



Upper Loup Scoop

Upper Loup NRD

January 2016

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Calendar of Events

January

1	Office Closed: New Years Day
14	Board Meeting ULNRD Office 3PM CT
18	Office Closed: Martin Luther King, Jr. Day

February

11	Board Meeting: ULNRD Office 3PM CT
15	Office Closed: President's Day

March

10	Board Meeting: ULNRD Office 3PM CT
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All Irrigation Wells in the District to be Metered

Due to the increasing demands of water for irrigation it is important that long-term water usage is managed in a sustainable and equitable way. Effective groundwater irrigation management begins with accurate water use measurements. Quantifying the amount of groundwater utilized for irrigation is essential for water and nitrate management. With the placement of flowmeters on all wells it will ensure the accuracy of data collected. Therefore, one of the proactive management decisions our Board has decided to take is requiring flowmeters to be placed on all high capacity wells, or those wells pumping 50 gallons per minute or greater, throughout the entire District.



Rule 19 states that all high capacity wells associated with certified irrigated acres (whether actively watering or not) must be equipped with a flowmeter. End dates for metering vary depending on where you live in the District. Sub-District 5 (Logan and McPherson Counties) due date is May 1, 2017. Sub-District 4 (Brown and Blaine Counties) due date is May 1, 2018. Lastly, Sub-Districts 1-3 (Grant, Hooker, Thomas and Cherry Counties) shall be metered by May 1, 2020. With that being said we don't recommend to wait till the last minute to get it done!

Basic flowmeter requirements are: new, NOT a Seametric brand, if electronic must have uninterruptible power supply, meet or exceed industry standard of + 2% water flow accuracy, installed according to manufacturer's specifications and calibrated to the pipe size, capable of measuring all the groundwater pumped by a well or wells connected in a series serving a single purpose, have a gallon totalizer gauge that reads in acre-inches and a flow rate gauge that reads in gallons per minute, and be protected with a cover. Flowmeter size, serial number, and flow direction shall be clearly stamped on the body of the flowmeter and shall be recorded by the District for inventory purposes. Once the meter(s) are installed please contact our office at 308-645-2250 and we will send out a technician to inspect the flowmeter.

Tree Planning and Tree Orders for Spring

The Upper Loup Natural Resources District continues to sell and plant trees to property owners across the district as it has for the past 40+ years. Trees can be purchased as producer hand plants, contract plants or for NRD machine planting. The ULNRD is now accepting orders for conservation trees thru March 1st or while tree supplies last.

Trees are available in a variety of species consisting of *(continued on page 2)*



(Trees, continued from page 1) conifers, broadleaves and shrubs. Conservation fabric mulch is also available and is a very beneficial practice to young windbreaks. It is installed over the seedlings to help control weeds and retain moisture. The ULNRD or local NRCS are available to work with landowners to determine the type and number of trees and shrubs needed. A technician will make arrangements for the tree order and assist with NRD machine planting service as well as advise you about weed control and care following planting. To help promote tree planting the NRD has cost share funds available for those practices that meet state requirements. Trees, shrubs, planting, weed mulch and installation as well as drip lines are

all eligible for the cost share program. Remember the Upper Loup NRD is your one-stop shop to order trees and weed mulch.

For more information on the conservation tree program including tree prices, minimum purchases, cost share, or if you need assistance with designing a tree planting project, please stop by our office in Thedford or call us at 308-645-2250 or contact your NRCS Office.

- 2016 Prices including tax:** Bare root = .90¢ (25 species minimum)
Trees and machine planting = .30¢ per linear foot (200 tree minimum)
Trees, machine planting, mulch and installation = \$1.10 per linear foot.

Chemigation and Permit Training

Chemigation is the injection of agricultural chemicals into water flowing through an irrigation distribution system for application to land, crops, or both. Each year several irrigators across the Upper Loup NRD use chemigation to apply fertilizers and pesticides to their fields. With chemigation, the rate of application can be regulated and chemicals may be applied at the exact time needed by plants to produce maximum results. The actual handling of chemicals is reduced so operator exposure is minimized and the chance for spills is diminished.

Chemigation offers the irrigator numerous other advantages. One of those advantages can be found in the application of nitrogen fertilizers. When chemigation is used, nitrate-leaching losses are reduced and the possibility for nitrate contamination of ground water is reduced.

However, chemigation has its risks. The greatest of these is the potential for accidental groundwater contamination through backflow into the irrigation well. To avoid this contamination, the appropriate chemigation equipment and system must be set-up, operated and maintained. Without the right equipment and setup, a permit will be denied.

Before an irrigator can begin chemigation, state law requires a permit to be obtained from the local NRD on an annual basis. Permit fees are due by June 1st and expire on midnight May 31st the following year. Permit fees through the ULNRD are as follows: Renewal Permit: \$30.00, New Permit: \$60.00, Special Permit: \$60.00 and Emergency Permit \$250.00. Inspections will continue to be made on a three year cycle; new and modified systems must still have an inspection prior to injecting fertilizer or pesticides. Renewal permits and fees are due in the office of the Upper Loup NRD no later than 4pm CT on June 1st.

Training dates and locations for 2016 are still being finalized at this time. Please watch the newspaper for any updates. Or visit our website at www.upperloupnrd.org.

CONSERVATION JEOPARDY

1. True or false: Condensation is when surface water changes and adds vapor to the atmosphere.
2. What type of soil is most likely to allow groundwater contamination?
A. Clay B. Rocky C. Sandy
3. Which holds more water?
A. Warm air B. Cool air
4. True or false: water moves faster through sand than clay.
5. In what state does the Niobrara River begin? A. South Dakota
B. Nebraska C. Wyoming

Answers on page 4

Groundwater Discharge Investigation in Loup River Basin

The Upper Loup NRD is currently in the middle of a two year project in which we are collaborating with the Nebraska Environmental Trust, United States Geological Survey and the Lower Loup NRD. The goal of this project is to collect airborne thermal infrared data; measure and record groundwater levels and temperature; and to study and understand spatial and temporal characteristics of groundwater/surface-water interaction in the Loup River basin.

Streams in the Loup River basin are sensitive to consumptive groundwater use because of the close hydrologic connection between groundwater and surface water. The information provided by a network of coupled gaging stations will allow scientists and managers to analyze streamflow and groundwater discharge patterns, both temporally and spatially. Future groundwater management actions must be tied to studies such as this in order to conserve, maintain, and protect our water supplies, natural environments, and economic vitality for future generations.

Sub-District 5 Water Quality Report for 2015

The potential for water contamination, especially in our sandy soils, is always present therefore water quality requires long term monitoring. If not properly protected wells are at risk of being contaminated from several sources. Potential sources of ground water contamination which may be present near your home include septic tanks, animal waste, pesticides, fertilizers, fuel storage tanks, household chemicals, used motor oil, etc.

The Upper Loup NRD recommends that all domestic wells, either registered or unregistered, get tested at least once every five years for nitrates and bacteria as deemed necessary. Wells in Sub District 5, which includes all of Logan County and the eastern portion of McPherson County, were tested this year. I am happy to report that the average of the 134 wells tested was 2.9 ppm, which is well below the Environmental Protection Agency's maximum contaminant level of 10 ppm.



Sub-District 1, which includes all of Grant County and the southwest third of Cherry County, are on schedule to be tested in 2016.

Upper Loup NRD Offers Cost Share for Soil Testing and Leafy Spurge

Soil testing is an important diagnostic tool to evaluate nutrient imbalances and understand plant growth. Testing the soil provides a basis for intelligent application of fertilizer and lime. Testing also allows for growers and homeowners to maintain a soil pH in the optimum range (6.0-7.0), which keeps nutrients more available to the plant for growth. Your local County Extension offices can instruct you on how to take the soil samples yourself. There are businesses that you can contact that will obtain the sample for you, one such group is your local Farmer's Co-op. The ULNRD understands the importance of soil testing and has a cost-share program to help land owners defray part of the costs associated with testing.

The use of herbicides for leafy spurge control is just one part of long term management that should include good grazing strategies and can include grazing by sheep or goats or biological control by the release of insects. It's important to continue yearly management as skipping a year can allow leafy spurge to re-infest rapidly. Extension educators and county weed supervisors are very good resources for weed management.

The ULNRD provides cost share funds for BOTH fall and spring treatment to landowners in the NRD area. Funds are available to cover 45% of the cost of approved chemicals up to \$400 per landowner. The appropriate chemical herbicide can be applied by a landowner with private pesticide certification or by a certified commercial applicator. Applications for cost share assistance can be obtained by contacting Upper Loup NRD at 308-645-2250 or downloading an application from our website at www.upperloupnrd.org

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At Large

Bobbie Jo Christensen

Cherry 1 Grant	Cherry 2 Hooker	Cherry 3 Thomas	Brown 4 Blaine
	McPherson 5 Logan		

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Seventh Annual ACE Camp Dates Set

Make plans to attend the sixth annual Adventure Camp about the Environment (ACE). The dates have been set for Sunday, June 19 through Wednesday, June 22, 2015 at the State 4-H Camp in Halsey. The camp is four days of outdoor fun, exploring and learning about Nebraska's natural resources for 6th, 7th and 8th graders. If you would like more information about the camp you can visit our website at upperloupnrd.org and look under the Education tab, or call the office at 308-645-2250.

CONSERVATION JEOPARDY ANSWERS

1. False, Evaporation 2. C. Sandy 3. A. Warm air 4. True 5. C. Wyoming