

Tri-Basin Topics

Winter 2007

"Dedicated to the Conservation of our Natural Resources"

Volume 21, Issue 1

New Limitations and Requirements for Landowners in Tri-Basin NRD

By John Thorburn

Tri-Basin NRD has been challenged to take action to respond to ongoing groundwater quality problems, the drought, changes in Nebraska water law and the settlement of the *Kansas v Nebraska* lawsuit. We have responded with a comprehensive set of rules and regulations that are flexible enough to account for local circumstances, incremental to avoid over-regulation of landowners, yet stringent enough to protect existing groundwater resources. Following is an outline of some key NRD rules. You can obtain a complete copy of Tri-Basin NRD's rules and regulations by visiting our office at 1308 2nd Street in Holdrege, calling our toll-free phone number (877) 995-6688, or by visiting our website, www.tribasinprd.org.

Groundwater Quality Management (Sect. 3 NRD rules):

- Phase III groundwater quality management rules are now in effect in a large portion of the original NRD groundwater quality Phase II management area (see NRD rule 3.5 and sub-sections).
- The key requirement in phase III quality management areas is that no more than 60 pounds per acre of Nitrogen can be applied in phase III areas for spring-planted crops before March 1 each year (see NRD rule 3.5.2). All other requirements for groundwater quality phase II areas remain in effect in phase III areas (see NRD rule 3.5.1).

Groundwater Quantity Management (Sect. 7 & 8 NRD rules):

- All of Tri-Basin NRD is in phase I regulation for groundwater quantity, to protect existing groundwater supplies.
- Phase I quantity management requirements (see map and NRD rule 8.3 and sub-sections) include greater well spacing requirements for new wells. New wells that are designed to pump more than 1000 gallons per minute must be 1320' from all existing wells. New wells designed to pump more than 1500 gallons per minute must be 2640' from all existing wells.
- Permanent flowmeters are required on all new wells (see NRD rule 8.3.3), and landowners must report water use annually.



- Landowners who want to use a well to pump groundwater on land that they don't own must apply for a groundwater transfer permit (see NRD rule 7.5). A well or wells that will be used to pump water for transfer must be metered (see NRD rule 7.6).
- Tri-Basin NRD requires landowners to agree to a series of conditions on use of new groundwater wells when they apply for new well permits.
- Township 5-22 (Union Twp.) in Gosper County is in phase II groundwater quantity management as of June 30, 2006 (see NRD rule 8.4 and sub-sections).
- In a phase II groundwater quantity management area, no new irrigated land can be developed, flowmeters are required on all wells and the NRD board of directors must approve permits for new wells
- If groundwater levels in a phase II township don't return to 1981-85 average levels within three years, that township will be declared a phase III groundwater quantity management area and landowners will be subject to groundwater pumping allocation (pumping limitations).

Integrated Groundwater Management (Sect. 9 & 10 NRD rules):

- State law requires NRDs to protect surface water resources from depletion due to consumption of interconnected groundwater resources.
 - No additional cropland, hayland or pasture can be developed for irrigation anywhere within Tri-Basin NRD (Gosper, Phelps and Kearney counties) unless landowners agree to return an equal amount of existing irrigated land within the same river basin to dryland uses (see NRD rules 9.2, 10.3 and sub-sections). A certified irrigated land transfer permit
- (continued on page 2)*



Managers Message

By: John Thorburn

Corners are for the birds

I have witnessed an amazing transformation in irrigation water management during my decade as manager of Tri-Basin NRD. When I came here, gravity (furrow) irrigation was the dominant irrigation practice.

There were already many center pivot systems, but they were generally used on rougher, unlevelled land.

Most of the irrigated crops in this NRD are now watered by center pivots. There are three main reasons for this change. First, center pivots apply irrigation water more efficiently. Pumping less water lowers fuel bills for farmers and conserves groundwater supplies. Improving energy efficiency of their irrigation systems is a big consideration for farmers in these times of high fuel prices.

A second factor in this changeover is labor savings. Reducing labor costs is one way that farmers can profitably farm more land. Using a gravity irrigation system, a farmer has to lay out and pick up irrigation pipe every year. Proper management of gravity irrigation also requires close attention to prevent over-watering. With a center pivot, the farmer usually needs to do little more than start his well and flip a switch to turn on the pivot system. The amount of water applied is determined by the well capacity, the rate of movement of the pivot and the pivot sprinkler package.

Pivot dealers and many farmers also claim that center pivots increase crop yields compared to gravity irrigation. A center pivot system applies water more uniformly than a gravity system. This more efficient method of water application is also less likely to cause nitrogen fertilizer to leach below the crop root zone. If crops use a higher percentage of fertilizer applied, yields increase and groundwater contamination by nitrates is reduced.

One by-product of irrigating square fields with circle-traveling center pivot systems is that the corners are difficult to irrigate. Some farmers continue to lay out gated pipe to irrigate corners, but that undercuts the labor-saving aspects of center pivot operation. Some farmers have “dump valves” on the ends of their pivots. These valves open automatically as a pivot



reaches a corner and spew large quantities water. If the field corner is downhill from the outer edge of the pivot, a dump valve can irrigate it, but it doesn't apply water very efficiently. Pivot dealers also sell corner systems that extend out as the pivot reaches a corner and fold back as it moves away. These systems work, but they are expensive, especially in terms of cost per acre irrigated.

Many farmers simply don't irrigate their pivot corners. In some years, dryland crops grown on the corners yield well, but in many years, especially during this drought, crops fail due to lack of water.

I hope that more farmers will consider another option for at least some of their pivot corners: planting them to grass and “growing” wild game birds like pheasant and quail. Three conservation programs pay farmers to plant native grass and quit farming pivot corners. These are the Pheasants Forever Cor-



ners for Wildlife program, the USDA-EQIP program and the USDA-CREP program. All these programs pay landowners a cer-

tain amount of money per acre per year to set aside land for wildlife habitat. Tri-Basin NRD is now working with USDA-Natural Resources Conservation Service (NRCS) and others to develop an “enhanced” EQIP practice that offers farmers a higher payment rate if they are willing to set aside irrigated pivot corners as wildlife habitat for at least five years. Contact your local NRD or USDA-NRCS office for more information about conservation program options for center pivot corners.

New Limitations and Requirements

(continued from page 1)

must be approved by the NRD Board of Directors before land is developed for irrigation. Transfers of certified irrigated land within the same river basin but to or from locations outside Tri-Basin NRD require prior approval of both Tri-Basin NRD and the other NRD board involved in the transfer.

- All existing irrigated acres will be certified for groundwater irrigation if they have been continually assessed as irrigated land for property tax purposes since 2004, or if a landowner can provide independent verification that land was irrigated during or after 1997, but before an area was subject to integrated management rules (see Section 10 of NRD rules).

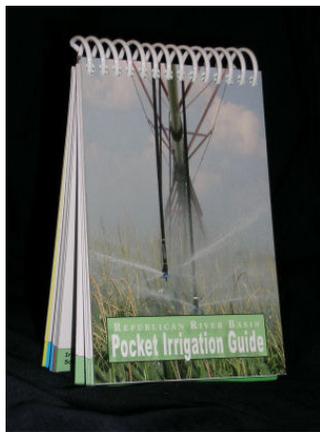
Republican River Basin flowmeter requirements (see Sections 5 and 6 of NRD rules):

- As part of the settlement of the *KS v NE* lawsuit, permanent flowmeters are required on all wells capable of pumping more than 50 gallons per minute.
- Landowners must report water use annually. Tri-Basin NRD personnel verify flowmeter readings on 25% of Republican Basin wells every year.

Tri-Basin NRD to Distribute Pocket Irrigation Guide

In Spring 2007, Tri-Basin NRD will be mailing the Pocket Irrigation Guide to all producers who submit annual Water Use Reports. The Republican River Basin Pocket Irrigation Guide can provide a valuable resource for Tri-Basin NRD's irrigators. The guide includes information on flow meter repair or replacement, conversion formulas, watering requirements, chemigation, pump efficiency and contact information for local organizations and agencies. Irrigators who do not receive a guide in the mail may stop in their local NRCS office or Tri-Basin NRD to pick up a copy.

The guide was produced in part by a grant from the Nebraska Environmental Trust under the leadership of the Nebraska Republican River Management Districts Association.



Chemigation and Nitrogen Management Recertification

Tri-Basin NRD will be sending out renewal forms during the first part of January to producers who had chemigation permits last year. Those producers whose chemigation certification has expired will receive notification from our office and will need to attend one of the chemigation training sessions which are held in February and March. Anyone needing to add new chemigation permits for the 2007 season should contact the Tri-Basin NRD office.

Producers in Phase II and Phase III areas of the Groundwater Quality Management Area also need to have a current Nitrogen Management card. Training sessions for Nitrogen Management will be held in February and March for those producers whose training has expired. If your card has expired, you should receive notification from our office.

For specific training dates for either chemigation or nitrogen management, check Tri-Basin's website, www.tribasinprd.org. For more information on either of these programs, please contact the Tri-Basin NRD office toll-free at 1-877-995-6688.

Trees for Newborns

Each year Tri-Basin NRD honors newborns in the district with the gift of a seedling tree. These trees are available to the family of any child born in Gosper, Phelps or Kearney County since the previous tree season (April). You can reserve a baby tree for your newest family member by filling out this form and returning it to the Tri-Basin NRD office. We will send you a postcard in April letting you know when and where to pick up your tree. If you have any questions, please call our office and ask for Esther.



Parents Name _____

Address _____

City _____ State _____ Zip _____

Phone number _____

Name of Baby _____ Date of Birth _____

ONLINE RESOURCES

- <http://dnrdata.dnr.ne.gov/wellssql/?&>Dept. of Natural Resources Well Data
- <http://water.usgs.gov/ogw> Ground water information
- http://www.cnppid.com/Elevation_Flows2.htmReservoir elevation/Platte River Flow
- <http://tribasinprd.org/domesticwatertest.html> Domestic Nitrate Testing
- <http://www.arboday.org>..... Tree recommendations, identification
- <http://www.websoilsurvey.nrcs.usda.gov/app/>Determining soil type
- http://water.usgs.gov/cgi-bin/daily_flow?neCurrent water resource conditions for Nebraska

CALENDAR OF EVENTS

(All meetings are at NRD office in Phelps County Ag Center unless otherwise noted.)

January

- January 1 - New Year's Day (Office Closed)
- January 9 - NRD Board Meeting at 1:30 p.m.*
- January 15 - Martin Luther King, Jr. Day (Office closed)
- January 16 - Tri-Basin Awards Banquet

February

- February 13 - NRD Board Meeting 1:30 p.m.
- February 19 - President's Day (Office closed)

March

- March 11 - Daylight Saving Time begins
- March 13 - NRD Board Meeting at 1:30 p.m.*

* Times are tentative

WATER CONSERVATION TIP

Check all faucets, pipes & toilets periodically for leaks, especially the toilet (90% of water leaks in the home are in the toilet system).



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Tri-Basin Natural Resources District,
1308 Second Street,
Holdrege, NE 68949 (308) 995-6688
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TRI-BASIN NRD STAFF

John Thorburn.....General Manager
Richard Holloway.....Assistant Manager
Charles Brooks.....Land Resources Coordinator
Carie Lynch.....Administrative Secretary
Roger David.....Conservation Technician
Steve Nelson.....Land Resource Technician
Tammy Fahrenbruch.....Office Manager
Esther Smith.....Office Clerk
Nicole Salisbury.....Office Assistant
Marlene Macklin.....Minden Office Secretary
Jill Wessels.....Elwood Office Secretary
Patty Abrahamson.....Holdrege Office Secretary

A mailing list is maintained and requests to be placed on the list should be sent to the above address. Comments and suggestions may be addressed to the General Manager.

TRI-BASIN NRD BOARD OF DIRECTORS

Brad Lundeen, Chairman Wilcox, NE	Dick Helms Arapahoe, NE
Phyllis Johnson, Vice Chairman Bertrand, NE	David Nelson Upland, NE
Todd Garrelts, Treasurer Holdrege, NE	David Nickel Kearney, NE
David Olsen, Secretary Minden, NE	David Raffety Kearney, NE
Brian Bergstrom Axtell, NE	Larry Reynolds Lexington, NE
Harold D. Erickson Holdrege, NE	Ray Winz Holdrege, NE
Ed Harris Loomis, NE	

*Pocket Irrigation Guide
*Conservation tree order form
*Landowner limitations/requirements

IN THIS ISSUE

RETURN SERVICE REQUESTED

**1308 Second Street
Holdrege, NE 68949**

Natural Resources District



**Non-Profit Permit
U.S. Postage
PAID
Holdrege, NE 68949
Permit No. 220**

**TRI-BASIN NATURAL RESOURCES DISTRICT
2007 HAND PLANT ORDER FORM**

NAME: _____ DATE: _____

ADDRESS: _____

CITY/STATE/ZIP: _____ PHONE: _____

ORDERS MUST BE IN MULTIPLES OF 25

Deadline for placing orders is April 2, 2007.

SPECIES	QUANTITY
CONIFERS	
AUSTRIAN PINE	
COLORADO BLUE SPRUCE	
PONDEROSA PINE	
RED CEDAR (EASTERN)	
BROADLEAFS	
BLACK WALNUT	
BUR OAK	
CRABAPPLE	
GREEN ASH	
HACKBERRY	
RED OAK	
SWAMP WHITE OAK	
SHRUBS	
AMERICAN HAZEL	
AMERICAN PLUM	
BUFFALO BERRY	
CARAGANA	
CHOCHECHERRY	
COTTONEASTER	
GOLDEN CURRANT	
LILACS	
RED-OSIER DOGWOOD	
SAND CHERRY	
SKUNKBUSH SUMAC	
Total # of Trees	
Multiply total # of trees x .60	
Mulch	
Subtotal	
Tax (Holdrege 7%, Elwood 5.5%, Minden 6.5%)	
Total Due	

Tree Pickup will be at: _____ Tri-Basin NRD _____ Minden NRCS _____ Elwood NRCS

WHY PLANT A WINDBREAK?

Windbreaks and shelterbelts provide many benefits. Windbreaks planted along field boundaries reduce soil erosion by reducing wind velocity. Shelterbelts planted around farmsteads reduce heating costs in homes and shop buildings. Shelterbelts can protect livestock from blizzards and serve as "living snow fences". Trees and shrubs also provide food, shelter and nesting habitat for many species of birds and mammals.

NRD TREE & SHRUB PLANTINGS

Contact the NRD Office or your county NRCS for help in determining the type and number of trees and shrubs you need. The technician will make arrangements for the tree order and planting service. The NRD will plant the trees according to the plan.

Trees are planted in the spring as soon as conditions are suitable. The NRD tree planting crew will notify landowners as to the approximate date and time of the planting.

SITE PREPARATION

Good site preparation is a key to rapid tree growth and survival. The best site preparation begins the year before the trees are planted. On heavier soils, working the ground to kill competing vegetation is an excellent method of preparing the site. The technician assisting in planning a windbreak or habitat plot can advise you about the type of site preparation needed. The technician can also help you determine if herbicide carryover will be a problem.

WEED CONTROL

Weed control in the form of plastic mulch is available through the district. This woven material is installed over the trees after planting. Slots are then cut for the trees. Plastic mulch not only eliminates weeds but also helps to preserve soil moisture.

PRICES

Trees & Shrubs60 each/multiples of 25

PLANTING SERVICE

Tree planting (no mulch)45/ft

Trees, tree planting, mulch, and mulch laying

Tilled sites \$ 1.00/ft

Untilled sites..... \$ 1.05/ft

Drip tape30/ft

Pull in Charge \$20

Minimum plan charge \$350 per planting

PLASTIC MULCH

Material Only35 per ft

Stakes15 each

Prices are subject to change.

PLANTING YOUR OWN TREES

You can order trees and shrubs at the NRD or your local NRCS Office. Orders must be in multiples of 25 per species. We will send you a postcard when your trees arrive.

DRIP TAPE

Tri-Basin has a subsurface drip tape available for watering trees planted by the District. The water source could be a portable tank or from a hydrant. Check with the TBNRD Land Resource Coordinator for more information.

COST-SHARE

Tri-Basin NRD offers cost-share funds for tree plantings and plastic mulch installation. You should apply at your county NRCS office before March 1.

All sites must be properly prepared before planting to qualify for cost-share. Reimbursement is made only after full payment is received. The minimum total cost of plantings eligible for cost-share is \$500.

Cost-share may also be available from your county USDA office. Pheasants Forever and Nebraska Game & Parks Commission also offer programs for wildlife habitat improvement. NRCS staff can help you determine which programs have funds available and best suit your needs.

BILLING ON NRD PLANTINGS

Tri-Basin NRD bills for trees/tree planting service after completion. Full payment is due upon receipt of the billing. Cost-share forms will not be finalized until payment is received at the Tri-Basin or NRCS office.