

Lower Loup Natural Resources District

IN THE LOUP

New rules governing the management of groundwater quality and quantity were passed by the Lower Loup NRD Board of Directors in October.

The new rules include:

- A requirement that flow meters be installed and used in Phase II and Phase III Groundwater Quality Management Areas
- Nitrate analysis of soil samples 0-36" in Phase II and Phase III Groundwater Management Quality Areas must be submitted to the NRD by February 1st
- Allow variances from rules to apply lagoon water to uncertified acres in certain situations
- Transfers of irrigated acres must meet criteria set by the NRD Board of Directors

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New Groundwater Rules Get LLNRD Board OK

New and modified rules regarding groundwater irrigation are now part of the Lower Loup NRD Groundwater Management Plan following a vote by the District's Board of Directors. NRD General Manager Leon "Butch" Koehlmoos said that the new rules were needed to address water quality and soil erosion issues.

One new rule affects irrigation practices in the NRD's Groundwater Management Areas. Area 28, a strip of land south of the Loup River from south of Columbus west to east of Palmer, is the only area in the District under the highest level of management, Phase III.

NRD Assistant Manager Russell Callan said that the nitrate levels in groundwater in Area 28 have continued to rise in spite of management efforts to reduce them. To provide producers in the area with data on the nitrogen credit they should be giving their irrigation water, flow meters will now be required for

areas in Phase II and III management. To assist with the new requirement, the NRD is establishing a cost-share program for the meters. The LLNRD will provide 100% cost-share in 2014, 75% in 2015, and 50% in 2016. Meters must be in place by December 31, 2016.

Another of the modifications will require nitrate analysis from soil samples in Area 28 by

The LLNRD's rules regarding irrigation from lagoons will now include the potential for an expedited variance. In specific situations, the lagoon water could be pumped on non-certified acres as long as a plan is in place with the NRD. These situations could develop following significant rain events where the lagoon's integrity is jeopardized or "must pump" levels are hit.



New rules regarding groundwater quality and irrigation in the Lower Loup NRD were passed by the LLNRD Board at their October, 2013 meeting.

Rules regarding the transfer of irrigated acres have been modified to add new criteria. That criteria, to be established by the NRD's Board of Directors, will help to limit soil erosion and promote water savings.

Factors to be considered are expected to include soil classification, slope, and soil infiltration. Transfer approvals will be made based on historic data under the new rules, and recent land leveling work will be excluded.

February 1st. The samples are taken from 0 to 36 inches for each field and will help producers determine how much residual nitrate is left in the soil before the next fertilizer application.



As dirt work is done for placement of a piezometer, core samples are saved for analysis of the geological components of the soil.

South Loup River Recharge Project Begins

How much does groundwater use and precipitation affect recharge on water flows in the South Loup River? The Lower Loup NRD has teamed up with other NRDs, UNL Conservation and Survey Division, and the US Geological Survey to get answers to that question.

The three-year study began in October in the Arnold area of

Custer County and is expected to provide better data on which water management decisions can be made.

Work this fall includes installation of several shallow wells with pressure monitoring equipment, called piezometers, to determine the difference in head pressure between the river and nearby groundwater stations.

A lysimeter will also be used to monitor the amount of precipitation that moves below the vegetative root zone.

The area for the study was selected based on the location of a USGS stream gage in the vicinity and the area's dissected plains geography. The LLNRD will use the data gathered in its work with groundwater models.

Over 800 Take Part In Range Judging Events

Two range judging contests in September, hosted by the Lower Loup NRD and the Natural Resources Conservation Service, helped to educate over 800 participants on grassland and range management.

The Area IV Range Judging Contest was held on September 17th at Gates in Custer County. The Senior Division of the contest was won by Rachel Ibach of S-E-M and

the top score in the Junior Division was from Ali Stout of Burwell.

Sargent had the top Senior team: Jack Gibbens, Dexter Griebel, Kolby Grint and Madison Kozeal. Burwell led the Junior teams: Stout, Breanna Dawe, Lane Jensen, and Ty Chaffin.

The LLNRD and NRCS also hosted the State Range Judging Contest on September

26th in western Platte County.

The Senior Division was won by Seth Wetovick of Fullerton and Kyle Linders of West Holt finished on top in the Junior Division. Fullerton had the top Senior team: Wetovick, Ethan Lesiak, Ellie Lesiak, and TJ Ostransky. The top Junior team was from West Holt: Linders, Riley Bilstein, Aaron Seger, and Jessie Mohnsen.

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Alvin Kruml of Sargent was awarded the 2013 Grassland Conservation Award.

Kruml Wins Grassland Conservation Award

Alvin Kruml of Sargent has received the 2013 Nebraska Outstanding Grassland Conservation Award from the Nebraska Association of Resources Districts (NARD). The Association presents the award annually to honor and promote outstanding grassland management.

Kruml's livestock operation covers 1,290 acres in eastern Custer County. Kruml has implemented cross-fencing,

watering corrals, and rotational grazing. Kruml said he uses these tools to distribute livestock evenly across the pastures, maintaining stability and a high level of grass quality. He had 13,000 feet of pipeline pulled in to his pastures and seven tanks added to the operation for better watering management.

Kruml also created farmstead and livestock windbreaks using transplanted cedar trees

that had been nuisances as they grew wild in his grasslands. He said those trees now provide additional carrying capacity for his pastures.

The Lower Loup NRD nominated Kruml for the award using data compiled by the staff at the USDA-Natural Resources Conservation Service office in Broken Bow. The award was presented at the NARD annual conference in Kearney September 23.

A Message From The Manager

Welcome to the latest edition of *In the Loup*. I am glad to share with you information on the work of this NRD and thank you for reading this newsletter.

In the last edition, I introduced some of the people who get the work of the NRD done every day. I shared information on the staff at the field offices in Albion and Columbus. In this issue, we go a little further west and take a look at the folks in the Spalding and Burwell field offices.

As I mentioned last issue, the Lower Loup NRD's field offices are located in your local Natural Resources Conservation Service (NRCS) offices. The NRCS is our federal partner in getting conservation on the land and NRD staff work in partnership with NRCS staff to provide services to the public.

Marie Schmeits has been with the LLNRD for 26 years,



Julie McBride has served residents of Garfield, Loup and Wheeler Counties for 13 years. Their duties include serving as receptionists for the NRCS office and working with the public on both federal and NRD programs.



The secretaries are the NRD's local contacts for constituents in their areas. NRD Field Office secretaries are familiar with all our programs and can offer information on cost-share assistance, well and chemigation permitting, irrigated acres questions, and other programs of the District.

serving as the District Secretary in Greeley, and now Spalding. In Burwell,

Dan Ray is another local NRD contact for the region. Dan has been with the NRD as a conservation technician for 37 years, handling water quantity and quality monitoring; chemigation inspections; conservation tree sales, planning and planting, field inspections; and working with local landowners in a variety of programs. Dan handles conservation duties in the field for Greeley, Nance, and Boone Counties.



I urge all of you to take time to visit your local NRD Field Office whenever you have a question, take the opportunity to meet our staff and allow us to assist you in any way we can to protect and conserve our natural resources, for now and for future generations.



Leon "Butch" Koehlmoos is the General Manager of the Lower Loup Natural Resources District.

Visit The
Lower Loup NRD
Web Site
www.llnrd.org

Order Conservation Trees Now For 2014

Landowners in the Lower Loup Natural Resources District who want protection from the wind and snow, erosion control, wildlife habitat, as well as the landscape aesthetics, can place their orders now for conservation trees to be planted in 2014.

The Lower Loup NRD began accepting orders for conservation trees on November 1st. The NRD provides conservation tree seedlings at a cost of

80 cents per seedling and sell seedlings in bundles of 25. Each tree is a bare-root seedling between 10 and 18 inches long.

From windbreaks to buffer strips, tree-planting assistance is available by contacting your local Natural Resources Conservation Service office. The list of available tree and shrub species can be found on the NRD web site, www.llnrd.org

The Lower Loup Natural Resources District can provide a tree planting crew and offer tips on site preparation, seedling storage, and after planting care. The District also offers weed spraying to prepare planting sites and can install drip irrigation systems for newly planted trees.

Call Forester Richard Woolen of the Nebraska Forest Service at (308) 728-3221 for more information.



Numerous varieties of tree and shrub seedlings are available for order through the Lower Loup NRD's Conservation Tree Program.



Phone: 308-728-3221
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www.llnrd.org

***IN THE LOUP** is a publication of the Lower Loup Natural Resources District. It is published quarterly by the LLNRD and is distributed to the residents of the 16 counties that make up the District. Questions regarding information in this newsletter can be directed to the NRD using the contact information at left. **IN THE LOUP** is edited by Larry Schultz, NRD Information/Education Coordinator.*

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Elkhorn-Loup Modeling Study To Be Completed In 2014

The Elkhorn-Loup Modeling (ELM) Study is currently in its calibration phase, the final step to completion. Lower Loup NRD Modeling Coordinator Tylr Naprstek said that, when completed in June of next year, the model will be the most detailed science based groundwater model for central Nebraska.

District General Manager Leon "Butch" Koehlmoos said that the project was initiated in 2005 by eight NRDs, the Nebraska Department of Natural Resources, UNL Conservation Survey Division, and US Geological Sur-

vey (USGS). He said the study encompasses both the Elkhorn Basin to Norfolk and the Loup River Basin downstream to Columbus.

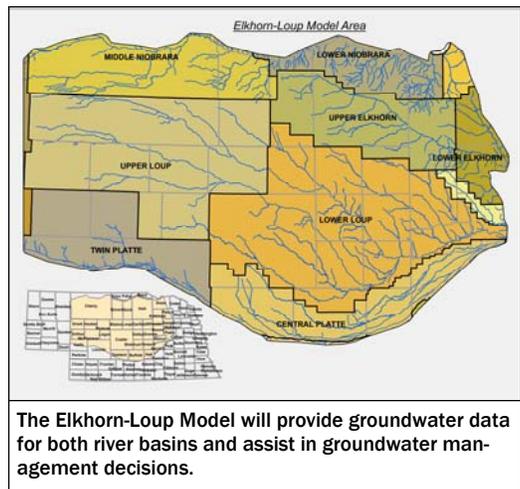
Naprstek said that the model has been developed over three phases, with each consecutive phase increasing in detail and calibration. He said the refined model is divided into two separate layers.

The vertical gradient has layers representing the upper and lower aquifers. The model grid size will be reduced to half-mile grids. He

said the model will operate on a seasonal basis, rather than on an annual basis. Naprstek said that will allow the NRD staff to look at the changes that occur during the year, from irrigation drawdown to seasonal recharge.

The current calibrations compare real world data with outputs from the

model. The calibrations will continue until acceptable measurements can be reproduced by the model.



The Elkhorn-Loup Model will provide groundwater data for both river basins and assist in groundwater management decisions.