Secretary ~ Burwell NRCS Office

## Upper Elkhorn NRD Committee Structure:

### Upper Elkhorn NRD Committees

The Upper Elkhorn NRD functions under the direction of three committees. Each committee has five committee members consisting of five elected board members. The committees and responsibilities are as follows:

#### **Legislative, Finance & Planning Committee:**

##### Activities include:

This Committee keeps abreast of legislation pertaining to NRD's and reports to the board. They will, while working with other committees and NRD staff, set up the budget and, as the occasion arises, either invest or withdraw monies that are needed for District Operations. This committee is also responsible for; (1) Analyzing program needs in the district and developing program and priority recommendations. (2) Review and make recommendations for board consideration and action on cooperative agreements, costshare applications and District expenditures. (3) Assist and guide the manager in the preparation and revisions of the Implementation Plan and Ten-Year Master Plan. (4) Report currently to the board the activities and action taken by their committee.

#### **Personnel, Equipment, Promotion & Education Committee:**

##### Activities include:

(a) Analyze personnel needs of the district and make recommendations for board consideration and action. (b) Analyze with the manager, annually a review of all NRD employee's job performance and salaries. (c) Analyze equipment and building needs and continued inventory of equipment for this district and make recommendations for board consideration. (d) Review and approve all job descriptions, employee benefits, personnel policies and interviewing potential staff or director candidates. (e) Periodically set up the annual meetings and awards banquets. (f) Act in judging the District Conservation Award nominees, District Poster Contest nominee's and presents the winners to the board. (g) Sponsor the land and/or range judging contest, conservation days, Soil Stewardship Day and County Government Day. (h)

Recommend Publicity and Educational efforts of the District. (i) Report currently to the board the activities and action taken by their committee.

**Water Resources & Watershed Committee:**

Activities include:

- (a) Establishing procedures and policies for formulation of NRD participation in special projects and programs relating to water quality and quantity issues for board review and action.
- (b) Receive special project requests and analyze request to determine qualifications, priorities, and extent of NRD participation relating to: flood control projects, drainage problems and streambank erosion.
- (c) Provide direction as needed, within budget limitations and other guidelines provided for implementation of projects approved by the board.
- (d) Report currently to the board the activities and action taken by their committee.

## Section I Introduction

### **Background:**

In the past history of Nebraska, the state had established many special purpose districts intended to solve natural resources related problems. These agencies served an important part in solving specific problems. As the conservation needs became more complex and the impact began spreading beyond the County lines, these districts were unable to respond to all the conservation needs deemed necessary over the wide spread area.

In 1969 the 80<sup>th</sup> Unicameral resolved the problem with the passage of L.B. #1357 creating Natural Resources Districts. The boundaries of the new districts were established in accordance with Nebraska major river basins that provided a better opportunity to deal with resource related problems. These boundaries provided for 24 Natural Resources Districts and on July 1, 1972 154 special purpose districts were merged into and became a part of the Natural Resources District.

The reason for the creation of the 24 Natural Resources Districts may be found in Section 2-3201 of the Natural Resources District Law. It reads as follows:

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

watershed conservancy districts, watershed districts, advisory watershed improvement boards, and watershed planning boards was consolidated and made functions of Natural Resources Districts; and the governing boards of such districts and boards was completed by July 1, 1972. The Legislature further declared that other special purpose districts, including rural water districts, ground water conservation districts, drainage district, reclamation districts, were encouraged to cooperate with and, where appropriate, to merge with Natural Resources Districts created by this Act.”

### **General Area Description of Upper Elkhorn NRD**

The UENRD encompasses approximately 3,000 square miles (1,920,000 acres) of the Elkhorn River Basin within four counties: all of Antelope County except the town of Tilden, 60 percent of Holt County from the Elkhorn River south, 60 percent of Rock County, and the northern 25 percent of Wheeler County.

The majority of the UENRD can be characterized as agricultural, with few incorporated communities. According to current census figures, the District has a population of approximately 18,000 persons, with the largest community, O’Neill, having a population of 3,705 persons (U.S. Census Bureau). All population centers within the District having a population of 1,000 persons or greater are located adjacent to or within several miles of the Elkhorn River.

The Elkhorn River, a tributary of the Platte River, rises in Rock County and flows generally east-southeast to Cuming County where it veers to a generally south-southeast direction, which it follows to its confluence with the Platte River in northern Sarpy County. The river has a total valley length of approximately 335 miles, and a basin area of 7,000 square miles (4,480,000 acres). The Elkhorn

River has an inherent tendency to meander since there are few natural deterrents to migration. This tendency accounts for the fact that the river is approximately 35 % longer than its valley. Several oxbow lakes are visible throughout the Elkhorn River Valley, indicating former channels that the river has now abandoned (Bentall et. al., 1971).

Surface elevations in the Elkhorn River Basin range from 2,700 to 1,100 feet above Mean Sea Level. Elevations generally decrease moving southeast through the basin. In the portion of the Elkhorn River Basin found within the UENRD, elevations range from 2,700 feet above Mean Sea Level in western Rock County to 1,600 feet above Mean Sea Level in northern and central Antelope County.

Principal tributaries in the UENRD include the South Fork (333 square miles), and the North Fork (861 square miles). Several secondary tributaries also feed the Elkhorn River including Holt Creek, Dry Creek, Cache Creek, Clearwater Creek, and Cedar Creek. The Elkhorn River is fed from overland runoff and groundwater seepage its entire length.

### **Climate**

The climate of the Elkhorn River Basin is transitional between the humid east and the semi-arid western plains. The UENRD lies within a belt of dry, subhumid conditions. Conditions are favorable for the raising of livestock and the growing of both feed and grain crops. Generally, the spring months are cool with considerable precipitation, while the summers are hot and relatively dry. Autumn is generally pleasant with occasional rains, and winters are cold with significant snowfall.

Average annual precipitation ranges from approximately 23 inches/year in the northwestern corner of Rock County to 26 inches/year in the southeastern corner of Antelope County (The PRISM Group at

Oregon State University, 2006). Normally, 60 to 65 percent of annual precipitation occurs during the growing season between May and September (PRISM, 2006). The average number of frost-free days is approximately 160 with an average annual temperature of 50° F (Bentall et. al, 1971). July is generally the warmest month in the UENRD with an average mean temperatures in the mid to upper 70's (° F), while January is generally the coldest averaging in the upper teens to low 20's (° F). Soil temperature lags behind air temperature by approximately a month with the highest temperatures occurring in late July or August and the lowest in February (Bentall et. al., 1971).

### **Soils**

The Natural Resources Conservation Service (NRCS) has published soil surveys for all counties making up the UENRD. These soil surveys give a detailed description of soil types and characteristics. For a more detailed description and maps, refer to the local NRCS soil survey publications..

The majority of soils in Rock County within the UENRD are found in the Valentine-Elmore-Tryon and Els-Valentine-Loup associations. Slopes are nearly level to very steep, and can be either poorly or excessively drained. These soils are sandy soils that have formed on bottomlands, sand ridges, and in sandhill valleys. Holt County soils are mainly the Els-Valentine-Loup association, but the southwestern corner of the county has soils in the Valentine-Elmore-Tryon association. Again, these soils are sandy soils. The portion of Wheeler County within the UENRD has Els-Valentine-Loup soil associations. The majority of Antelope County has soils in the Thurman-Boelus-Nora association. These are deep sandy and silty soils formed on uplands with nearly level to steep slopes. The southeastern corner of the county has soils in the Nora-Moody-Crofton soil association. These are

deep silty soils on loess (wind-deposited) uplands, which can have gentle to steep slopes. Surrounding the Elkhorn River Valley in Antelope County, soils in the Cozad-Hord association can be found. These soils are silty soils found on foot slopes and stream terraces.

### **Authority**

Before the responsibilities of a Natural Resources District can be met, it has to determine a goal & establish some objectives, which will be used in attempting to reach that goal.

### **Purpose**

This plan then becomes a guide to help attain the goals arrived at by the District for programs set forth by the Natural Resources District Law Section 2-3229. In this section it states that “The purposes of the 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 flood water and sediment; (3) flood prevention and control; (4) soil conservation; (5) water supply for any beneficial uses; (6) development, management utilization and conservation of groundwater and surface water; (7) pollution control; (8) solid waste disposal and sanitary drainage; (9) drainage improvement and channel rectification; (10) development and management of fish and wildlife habitat; (11) development and management of recreational and park facilities; and, (12) forestry and range management. These programs are in conformance with the goals and criteria for properly developing the water and related land resources.

-Following are the goals of the districts that relate to the before mentioned authorities.

**(1) Erosion Prevention and Control:**

*It is the goal of the Upper Elkhorn NRD to:*

- (A) Substantially reduce the sediment and erosion damage within the district.*
- (B) Safeguard the health, safety, and welfare of the District's citizens,*
- (C) Through the management of the natural resources preserve the value of land and its productivity for present and future generations,*
- (D) Prevent the pollution of streams and ponds in the District*
- (E) Reduce the danger of flooding.*
- (F) Continue to cooperate with local, State and Federal agencies to reduce and prevent erosion by wind and/or water.*

The Upper Elkhorn Natural Resources District (NRD) will implement and enforce the Upper Elkhorn NRD Erosion and Sediment Control Plan in accordance with the Nebraska Erosion and Sediment Control Act of 1986. (LB 474) LB 474 gives the NRD's and their constituents the opportunity and authority to control erosion and sedimentation to help improve the quality of both ground and surface water.

The Erosion and Sediment Control Act establishes a mechanism for processing complaints where soil erosion level is believed to be greater than the soil loss limits established according to LB 474. Complaints can be filed by any landowner or tenant being damaged by sediment runoff, by any authorized representative of the state agency or political subdivision whose public facilities are being damaged, by any authorized representative of a state agency or political subdivision with water quality responsibilities; or, by any authorized representative of a natural resources district. If there is damage occurring from excessive erosion, that landowner may be required it install conservation practices to reduce erosion to tolerable levels.

**(2)Prevention of Damages from Floodwater and Sediment,  
and (3)Flood Prevention and Control:**

The problem of flooding is not a major concern within the district, however localized flooding does occur. *It is the goal of the Upper Elkhorn NRD to assist and discuss with those individuals affected by flooding and sediment deposits about the alternatives that could alleviate property and financial losses.*

*It is also a goal of the Upper Elkhorn NRD to assist the Department of Water Resources and Conservation Survey Division with maintaining existing or installing additional surface water gaging stations along the Elkhorn River and its tributaries. Additional data will allow the board and district staff to update position statements on instream flow applications for recreational, fish and wildlife habitat. The District will also research developing an outreach program to discourage any property development within the 100-year floodplain.*

The Elkhorn River has an inherent tendency to meander since there are few natural deterrents to migration. This tendency accounts for the fact that the river is approximately 35% longer than its valley. Several oxbow lakes are visible throughout the Elkhorn River Valley; indicating former channels that the river has now abandoned.

Principal tributaries in the UENRD include the South Fork (333 square miles), and the North Fork (861 square miles). Several secondary tributaries also feed the Elkhorn River including Holt Creek, Dry Creek, Cache Creek, Clearwater Creek, and Cedar Creek. The Elkhorn River is fed from overland runoff and groundwater seepage.

Historically, several stream gauging stations have been established at various locations along the Elkhorn River and tributaries to measure water discharge. At the Ewing gauging station located below the confluence of the Elkhorn River and the South Fork, annual mean discharge for the water year 2011 (October 2011-September 2011) was 435 cubic feet per second (cfs). The highest flows typically occur during the spring months when precipitation and runoff (including snowmelt runoff) are greatest, whereas lowest flows generally occur during the drier months when irrigation pumping and crop water use is highest. Annual mean discharge for the water years 1947-2011 was 205 cfs, while daily mean flow ranged from 68 to 621 cfs (U.S. Geological Survey, 2012). Currently, the Ewing gauging station is the only operational gauging station with updated data available. Other gaging stations in the District are operated by the Nebraska Department of Natural Resources on the Elkhorn River near Atkinson and another in Neligh. The NDNR also has a gage on the South Fork near Ewing. The Elkhorn River has the potential for high discharge rates. Along with the natural meandering tendency of the river, low stream embankments, high flows can potentially cause streambank erosion and flooding problems.

#### **4) Soil Conservation**

*It is the goal of the Upper Elkhorn NRD to implement education and cost-share programs aimed at reducing soil erosion by adopting various best-management practices. Best-management practices may include planting trees, conservation/minimum tillage, cover crops, promoting grassed waterways, buffer strips, planned grazing systems, retention basins, let down structures, and reseeding cropland back to grass.*

Gully erosion is a potential problem in Eastern Antelope County. With low permeability soils combined with steep slopes and minimal runoff control practices this area has the potential to erode tons of topsoil every year. Phosphorus and other nutrients from livestock waste and fertilizers attach to erodible soil and can contribute to eutrophication down stream.

Converting grassland to farmland and overgrazing has increased storm runoff velocity. This increased runoff energy is contributing to stream channel degradation in the headwaters of the Elkhorn River and its tributaries. Subirrigated meadows in Holt and Rock County are draining due to the lower stream elevation. As a result, existing plant communities and grazing productivity can be severely affected.

Wind erosion occurring on acres resulting from over grazing, reduced crop residue levels, overall poor land management practices of threatening the fragile Sand Hills region.

**(5) Water Supply for any Beneficial Uses  
(6) Development, Management, Utilization, and Conservation of Groundwater and Surface  
Water, (7) Pollution Control**

*The Groundwater Reservoir Life Goal for the Upper Elkhorn Natural Resources District is to protect the quality and quantity of groundwater, and to support reasonable and beneficial uses of the District's groundwater for an infinite period of time.*

The goal of the Upper Elkhorn NRD is to protect the quantity and quality of ground water through implementation of the management strategy in the Ground Water Management Plan. Nitrate contamination of our groundwater supplies may be considered the biggest environmental concern in our District. The Upper Elkhorn NRD has an aggressive groundwater-monitoring program. Approximately 600 irrigation wells are potentially monitored annually for various compounds; mainly

nitrate-nitrogen contamination while approximately 55 dedicated monitoring wells are sampled monthly for nitrates and annually for various agri-chemicals, mainly atrazine. During the summer of 2011, 437 irrigation wells were sampled for nitrate nitrogen. The results from this analysis show that 49.8% of the wells sampled in Antelope and Holt County had a nitrate-nitrogen concentration above the Federal health standard of 10 parts per million (ppm). More than 24.5% of the irrigation wells sampled had a nitrate-nitrogen concentration twice as high as the Federal health standard.

The UENRD has developed specific objectives to achieve this goal. A periodic evaluation will be made to determine if these objectives are effectively helping the District to reach its goal. Future revisions and additions may be required. The objectives are outlined below:

**Objective I. *Citizen Advisory Committee***

The Upper Elkhorn NRD has in the past established a Citizen Advisory Committee to work with the District and provide public input concerning the District's programs or natural resources. This process will be utilized in the future to get additional information from the general public whenever possible.

**Objective II. *Groundwater Quality and Quantity Monitoring Programs***

Continue with the District's baseline groundwater quality and quantity monitoring programs and continue to monitor trends in groundwater quality and quantity levels.

**Objective III. *Groundwater Conservation***

Groundwater quantity will be addressed through the District's Groundwater Quality Management Plan. If a significant rise or decline in groundwater levels occurs or a trend is

observed, the District will develop a management area based on specified triggering mechanisms.

Triggering mechanisms are set to take action when an unacceptable rise or decline occurs in the District's monitoring wells over a five-year period. This can be based on actual footage (i.e. 10 feet) or a percentage (i.e. 15%) of the aquifer depth. For example, if a fifteen percent decline is established as the triggering threshold in an area with an aquifer of 100 feet in depth, the establishment of a groundwater management or control area would occur when groundwater levels drop an average of 15 feet over a five year time period.

To reduce the possibility of significant groundwater level changes, the District has and will continue to improve conservation management of municipal, industrial, and irrigation systems; promote Best Management Practices (BMPs) in utilizing soil and groundwater resources through District programs; and develop a drought management education program.

**Objective IV. *Maintain and Improve Groundwater Quality***

Continue to work with District constituents to develop and implement fertility, pest, and irrigation management plans. Encourage the incorporation of BMPs into management plans to reduce groundwater quality degradation. These programs will continue to include the rural (agricultural) and urban sectors. Expand and update information available and information dissemination.

BMP's recommended for implementation include, but are not limited to, the following:

1. Deep Soil Testing (2 or 3 foot level, if applicable)
2. Use of Crop Consultant
3. Expanded Educational Programs
4. Demonstration Site Evaluations

5. Alternative Cropping Practices
6. Chemigation
7. Animal Waste Accountability

**Objective V. *Administration of Nebraska Chemigation Act LB 284.***

Due to the passage of Nebraska Chemigation Act LB 284 in 1986 the UENRD chemigation program was established. The Upper Elkhorn NRD will continue to cooperate and help the Nebraska Department of Environmental Quality administer this program. Irrigators who apply fertilizers or pesticides through center pivot irrigation systems must be certified every four years and have proper equipment in place to prevent chemicals from contaminating the groundwater supply. District staff will continue to inspect these systems, issue permits to certify District cooperators, and maintain proper records of such activities.

**Objective VI. *Administer and Expand Information and Education Programs to Encourage the Proper Management of Groundwater Resources.***

Existing information and education programs will continue to be updated, expanded, and administered to most effectively distribute information regarding District programs. This includes, but is not limited to brochures, newsletters, youth-oriented groundwater awareness programs, monitoring results, demonstrations, presentations, and Public Service Announcements.

**Objective VII. *Establish Groundwater Quality Management Areas to Address Specific Groundwater Quality Problems***

The UENRD has determined that successful implementation of this groundwater management plan will require the establishment of Groundwater Quality Management Areas (GWQMA). The Upper Elkhorn NRD Establishment of these areas and requirements of each will depend on

contamination levels for nitrate-nitrogen and other agri-chemicals. On June 30, 1996 the Upper Elkhorn NRD enrolled the entire District in to a Groundwater Quality Management Area. On January 1, 2003 the Upper Elkhorn labeled two Phase II areas or which one was in Antelope County and the other in Holt County.

**Objective VIII. *Cooperate with Adjacent NRD's in the Management of Groundwater Quality and Quantity.***

Since geographic and geologic boundaries do not always correspond with political boundaries, the UENRD will cooperate with adjacent NRDs to effectively and consistently manage water resources. Adjacent NRDs include the Lower Niobrara, the Lewis and Clark, the Lower Elkhorn, the Lower Loup, the Middle Niobrara, the Lower Platte North, and the Upper Loup NRDs. Cooperation and information exchange will be encouraged with all NRDs in Nebraska.

**Objective IX. *Vadose Zone Sampling Program***

The District will continue to administer and expand their Vadose Zone sampling program, which began in 1992. The information received will help develop a broad data base and target areas in need of management programs.

**Objective X. *Well Abandonment Cost-Share Program***

Wells, which are not properly abandoned, provide for a direct access of contaminants to enter the groundwater. The District will continue to administer a well abandonment program, which encourages landowners to take the proper steps and precautions to abandon wells.

**Objective XI. *Deep Soil Sampling Cost-Share Program***

The UENRD will continue to provide cost share funds for cooperators who conduct a deep soil sampling analysis to determine residual soil nutrients. The District will encourage producers to take residual soil nutrients into account when formulating their management plans.

**Objective XII. *Nitrogen Demonstration Plots***

The UENRD has cooperated with the UNL Northeast Research and Extension Center in developing nitrogen demonstration plots in the District. In addition, the District has helped sponsor a 319 Project to demonstrate BMPs to cooperators. The participation in current demonstration programs and the development of new programs will continue to be a focus of the District.

**Objective XIII. *Improving Livestock Waste Management.***

*It is the goal of the Upper Elkhorn NRD will work with producers, local, state and federal agencies to develop or assist in implementing Best Management Practices relating to livestock waste. The management of animal waste for small and large livestock operations with its relationship to groundwater and surface water is a growing concern within the Upper Elkhorn NRD.*

***Objective XIV. Work With and Cooperate with State and Federal Agencies in Management of Groundwater Quality and Quantity.***

Continue to work with other state and federal agencies to monitor the groundwater quality and quantity of the District. Programs, projects, and management areas will be developed and administered in coordination with these other agencies.

Maintaining and improving open information channels and good working relationships with these agencies to manage the District's water resources for people, agriculture, fish, wildlife, municipalities, industrial and recreational needs.

***Objective XV. Urban Resources***

*It is also the goal of the Upper Elkhorn NRD to cooperate with villages and towns in protecting their water supply. With the request of these communities and assistance of the Nebraska Department of Environmental Quality the Upper Elkhorn NRD will assist in developing a Wellhead Protection Area for that communities water supply.*

*It is the also the goal of the Upper Elkhorn NRD to assist where ever possible in developing a Hazardous Waste Collection program and Information & Education Campaign in cooperation with the Nebraska Department of Environmental Quality.*

**(8) Solid Waste Disposal and Sanitary Drainage:**

*It is a goal of the Upper Elkhorn NRD to create an outreach program to encourage clean-up of “on-farm” solid waste disposal sites. This may include working in cooperation with other Federal, State and local agencies to provide financial assistance to these producers.*

### **(9) Drainage Improvement and Channel Rectification**

*It is a goal of the Upper Elkhorn NRD to continue to work with the citizens of the district as well as with local, state and federal agencies in improving or maintaining drainage or channel rectification.*

Many of the current or past concerns related to this area are handled with the assistance of the Natural Resource Conservation Service and U.S. Corps of Engineers.

### **(10) Development and Management of Fish and Wildlife Habitat (12) Forestry and Range Management**

*It is the goal of the district to continue promoting and providing assistance to local cooperators, local, state and federal programs within the Upper Elkhorn NRD to enhance wildlife habitat, forestry and range.*

Through the Conservation Tree Program, the Upper Elkhorn NRD is able to make numerous varieties of trees and shrubs available for conservation plantings each spring. Farmstead windbreaks, livestock shelters, field windbreaks, wildlife habitat and living snowfence are just some of the uses that can be made of conservation trees. Conservation trees are purchased through the Nebraska Forest Service at Halsey, Nebraska, and from other state-operated nurseries in the nearby surrounding states. The Upper Elkhorn NRD provides technical assistance to help with proper planning of shelterbelts and windbreaks. Machine planting service is available upon request. Trees planted by the Upper Elkhorn NRD crews are done to USDA-NRCS specifications. To help promote tree planting the Upper Elkhorn NRD has cost share funds available through the Nebraska Soil and Water Conservation

Program. Trees, planting, drip irrigation and conservation weed mulch are all eligible practices under this program.

### **(11) Development and Management of Recreational and Park Facilities**

*It is the goal of the Upper Elkhorn NRD to enhance Recreational and Park Facilities through the plantings of trees, shrubs and native grasses. Other practices, such as buildings, trail enhancement and recreational equipment may be partially funded based on an individual project.*

*It is also the goal of the Upper Elkhorn NRD to develop a Community Costshare Program for the enhancement of educational programs relating to soil and water as well as the development of recreational and park facilities.*

#### **Funding Mechanisms:**

*It is the goal of the Upper Elkhorn NRD to utilize all funding resources available to protect, enhance, maintain or improve the natural resources of the district. Various funding sources are available through local, state and federal grants, funds or programs as well as the authority granted to NRDs on local taxation.*