



Nebraska Resources

Newsletter

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Editor's Note:

A full color electronic version of this newsletter can be found on the Department's web site along with back issues at <http://www.dnr.ne.gov/dnrnews/newsarchive2.html>.

Republican River Compact Update

By Jim Schneider and James Williams

The Department and the three primary Republican River Natural Resources Districts (NRDs) are in the **process of modifying their Integrated Management Plans (IMPs)** in order to explicitly list actions to be taken when the State is in danger of being out of compliance with the Republican River Compact.

Background

The NRDs in the basin have previously agreed to limit their groundwater withdrawals in order to limit their depletions to streamflow to their agreed-upon shares: 26% for the Lower Republican NRD, 30% for the Middle Republican NRD, and 44% for the Upper Republican NRD. Therefore, the current IMPs include limits that will keep the state in compliance.

In 2008 Colorado, Kansas, and Nebraska entered into dispute resolution regarding a number of issues, including future compliance. In June 2009 the arbitrator, Karl Dreher, issued a finding that the IMPs may be adequate during years with average and above-average precipitation, but may not be adequate during dry years. His concern was that although the NRDs' allowable depletions to streamflow are limited to 100% of Nebraska's allowable depletions, there were no details in the plans to describe how this would be accomplished.

Proposed Options

In the fall of 2009 the Department of Natural Resources and the NRDs worked together to determine viable options for additional regulatory controls in the IMPs. The purpose of the controls are to explicitly list actions to be taken during potentially dry years to maintain Compact compliance. Based on initial public comments

Continued on p. 2

Schneider Named Deputy Director



Director Brian Dunnigan has appointed James Schneider to serve as the Deputy Director for the Department of Natural Resources. *"Jim's knowledge of water resources will provide a technical level of expertise which is required by the Department at this level. While serving as Deputy Director, Jim will also continue to supervise the Integrated Water Management Division,"* said Dunnigan. Jim has held the position of supervisor of the Integrated Water Management Division and has been the

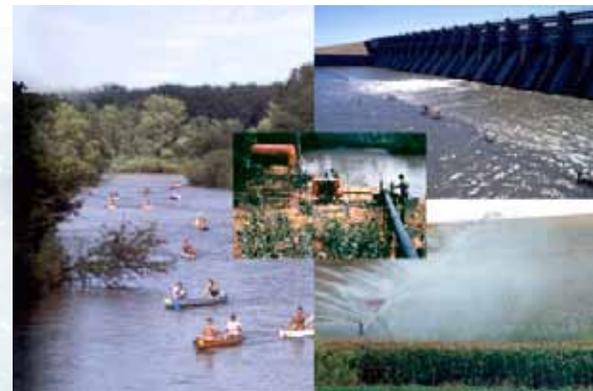
Department's senior groundwater modeler for the past three plus years. During that time Jim has worked with the natural resources districts in helping develop required integrated management plans and has supervised modeling efforts by the Department. He has a doctorate in geology from the University of South Florida, Tampa and master's and bachelor's degrees in geology from Northern Illinois University, DeKalb.

Republican River Compact Update continued from p.1

and suggestions from the NRDs, the Department proposed three options for regulatory actions:

- Set all allocations within an NRD at a low level that would keep Nebraska in compliance during all years,
- Leave allocations at a level close to current allocations, and, when necessary, curtail pumping in a Rapid Response Region in which at least 10% of a volume pumped would be depleted from stream flow during five years (10/5 zone), and
- Leave allocations at a level close to current allocations, and when necessary, curtail pumping in a Rapid Response Region in which at least 10% of a volume pumped would be depleted from stream flow during two years (10/2 zone).

In order for the third option to be effective, the IMPs would have an additional goal of reducing overall pumping by about 1% per year for several years. It would be expected that much of this decrease could be accomplished through voluntary buyout and contracts. All three options include curtailment of surface water use when necessary.



Public Process

The Department and the NRDs have held many public meetings to discuss the proposed IMP changes. These included:

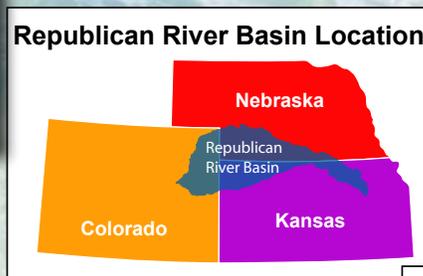
- A basin-wide meeting in Holdrege on September 17, 2009,
- Public presentations at the October board meetings (handouts are available at http://dnr.ne.gov/Republican/RRB_Handouts_1009_BoardMeetings_Rev2.pdf),
- Eight local meetings during November, and
- Forecast meeting on November 30, 2009 (handouts are available at http://dnr.ne.gov/Republican/williams/repub_curtis.htm)

These meetings allowed for stakeholders to comment on or ask questions regarding the proposed plans.

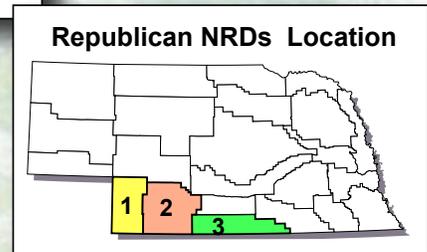
IMP Status

The three NRDs have passed resolutions stating that they will work with the Department to complete additions to the IMPs during 2010. The NRDs chose to work toward implementing their own versions of the third option listed above: when necessary, a curtailment of pumping in a zone that is hydrologically connected to stream flow, along with curtailment of surface water use. The Department will continue to work diligently with the NRDs to finalize these modifications to the IMPs. When the Department and each NRD reach agreement, there will be an additional public hearing in each NRD to receive public comment. Notices for these public hearings, along with a copy of the revised IMPs, will be posted on our website at <http://dnr.ne.gov/IWM/> when the hearings have been scheduled.

Republican River Basin Boundary in Nebraska



1. Upper Republican NRD
2. Middle Republican NRD
3. Lower Republican NRD



Annual Evaluation Published

By Jesse Bradley

The Department has published its *2010 Annual Evaluation of Hydrologically Connected Water Supplies* (available at <http://www.dnr.ne.gov/LB962/AnnualReport/index.html>). This evaluation was completed for all basins that are not currently designated as fully or overappropriated or for which a status change has not occurred in the past four years (Lower Platte River Basin). The basins that were evaluated include: **1**) the Niobrara River Basin downstream of the Spencer Hydropower facility; **2**) the Missouri Tributary Basins; and **3**) the Blue River Basins. The Department has reached a preliminary conclusion that no portions of these basins are fully appropriated at the current time.

Nebraska Department of Natural Resources



2010 Annual Evaluation of Availability of Hydrologically Connected Water Supplies

Determination of Fully Appropriated

an electronic copy of the 2010 Annual Evaluation can be found at

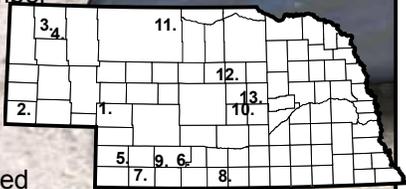
<http://www.dnr.ne.gov/LB962/AnnualReport/index.html>

Water Year 2009

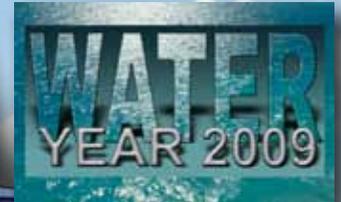
This reservoir storage comparison table shows the capacity, and maximum storage level reached during

Water Year 2009

(October 1, 2008-September 30, 2009), and the carryover at the end of September 2009, for the largest 15 reservoirs serving Nebraskans, 13 of which are located in Nebraska (see reservoir location map).



Reservoir Location Map



Reservoir Storage Comparison for (October 1, 2008-September 30, 2009)

Reservoir		Capacity	Maximum Storage		Carryover	
		Top of Irr. Pool in Acre-feet	(for Water Year 2009) Acre-feet	% Average	September 30, 2009 Acre-feet	% Average
Pathfinder	a	1,016,510	1,015,806	113%	555,423	138%
Glendo	a	184,870	138,661	88%	80,815	64%
1. Lake McConaughy	a	1,948,000	947,400	62%	869,750	71%
2. Oliver (no irr. water stored)	b	2,680	984	42%	724	42%
3. Whitney	a	10,000	10,800	104%	6,632	154%
4. Box Butte	a	31,060	*13,554	72%	6,446*	124%
5. Enders	a	44,480	16,200	50%	15,113	93%
6. Harry Strunk Lake	a	37,140	30,852	76%	27,200	118%
7. Swanson Lake	a	120,160	69,030	68%	47,576	77%
8. Harlan County Lake	a	342,560	337,577	104%	286,167	118%
9. Hugh Butler Lake	c	37,780	29,136	89%	23,288	92%
10. Sherman	d	69,080	70,230	103%	56,420	123%
11. Merritt	e	74,490	67,808	92%	52,060	108%
12. Calamus	f	127,400	127,759	107%	82,632	114%
13. Davis Creek	g	32,459	28,956	98%	9,107	73%

Records used for averages
a 1960-2009, b 1981-2009, c 1962-2009, d 1963-2009, e 1964-2009, f 1985-2009, g 1994-2009

* The Box Butte Reservoir capacity was modified.

LiDAR Update

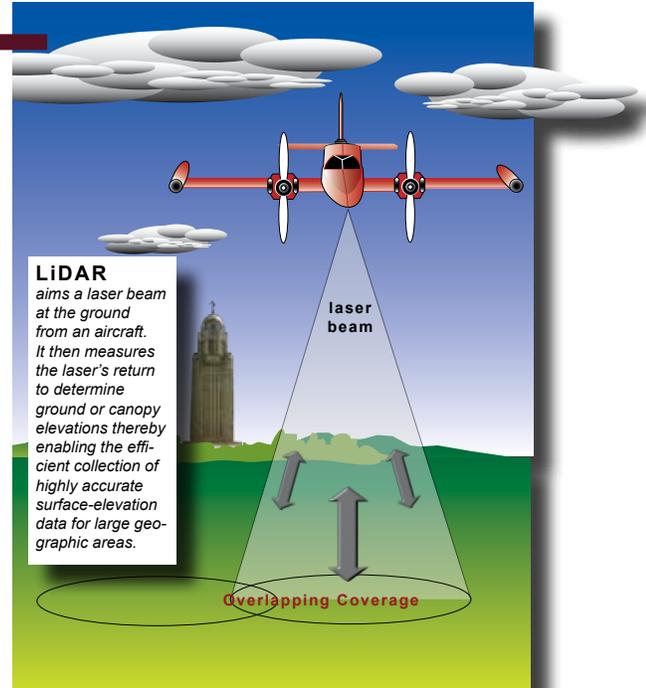
By Staci Parent

LiDAR, (Light Detection And Ranging), is also known as airborne laser mapping. It is a fast-maturing technology that is being adopted within the mapping community. It combines a Global Positioning System with an inertial measurement unit and a laser scanner.

The LiDAR collection and data processing is complete for the South-Central Nebraska and North-Central Kansas projects (additional information can be found at http://www.dnr.ne.gov/dnrnews/news2008/April2008_Rev.pdf), and the data has been delivered.

The LiDAR Exchange Format Standard is a public file format for the interchange of LiDAR data between vendors and customers. Data in this format will be made available on USGS's Center for LiDAR Information Coordination and Knowledge (CLICK) website at <http://lidar.cr.usgs.gov/>. New 1.0-meter Digital Elevation Models (DEMs) were included in the new data and will be hosted on DNR's website in the near future. Several partners are collaborating on a project to obtain 0.7-meter Ground Sample Distance (GSD) LiDAR for a portion of the Platte River and 1.4-meter GSD LiDAR for the rest of the study area. The Rainwater Basin Joint Venture, Platte River Recovery Implementation Program, DNR, USGS, Central Platte NRD, Tri-Basin NRD, Lower Republican NRD, Little Blue NRD, Upper Big Blue NRD, Kansas GIS Policy Board, USDA-NRCS Kansas and Nebraska worked together and provided funding to make this project a reality. Significant funding was also provided by Nebraska Environmental Trust, Natural Resources Conservation Service's Conservation Innovation Grant, and the Interrelated Water Management Plan Program Fund. The U.S. Fish & Wildlife Service and Nebraska Game and Parks Commission made in-kind contributions in the form of personnel time.

The Department is also involved in writing a business case for statewide LiDAR and is in the drafting stages of the writing process. The paper evaluates the likely benefits and costs of obtaining statewide LiDAR as a means to update and improve the state's topographic dataset.



AUCTION RESULTS

By Kent Zimmerman

On January 13, 2010, the Little Blue Natural Resources District sold at auction 80 acres from the upstream end of the Little Sandy Creek Watershed Project Site #40. Auctioneer Bill Rut closed the auction with a **high bid of \$180,000** which was subsequently accepted by the Nebraska Natural Resources Commission during its January 27 meeting. Brokerage services for the sale were provided by Anita Meyer, Home & Country LLC.

Purchase of this tract was funded by the Commission from the **Small Watersheds Flood Control Fund**, a revolving fund established for such projects. **The remaining 320 acres at Site #40 are tentatively scheduled to be sold in early 2011.** Information regarding the sale will

be available on the Department's web site in the late fall of 2010. All proceeds from these land sales will return to the Small Watersheds Flood Control Fund and become available for other watershed projects.



The remaining 320 acres at Site #40 are tentatively scheduled to be sold in early 2011. That tract includes the reservoir and dam.



The Nebraska Soil and Water Conservation Fund was established in 1977 to provide state financial assistance to Nebraska landowners installing approved soil and water

conservation measures. **Since 1977 the State of Nebraska has provided over \$85 Million in state cost-share assistance to Nebraska landowners.** The fund is administered at the state level by the Nebraska Department of Natural Resources and is coordinated by the state's 23 natural resources districts at the local level with technical assistance provided by the Natural Resources Conservation Service. For additional information on the Nebraska Soil and Water Conservation Fund, contact the Nebraska Department of Natural Resources or your local natural resources district.

Nebraska Department of Natural Resources
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Nebraska Soil and Water Conservation Program Update

Approved Soil and Water Conservation Practices	Program Accomplishments in 2009	Total Program Accomplishments 1977-2009
Terraces.....	187 miles	12,182 miles
Terrace Underground Outlets.....	204,060 feet	5,953,611 feet
Water Impoundment Dams.....	9	1,354
Grade Stabilization Structures.....	9	731
Irrigation Tailwater Recovery Pits.....	2	871
Diversions.....	26,638 cubic yards	1,733,502 cu.yds.
Grassed Waterways.....	70 acres	14,141 acres
Water and Sediment Control Basins.....	51	713
Dugouts for Livestock Water.....	8	696
Pasture or Range Seeding.....	1,180 acres	68,381 acres
Critical Area Plantings-Grass.....	117 acres	1,646 acres
Windbreaks.....	2,372 acres	47,155 acres
Windbreak Renovations.....	25 acres	3,871 acres
Irrigation Return Pipe.....	2,479 feet	557,496 feet
Planned Grazing Systems.....	77,350 acres	3,817,574 acres
*Irrigation Surge Valves.....	0	632
Irrigation Water Management.....	46,454 acres	453,463 acres
Repair of Practices.....	19	244
Brush Management.....	30 acres	39 acres
Stream Bank Stabilization.....	0	3
**Republican Basin GW Meter Program.....	0 meters	1,713 meters
**Republican Basin SW Meter Program.....	0 meters	82 meters
***Republican Basin Water Meter Program.....	0 meters	5,451 meters
****Water Mgt. Area Water Meter Program.....	0 meters	504 meters

\$3,152,426.82 \$85,037,320.82

* Rescinded as separate practice effective 7/1/94
 ** These practices not used after 7/1/2001
 *** This practice not used after 12/31/05
 **** This practice not used after 3/31/05

January 2010

Figures are rounded to the full unit

Budget Adjustments



As a result of a slowing economy with fewer revenue dollars than projected coming in and similar predictions for the immediate future, the Nebraska Unicameral took action during its special session. The result of the special session was appropriate budget adjustments for state government. For most state agencies and programs this resulted in a reduction of 2.5% this fiscal year and 5% next fiscal year in appropriated funds. As a result of the need to implement these budget reductions, State funds administered by the Department were adjusted.

General fund programs, those almost exclusively funded through general fund appropriations, were adjusted by the 2.5% and 5% amounts. Cash funded programs were not significantly adjusted because they rely on fees and a revolving fund with the available funds varying depending on those fees and sales. Adjustments were also made in reappropriated funds for programs with unexpended balances at the end of June 30, 2009. The table below shows the original appropriations and adjusted figures.

These six State funds are used to help conserve, protect, and enhance Nebraska's natural resources.

Programs	FY 2010 Appropriations		FY 2011 Appropriations		Reappropriated from Prior Years	
	Original \$	Adjusted \$	Original \$	Adjusted \$	Original \$	Adjusted \$
General Fund Programs						
Resources Development Fund	3,373,066	3,288,739	3,373,066	3,204,413	4,202,910	2,101,455
Soil & Water Conserv Fund	2,489,835	2,427,589	2,489,835	2,365,343	1,265,127	632,563
Interrelated Water Mgt Plan Pgm	2,312,854	2,255,033	2,312,854	2,197,211	2,413,161	1,469,752

Cash Funded Programs

Small Watershed Flood Control
 Water Well Decommissioning
 NR Water Quality Fund

(funded by revolving fund from land sales and occasional general fund appropriation)
 (funded by a portion of well registration fees)
 (funded by a portion of fees levied for pesticide registration and applicator licenses fees)

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Brian P. Dunnigan P.E., Director

The *Nebraska Resources* is a quarterly publication of the Nebraska Department of Natural Resources. Your comments and suggestions are welcomed.

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Nebraska Department of Natural Resources....

....dedicated to the sustainable use and proper management of the State's natural resources.