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## NRD Plans for “Not-Quite” Fully-Appropriated Basins

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# CORNHUSKER ECONOMICS

## NRD Plans for “Not-Quite” Fully-Appropriated Basins

On April 8, 2009, the Nebraska Department of Natural Resources (DNR) determined that the Lower Platte River Basin was not yet fully-appropriated. On April 6, Nebraska Governor Heineman signed Legislative Bill (LB) 483, which established procedures to limit new irrigation development in areas like the Lower Platte Basin. Last week’s newsletter (April 15), discussed how LB483 requires the 14 affected natural resource districts (NRDs) to prepare plans to limit new high-capacity wells, in order to maintain the basin’s not fully-appropriated status. This week’s newsletter discusses how the LB483 NRDs might propose to limit new irrigation wells.

**What NRDs must propose the new well limits to the DNR?** Fourteen NRDs in all: Upper Niobrara-White, Middle Niobrara, Lower Niobrara, Upper Loup, Twin Platte, Lower Loup, Central Platte, Upper Big Blue, Upper Elkhorn, Lower Elkhorn, Lower Platte North, Lower Platte South, Lewis & Clark and the Pappio-Missouri River. The NRDs with the largest affected area are the Upper Loup (Thedford), Upper Elkhorn (O’Neill), Lower Loup (Ord), Lower Elkhorn (Norfolk), and Lower Platte North (Wahoo). A general map of the affected area is part of last week’s *Cornhusker Economics* (Attachment B in: [http://www.dnr.state.ne.us/LB962/AnnualReport\\_2009/AttachmentB\\_04-08-09.pdf](http://www.dnr.state.ne.us/LB962/AnnualReport_2009/AttachmentB_04-08-09.pdf))

**How will LB483 limit new well drilling?** When the DNR reverses the preliminary determination that a basin is fully-appropriated, the DNR well bans stay in place. The LB483 NRDs have 120 days in which to adopt a four-year plan to limit the number of new wells, so that the basin stays not fully-appropriated. So the NRD LB483 well-drilling regulations should be submitted to the DNR by early October.

**What is the DNR’s role in this process?** If the DNR does not approve an NRD LB483 plan within 60 days, the annual number of new wells is limited to irrigating no more

Market Report	Yr Ago	4 Wks Ago	4/17/09
<b><u>Livestock and Products,</u></b>			
<b><u>Weekly Average</u></b>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.....	\$90.39	\$83.37	\$88.77
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.....	116.63	111.02	117.44
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.....	104.25	94.38	100.88
Choice Boxed Beef, 600-750 lb. Carcass.....	149.03	134.35	145.37
Western Corn Belt Base Hog Price Carcass, Negotiated.....	66.90	55.18	59.20
Feeder Pigs, National Direct 50 lbs, FOB.....	55.77	70.60	65.17
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.....	67.10	59.49	60.94
Slaughter Lambs, Ch. & Pr., Heavy, Woolled, South Dakota, Direct.....	87.00	93.25	92.00
National Carcass Lamb Cutout, FOB.....	250.45	248.87	249.27
<b><u>Crops,</u></b>			
<b><u>Daily Spot Prices</u></b>			
Wheat, No. 1, H.W. Imperial, bu.....	8.44	5.26	4.92
Corn, No. 2, Yellow Omaha, bu.....	5.49	3.84	3.67
Soybeans, No. 1, Yellow Omaha, bu.....	12.63	9.30	10.28
Grain Sorghum, No. 2, Yellow Dorchester, cwt.....	9.37	5.91	5.50
Oats, No. 2, Heavy Minneapolis, MN, bu.....	3.73	2.05	1.86
<b><u>Feed</u></b>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.....	*	190.00	190.00
Alfalfa, Large Rounds, Good Platte Valley, ton.....	*	77.50	77.50
Grass Hay, Large Rounds, Premium Nebraska, ton.....	*	140.00	85.00
Dried Distillers Grains, 10% Moisture, Nebraska Average.....	176.00	131.00	130.00
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.....	65.87	50.13	49.00
<b>*No Market</b>			



than 2,500 new acres (about 18-19 pivots), or increasing existing irrigated acres no more than 20 percent, whichever is less. So the DNR should have acted upon the proposed NRD LB483 regulations by early December, 2009. In addition, the Lower Loup basin will continue to be reviewed each year by the DNR, to determine whether or not it is fully-appropriated. If it is later determined to be fully-appropriated, the fully-appropriated basin well ban will be implemented.

**How might NRDs limit new well installation?** LB483 only requires that the NRD plan keep the NRD in not fully-appropriated status, so they have broad discretion in developing their LB483 plans. NRD media comments suggest that they may not simply grant well drilling permits on a first come, first serve basis. The Upper Elkhorn NRD suggested that well drilling permits will be evaluated on a point system, with bonus points given where the operator agrees to install a water meter or to maintain grassed waterways. Negative points could be given where shelterbelts would be torn out to make way for a center pivot irrigation system, or if the well is in an area with high-nitrate ground water levels and a high ground water table. The Lower Platte North NRD suggested that a well might not be approved to irrigate steep land subject to erosion.

**Do other states have models that might be worth considering?** Most western states have state well permitting requirements, and most states require a pump test to determine the impact of the new well on existing wells, including nearby domestic wells. The Upper Big Blue NRD (York) has a similar process that may serve as a model for the LB483 NRDs.

Beyond this, Colorado has an administrative process for determining whether new irrigation wells can be drilled that could serve as a useful LB483 model. The basic test may be called the three-mile, 40 percent depletion in 25-years rule. Basically, a circle with a three mile radius is drawn around the proposed well. The Colorado DNR calculates the total amount of ground water within the circle, and the amount of pumping from wells located within the circle. If the pumping from the proposed well would cause depletion exceeding 40 percent of the available ground water in 25 years, the permit for the new

well is denied. If the total depletion is less than 40 percent, then the permit for the new well is granted. Forty percent was chosen by the Colorado DNR after determining further depletions would make ground water too expensive for irrigators to pump. Twenty-five years was chosen as it corresponded to the period to repay the loan for an irrigation well and equipment.

Kansas ground water management districts (GMDs) use a similar approach for new wells, only they use the nine-section approach. The section in which the proposed well is located becomes the center section of a nine-section block, and the ground water depletion factors are applied to determine whether the nine-section block is in effect fully-appropriated or not. The Southwest Kansas GMD uses the Colorado 40 percent depletion in 25-years test, while the Equus Beds GMD uses a zero depletion factor. The LB483 NRDs might consider including some variation of the Colorado three-mile test, or the Kansas nine-section test in the well drilling regulations they propose to the DNR.

**Where can I get more information?** Contact your local NRD. NRD contact information is available at [http://www.nrdnet.org/nrd\\_guide/find\\_nrd.html](http://www.nrdnet.org/nrd_guide/find_nrd.html)

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