APRIL
2014

LBNRD APPROVES NEW GROUNDWATER RULES

The Little Blue NRD Board of Directors took action at their April 8, 2014 board meeting to approve new rules for managing groundwater in the District. The rules are designed to promote irrigation efficiency, gather information regarding irrigated acres and pumpage to better establish a water budget for the future, provide training for operators, limit development of the fringe areas of the main aquifer, and reduce conflicts between water users. The new rules and regulations will become effective on May 12, 2014. This issue of *"Out of the Blue"* will highlight the new rules and provide information about each major change. A complete text of the rules can be found on the District's web page at www.littlebluenrd.org.

REQUIRED CONTROLS

Regulation	Rule
Well Construction	Meters required on all wells by March 31, 2017, according to District installation specifications. Wells in Very High Risk area must meet minimum aquifer score of 80 points, or must "prove capacity and impacts".
Moratorium on New High Capacity Wells:	No new high capacity well permits allowed in the Aquifer < 10 Feet.
Well Spacing in High Risk Area:	Spacing set at 1,250 feet between wells.
Development Limitation:	One (1) well per 80 acres in Very High Risk area.
Domestic Well Protection:	Require 500' distance from registered domestic well.
Water Flow Meters:	Mandatory all high capacity wells metered by 2017. Some grandfathered of existing meter installation.
Water Use Reporting:	Required starting with 2014 crop year, best available means until after April 1, 2017. Reporting of water use by others using high capacity wells. (Municipalities, livestock, industry, wildlife, etc.)
Certification of Irrigated Acres:	Certification required by April 15, 2015.
Certification of All Operators:	All producers required training in the District by 4/1/18.
Water Transfers:	All transfers must be permitted by the LBNRD Board. Transfers cannot occur to area where no water currently exists or where a productive well couldn't be obtained, even if in the same section, or more than two wells used.

Annual Water Use Reporting Begins in 2014

THE NRD WILL REQUIRE that all owners/operators record and report their total water use for 2014 crop year by either using a flow meter, an hour meter, estimated pumpage rate, or other district approved method. Pumpage reports would also be required from the owners of all businesses, industries, livestock, fish and wildlife, recreation users and municipalities who operate any high capacity wells or series of wells designed to pump over 50 gpm. Initial reports will be due by December 15, 2014. If you already have an approved meter on your well, call the LBNRD with your beginning reading and we will record it in our database.

Flow Meters Are Required

All active high capacity water wells (those that pump over 50 gpm) within the Little Blue NRD will be required to have an approved flow meter installed and operational by March 2017. Flow meters must meet the specifications adopted by the board and also be installed according to manufacturer's specifications.

Although meters may be installed earlier than the schedule provided, the required minimum installation schedule is as follows:

Wells in Northeast Quarter
Metered by December 31, 2014.

Wells in the Northwest Quarter
Metered by September 30, 2015.

Wells in the Southwest Quarter
Metered by June 30, 2016.

Wells in the Southeast Quarter
Metered by March 31, 2017.

Meter Repair Offered

If producers have meters that need repair please call the office, 402-364-2145, as soon as possible so NRD staff can retrieve and fix the meter. Cost of parts for meters will be billed to the operator.

The Board is currently reviewing their meter maintenance program and have decided not to cost share for flow meter purchases or installation.

DISTRICT APPROVED FLOW METERS

The water user must select the proper size, pressure rating, and operating range (minimum and maximum GPM) for his or her water flow meter installation and properly install the meter in accordance with the Little Blue NRD's requirements and the manufacturer's instructions.

- All meters must be warranted to register not less than 98% nor more than 102% of the actual volume of water passing the meter for all rates of flow within the meter size's range of flow.

continued on next page

DISTRICT APPROVED FLOW METERS

(continued)

MECHANICAL FLOW METERS

- McCrometer Propeller
- Geyser Propeller
- Netafim WT or WST
- Senninger Flo-Wise Ag Rotor

ELECTRONIC FLOW METERS

SeaMetrics Model AG 2000
Siemens Sitrans F Mag 8000

The minimum spacing requirements from propeller tip or flow measurement tip for jetting and non-jetting flows are listed below.

McCrometer & Geyser	Non Jetting Flows*	Jetting Flows **
No vanes	10 diameters	20 diameters
With vanes	5 diameters	10 diameters

Geyser & McCrometer meter installations all require 2 diameters downstream. NOTE: McCrometer propeller meters may be installed 1.5 diameters downstream of jetting or non-jetting flows if used with **McCrometer Model FS100 Insertion Flow Straightener**. Geyser propeller meters may be installed 1.5 diameters downstream of jetting or non-jetting flows if used with **Geyser Flow Equalizer**.

Senninger:		jetting or non-jetting flows—5 diameters upstream, 2 diameters downstream
Netafim:	**WST**	jetting or non-jetting flows—5 diameters upstream, 2 diameters downstream
	WT	jetting or non-jetting flows—10 diameters upstream, 5 diameters downstream
Siemens:		jetting or non-jetting flows—2 diameters upstream, 1 diameter downstream
SeaMetrics:		jetting or non-jetting flows—2 diameters upstream, 1 diameter downstream

* Non-Jetting Flows is turbulence associated with turbine discharge heads, pipe elbows, T's and cooling coils. Non-Jetting flow occurs as the flow exits a 45 or 90 degree elbow which causes swirling.

** Jetting Flows is turbulence associated with valves, such as swing check valves, chemigation valves, gate valves and butterfly valves. Jetting flow is due to the fact that the clacker or valve flap does not fully swing up out of the water flow.

NOTE: This is not an endorsement of the products. Because a meter is not on the list does not indicate the meter doesn't meet specifications. If the meter a producer wishes to use is not on this list, please contact the **Little Blue NRD**. After a review of manufacturer's specifications any meter which meets Little Blue NRD guidelines may be added.

Some Flowmeters May Be Grandfathered

IRRIGATION FLOWMETER INSTALLATIONS prior to May 12, 2014, are grandfathered and will not be required to meet the new installation guidelines, provided that the meter is on the District's approved list of meters and was installed according to District installation guidelines of 1982. The District will check the meters for accuracy and will provide 100% cost share for the least-cost option to bring meters which exceed 10% accuracy up to acceptable NRD guidelines. Meters which do not meet the above criteria will not be grandfathered or certified. However, District meters which were cost-shared on or meters installed after the establishment of a water quantity sub-area will be held to the plus or minus 2% installation standards.

Certification of Irrigated Acres

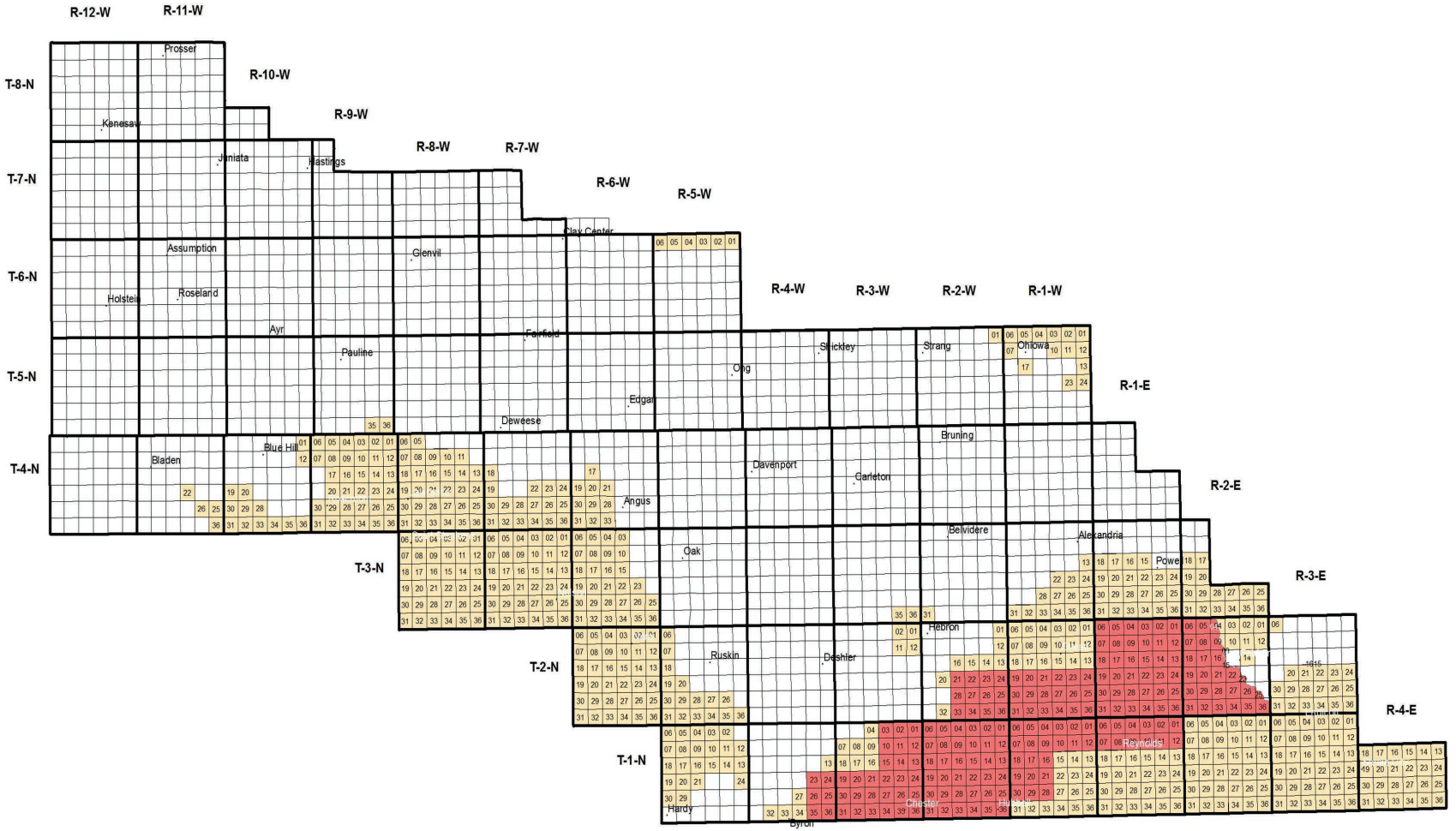
The groundwater user will also be required to report the number and location of all irrigated acres owned or under their control and all associated well registration numbers. The number of irrigated acres will be determined by using FSA records (if available), county assessor records, aerial photographs and any other available relevant information. This must be done by April 15, 2015.

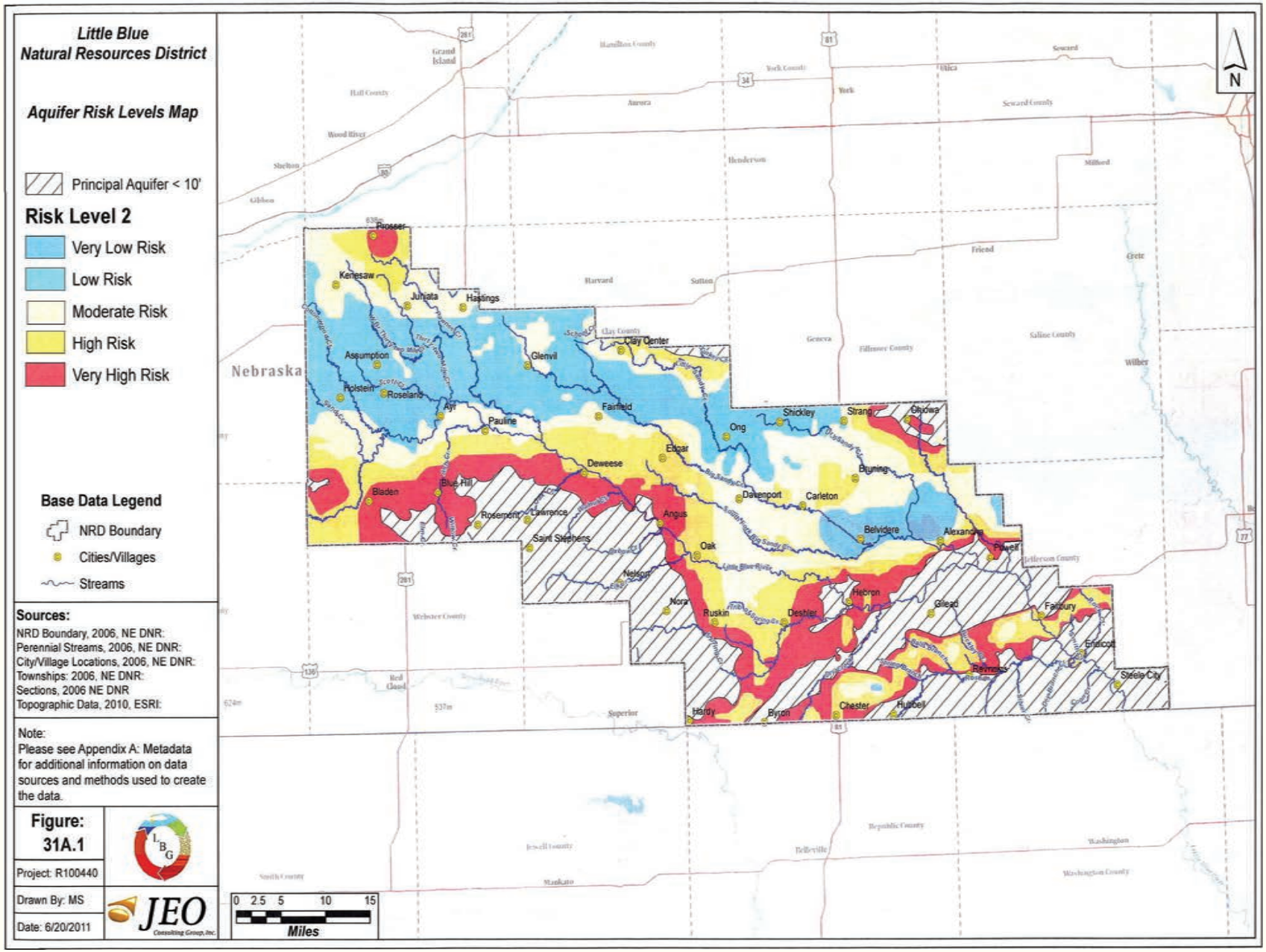
After this process has been completed, any person who wishes to develop land for irrigation purposes or otherwise modify his certified irrigated acres must file an updated Irrigation form. The District currently is gearing up for the certification process and compiling owner information. Certification will begin this fall.

Little Blue Natural Resources District

Yellow sections are permanent stay on high capacity well drilling effective upon adoption of new rules.

Red sections are permanent stay on high capacity well drilling and expansion of irrigated acres effective May 17, 2006.





The map above was developed by the consulting firm of JEO in June of 2011. The Little Blue Hydro Geologic Report was utilized by the **Little Blue Natural Resources Board of Directors** in determining new regulations and rules.
Please refer to the color coded chart on the left side of the map, this will show the different risk areas.

AQUIFER
Very High Risk Area
Additional Requirements

No more than one high capacity well shall be allowed per eighty acres of land within the "Very High Risk Area", (Map on page 6). This rule is in force regardless of ownership or lack of adequate water for the irrigation system. Any wells installed prior to the October 11, 2011 adoption date of this rule at a development level greater than two wells per quarter section of land, are grandfathered and may continue to be operated.

Any applicant for a high capacity irrigation well which would lie in the "Very High Risk" area is required to file for a pre-application for a permit. If the pre-permit score (based on hydro-geologic conditions) assigned to the well location is equal to or greater than 80 points, no additional information is required and a formal permit may be filed. However, if the score assigned to the well location is below 80 points, the applicant will be required to supply additional hydro-geologic, water quality and well capacity information for evaluation by the District. The information needed:

1. A well hole log and physical material sample summary of well site.
2. A 24-hour pump test of the well at the design capacity; minimum pump output after 24-hour test must be at least 300 gallons per minute, verified by the District.
3. A water quality sample collected at the end of the pump test and submitted to a qualified lab for analysis including: nitrates, sodium, chloride, pH, and total dissolved solids.
4. The static water level drawdown shall be measured by the pump installer or well driller on the new well drilled, and the NRD may gather drawdown information for other water wells located within 2,640 feet of the subject well.

If the well fails to meet the 300 GPM requirement, the well shall be abandoned or, at the option of the landowner, it may be registered as a domestic or livestock well and equipped only for those purposes.

After May 12, 2014, permits for new high capacity irrigation wells which lie in the "Very High Risk" areas shall be a minimum of 1,250 feet from any existing irrigation or municipal well and, if within 1 mile of municipal well, such well may carry additional permit restrictions.

Aquifer
Less Than 10 Feet

No new high-capacity irrigation wells shall be permitted in the areas identified in the Little Blue Hydro-Geologic Study as "Aquifer < 10 feet." (Reference: Map on page 6).

Domestic Well Protection

All new high capacity wells must be located no closer than 500 feet to the nearest registered domestic water well. Any existing well in place prior to the effective date (May 12, 2014) of this rule is grandfathered. A domestic well may be constructed closer than 500 feet to a high capacity well at the domestic well owner's risk.

Thanks from NRD Manager

The winter and spring of 2013-2014 have been extremely dry and windy. These conditions likened in many ways to those of the 1930's.

Because of the area's landowners and operators care in leaving standing crop residue in the fields as long as possible, blowing dust and wind erosion were kept to a minimum.

The Little Blue NRD would like to thank the area producers for your conscience effort to protect the soil under these potentially hazardous conditions.

Leaving crop residues has many additional benefits as well. Residue helps rainfall infiltrate the soil surface when rains do come. It prevents runoff water and gives rainfall more time to infiltrate. Each tillage operation, on the other hand, can release nearly one inch of soil moisture into the atmosphere.

If dry conditions persist, that moisture can be very valuable for summer grown crops.

Again, our thanks for protecting your soil through this dry season, and best of luck during this year's cropping season.

Michael D. Onnen
Manager

VISIT US ON THE WEB: www.littlebluenrd.org

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WATER TRANSFERS

All applications for transfers beyond will be reviewed by the District's Water Resources Committee and recommendations acted upon by the Board of Directors at a monthly scheduled meeting.

Transfers to adjoining land tracts shall be prohibited, even though they are located in the same section of land, if 1) there is no groundwater aquifer under the receiving tract; 2) the aquifer that underlies the receiving tract is incapable of providing enough water to support the irrigation system on the receiving tract on its own; or 3) more than two high capacity wells would be required to support the irrigation system of the receiving tract.

The District will either: approve, approve with conditions, deny, or request additional information before action on the transfer.