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Cornhusker Economics

Cooperative Extension

Institute of Agriculture & Natural Resources
Department of Agricultural Economics
University of Nebraska – Lincoln

Using Water Taxes to Retire Water Rights

Market Report	Yr Ago	4 Wks Ago	4/18/03
Livestock and Products, Average Prices for Week Ending			
Slaughter Steers, Ch. 204, 1100-1300 lb Omaha, cwt	$67.07	$78.35	$79.54
Feeder Steers, Med. Frame, 600-650 lb Dodge City, KS, cwt	81.32	86.68	90.50
Feeder Steers, Med. Frame 600-650 lb, Nebraska Auction Wght. Avg	92.25	92.40	95.90
Carcass Price, Ch. 1-3, 550-700 lb Cent. US, Equiv. Index Value, cwt	106.07	118.19	124.41
Hogs, US 1-2, 220-230 lb Sioux Falls, SD, cwt	33.75	*	36.00
Feeder Pigs, US 1-2, 40-45 lb Sioux Falls, SD, hd	40.28	*	38.50
Vacuum Packed Pork Loins, Wholesale, 13-19 lb, 1/4" Trim, Cent. US, cwt	91.70	95.79	97.09
Slaughter Lambs, Ch. & Pr., 115-125 lb Sioux Falls, SD, cwt	*	97.25	90.25
Carcass Lambs, Ch. & Pr., 1-4, 55-65 lb FOB Midwest, cwt	144.77	194.17	192.44
Crops, Cash Truck Prices for Date Shown			
Wheat, No. 1, H.W. Omaha, bu	3.05	3.45	3.45
Corn, No. 2, Yellow Omaha, bu	1.83	2.27	2.35
Soybeans, No. 1, Yellow Omaha, bu	4.54	5.67	6.11
Grain Sorghum, No. 2, Yellow Kansas City, cwt	3.34	4.13	4.26
Oats, No. 2, Heavy Minneapolis, MN , bu	1.75	2.03	1.90
Hay, First Day of Week Pile Prices			
Alfalfa, Sm. Square, RFV 150 or better Platte Valley, ton	117.50	127.50	150.00
Alfalfa, Lg. Round, Good Northeast Nebraska, ton	45.00	77.50	75.00
Prairie, Sm. Square, Good Northeast Nebraska, ton	80.00	115.00	117.50

* No market.

In a 1998 law review article, Texas A&M University Professor Donald Kaiser recommends using a fee on water withdrawals to retire ground and surface water rights in order to protect endangered species. Kaiser & Phillips, "Dividing the Waters: Water Marketing as a Conflict Resolution Strategy in the Edwards Aquifer Region," 38 *Natural Resources Journal* 411 (1998). Arizona groundwater law also authorizes groundwater taxes to fund buying groundwater rights to slow groundwater depletion. This article explores how such a strategy might be implemented to deal with Nebraska water conflicts, including conflicts between surface water users and groundwater users.

Edwards Aquifer. The Edwards Aquifer region in south central Texas has water use conflicts similar to those in Nebraska's Platte River Basin. Groundwater is pumped from the Edwards Aquifer for irrigation, municipal and industrial purposes. The Edwards Aquifer also supports several springs that are designated critical habitat for endangered and threatened aquatic species. Groundwater pumping during droughts has reduced streamflow such that continued existence of the endangered species is threatened. A federal judge gave Texas one year to enact legislation to protect the endangered species and avoid federal regulation of groundwater pumping. In response, the Texas Legislature enacted the Edwards Aquifer Authority. The EAA's mission is to reduce total water withdrawals within the Edwards Aquifer region to protect endangered species. The EAA has established withdrawal fees of $2 per acre-foot (325,851 gallons) of water pumped for irrigation per year, and $11/AF for municipal and industrial withdrawals. The EAA will use water tax revenue to purchase and retire water

rights on a willing seller-willing buyer basis. Over time, sufficient water rights should be retired to protect endangered species. This approach avoids water users being forced to stop or reduce water use to protect endangered species.

Arizona. Arizona follows a similar approach, although the objective is to reduce groundwater depletion. The 1980 Arizona Groundwater Code authorizes the state to tax groundwater withdrawals to purchase and retire groundwater rights. Under current Arizona law, groundwater withdrawals may be taxed up to $5/AF with up to $2 going to purchase and retire groundwater rights (up to $1 is used for administration and up to $2 may be used for supply augmentation). Arizona groundwater rights may be purchased and retired beginning January 1, 2006 in each of the state's five groundwater "active management areas" (similar to Nebraska's groundwater management areas). As groundwater rights are retired, groundwater withdrawals are reduced and the rate of groundwater depletion is slowed. Arizona hopes to balance groundwater withdrawals and recharge by 2025.

Nebraska Surface-Groundwater Conflicts. Pending litigation between Pumpkin Creek surface water irrigators and groundwater irrigators has heightened awareness of the legal gap in Nebraska water law for dealing with such conflicts. Where well pumping has significantly decreased streamflows, as is probably the case for Pumpkin Creek, the Nebraska Groundwater Management & Protection Act offers few effective remedies. Groundwater irrigators fear that Pumpkin Creek court rulings might require them to either stop pumping, or else compensate surface water appropriators for interfering with their senior water rights. This has led to inclusion of surface-groundwater disputes in the charge to the Nebraska Water Policy Task Force. Task Force legislative recommendations should be considered in the Unicameral's 2004 session.

Water Taxes & Water Rights Retirement. How might a water tax be used to deal with conflicts between surface and groundwater users in Nebraska? A tax could be collected on irrigated acres or on the amount of water pumped. For example, a $1 tax on irrigated acres in Nebraska (both surface and ground) would raise $8-10 million annually. Additional money could be raised if municipal and industrial withdrawals were also taxed. The money could be used to retire water rights (surface or ground) in problem areas, to deal with conflicts between surface and groundwater users, groundwater depletion, or endangered species protection. In surface-groundwater disputes it would probably be less expensive to retire surface water rights, as it would likely take several (perhaps dozens) of groundwater irrigators to deplete the water rights of a single surface irrigator. Groundwater rights could also be purchased and retired in areas where ground water depletion is occurring. Water rights could similarly be purchased and converted to instream flows for endangered species protection.

In Nebraska, a good argument can be made for dealing correlatively with competing surface and groundwater users. Rivers in Nebraska are ground water fed, and surface and groundwater users both depend upon a shared resource. Prior appropriation provisions in the Nebraska Constitution may legally prevent a pure correlative rights (i.e. sharing) system for dealing with surface-groundwater disputes. However, dealing with water supply shortages by purchasing water rights on a willing seller-willing buyer basis funded by a tax on all large water withdrawals may be as close as we can legally come to a correlative rights approach in Nebraska.

J. David Aiken, (402) 472-1848
Professor (Water & Ag Law Specialist)
daiken@unl.edu