

Nebraska Resources

Newsletter

Nebraska
Department of Natural Resources



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The J-2 Regulating Reservoir Project

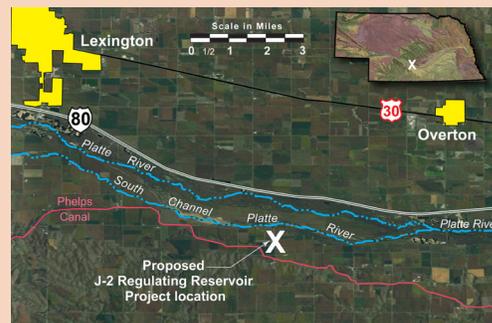
By Jennifer Schellpeper

The Department of Natural Resources (Department), Platte River Recovery Implementation Program (Program), and The Central Nebraska Public Power and Irrigation District (Central) have jointly signed a formal water services agreement for the design, permitting, construction, and operation of the J-2 Regulating Reservoir. The initial steps of design, permitting, and land acquisition are expected to begin in fall 2013.

The J-2 Regulating Reservoir is a proposed off-channel facility to be located between Lexington and Overton, between the Phelps Canal and the South Channel of the Platte River, about three miles downstream of the existing Johnson No. 2 (J-2) Return.

The facility will have a surface area of about 1,000 acres and a capacity of approximately 15,000 acre-feet.

Including the costs of improvements to the Phelps Canal together with the regulating reservoir, the project cost through completion of construction is estimated to be \$75 million.



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Agency Numbers to Remember

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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>.

Voluntary Water Reporting

By Tom O'Connor



Since 1895, Nebraska has had an administrative system for the orderly use of the State's surface water. **All surface water diversions for irrigation, hydropower, industrial, municipal, and domestic use and the storage of water in reservoirs require a state permit.** The Nebraska Department of Natural Resources (Department) is the state agency responsible for overseeing the distribution and use of the State's surface water.

The Department is expanding its reporting program for surface water permit holders and has contracted with Riverside Technology, inc. to develop an online water use reporting tool. The reporting tool will allow permit holders in the state to enter water use information online. The online water use

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The J-2 Regulating Reservoir Project benefits the Department and the Program by retiming streamflows. More specifically, **impounding the streamflows at times when there is excess water in the river and releasing it when there are shortages to target flows**. Improving shortages to target flows meets Nebraska’s interests of meeting the goals and objectives of the Platte River Basin integrated management plans (IMPs) and the goals of the Program to improve the habitat of certain threatened and endangered species along the Platte River. Nebraska’s share of the project benefits to streamflow is 25 percent, which will be shared by the state and three local natural

resources districts (NRDs), the Central Platte, Twin Platte and Tri-Basin NRDs. Central secures project benefits through improved hydropower production during the irrigation season while still meeting irrigation demands. Under the terms of the agreement, Central is responsible for the design, permitting, construction, and operation of the project. Funding for the project is shared by all parties.

Nebraska’s funding for this project has been in the works for numerous years. Most recently, the Department received funding from the Nebraska Environmental Trust (Trust) via a grant application that included funding for the J-2 Regulating Reservoir Project. The Trust grant monies became part of the Department’s Water Resources Cash Fund (WRCF). To implement the grant application the Department entered into an Interlocal Cooperative Agreement with five Platte Basin NRDs (Central Platte, Twin Platte, North Platte, South Platte and Tri-Basin) forming the Platte Basin Coalition (Coalition). The Coalition approved funding for the J-2 Regulating Reservoir Project at its July 13, 2012, meeting. In addition to the WRCF dollars, the Central Platte, Twin Platte and Tri-Basin NRDs are contributing matching local funds for their respective share of the benefits.

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reporting tool is expected to be completed before the end of calendar year 2013 and is planned to be used for both mandatory and/or voluntary reporting for the 2014 irrigation season.

Reporting of surface water use is already required in some areas of the state. Many private irrigators and most irrigation districts and hydropower facilities have installed measuring devices that automatically record surface water use. **Measurement and reporting water use provides valuable information that helps to protect a right to divert** and assists the Department in overseeing the orderly use of surface water, including:

- **Water Administration** – Every surface water permit has a priority date and in times of shortage the “**first in time, first in right**” rule applies (junior users may be closed to protect senior users). By helping the Department track which diversions are being used, the measurement and reporting of surface water use can assist the Department in protecting your right to use water during times of shortage.
- **Integrated Water Management** – Integrated water management is the process of **planning for the long-term sustainability of both surface water and groundwater**. Measurement and reporting

surface water use supports both the Department and local natural resources districts’ efforts to manage the water that is vital to your livelihood and to the livelihood of future generations.

- **Field Investigations and Cancellation** – A surface water permit that is no longer used may be subject to a preliminary determination of non-use and subsequent cancellation (adjudication). Water use information can aid the Department in conducting field investigations and in the adjudication process. Cancelling unused water rights can help to protect your right to use water during times of shortage.

The Department collects surface water use information in accordance with the following statutes:

- *Neb. Rev. Stat. § 61-206* gives the Department jurisdiction over all matters pertaining to surface water rights for irrigation, power, or other useful purposes except as such jurisdiction is specifically limited by statute.
- *Neb. Rev. Stat. § 46-261* authorizes the Department of Natural Resources to require the owner of any surface water permit to measure and report their water use.

INSIGHT UPDATE

By Nathan Morris

The Nebraska Department of Natural Resources (Department) is continuing its work on INSIGHT – an Integrated Network of Scientific Information and Geo-Hydrologic Tools – to deliver information on water supplies and uses for various river basins across the state through an interactive, map-based, website. Additional information on INSIGHT can be found online in *Water Matters* No. 6 and previous newsletters.

The INSIGHT tool will consolidate water supply and demand data, as well as information from groundwater modeling and other modeling efforts, from a variety of sources and provide a single location of access to the data through a series of interactive maps on the Department's website. Through this consolidation and interactive display of hydrologic data, INSIGHT will also help water managers better understand current and future demands, evaluate the effectiveness of water management strategies, and assess the most critical areas of

water shortage. Furthermore, simple charts and graphs will be presented at the statewide, basin, and sub-basin levels on the website to help the public understand water availability conditions for any given area across the state.

To develop INSIGHT, the Department has contracted with Riverside Technology, inc. to help build the data systems and the public website. As part of INSIGHT, improved hydrologic and administrative data entry and tracking systems are also being developed, including an online water use reporting tool, notice letter generation and tracking data system, integrated streamgaging portal, and a field office remote GIS application. Originally intended to be released at the end of July 2013, INSIGHT – along with a redesigned Department website – will now be released to the public at the end of December 2013.

Meet the Ord Field Office

By Tom O'Connor

In addition to the main office in Lincoln, the Department of Natural Resources has field offices in Bridgeport, Cambridge, Lincoln, Norfolk, and Ord. Twenty-two staff members perform a variety of duties in these five field offices.

The Ord field office has a **jurisdictional area covering Central and North Central Nebraska (26 counties)** and includes the Lower Niobrara, Middle Loup, North Loup, South Loup, Loup, Cedar, and the Central Platte river basins. The Ord office has the responsibility of overseeing surface water administration, conducting safety inspections of low hazard dams, operating streamgaging stations, and computing streamflow records throughout their assigned area.

The Ord field office has four staff. The supervisor of the Ord field office is Tom Klanecky. Tom is responsible for the administration and enforcement of state surface water statutes for the area, which includes 18 different canals and approximately 1,320 direct flow and storage permits. On occasions, Tom is also called upon to help mediate surface water-related conflicts.

Staff also includes three Natural Resources Specialists: Patrick Breikreutz, Jeremy Sedlacek, and Stacey Kolar. Key responsibilities include monthly measurements of stream discharge, performing maintenance on gage house instrumentation, and keeping stream discharge records up-to-date. During

the irrigation season, staff inspects numerous pumps and diversions and makes weekly measurements of canal diversions. Field investigations to determine if permit conditions are being met and safety of dam inspections are generally completed in the fall and early winter.

The Ord field office is located at:

1608 North 28th Street

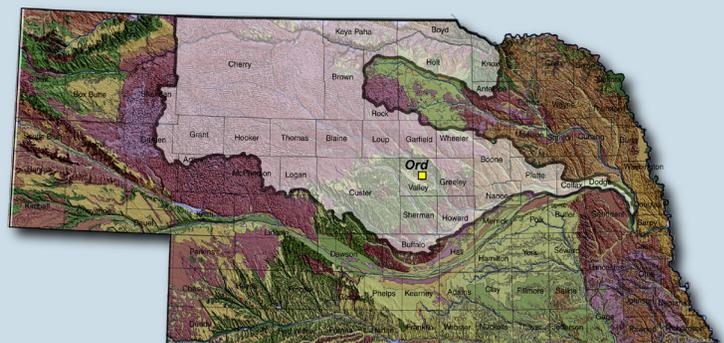
Ord, NE 68862

Telephone: (308) 728-3325

Fax: (308) 728-9967

E-mail: tom.klanecky@nebraska.gov

Ord field office jurisdictional area

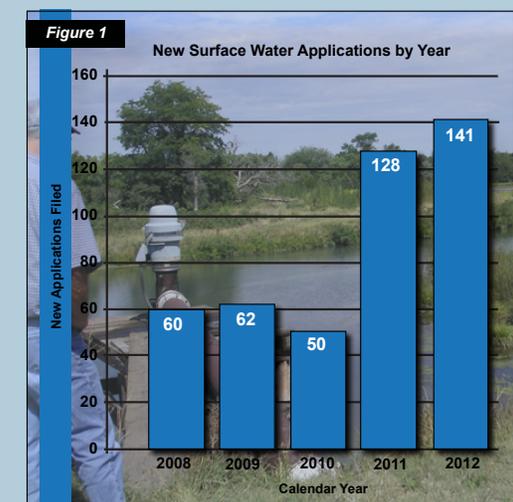


Duties of the Permits and Registrations Division

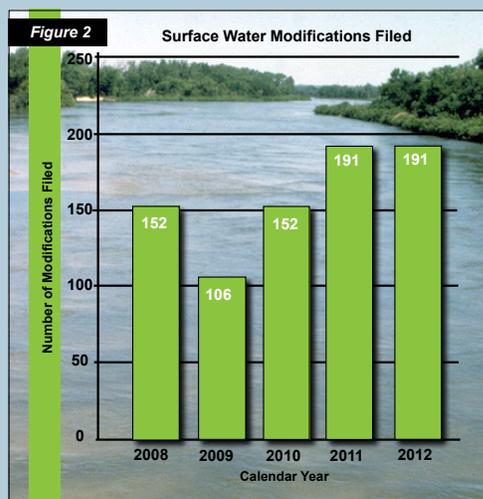
By Tracy Zayac

The Department of Natural Resources' **Permits and Registrations Division** encompasses many of the duties of the Department's former Water Administration Division. The Permits and Registrations Division includes four sections: surface water permits, groundwater permits, groundwater well registrations, and change of ownership. Each of these sections handles a portion of the water-related regulatory and record-keeping duties statutorily assigned to the Department.

The **surface water permitting section** of the division deals with permitting the use of water from streams and reservoirs in the state. This includes, among other activities, appropriation of surface water for a variety of uses; storage of surface water; and transfers of appropriated water to different locations. This section works closely with Department field offices in the administration of surface water appropriations according to Nebraska's prior appropriation system, as well as with the Department's Dam Safety Section in the inspection and certification of dams used to impound surface water. With the recent onset of drought during the irrigation season, along with this year's efforts to permit almost 300 unpermitted reservoirs in the



Republican River Basin, the surface water section has seen a large influx of new applications and requests to modify existing appropriations. Since 2010, the number of new applications has increased dramatically over previous years: although only 50 new applications were filed in 2010, a total of 128 new applications were filed in 2011, and 141 were filed in 2012 (Figure 1). The rate of filings to modify existing appropriations has varied less widely over the past several years: compare a recent low of 109 modifications filed in 2009 to a high of 191 modi-



fications filed in both 2011 and 2012 (Figure 2). By the end of June 2013, however, 101 new applications and 275 modifications to existing appropriations had already been filed.

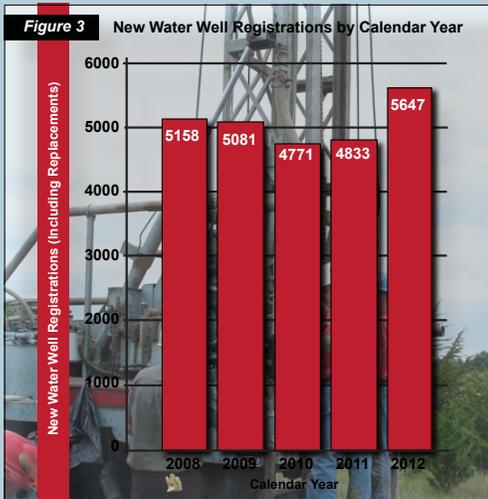
The year-to-date numbers for 2013 clearly show the importance of surface water to Nebraska's water users.

The **groundwater permitting section** handles certain kinds of groundwater transfers prescribed in state statutes and that are separate from the groundwater regulatory matters handled by local natural resources districts. These are municipal and rural domestic transfers; industrial transfers; transfers of groundwater out of the state; and geothermal resources development. In addition, this section works with well owners who want to construct a new public water supply, industrial, or irrigation well that will be located less than the statutory well spacing distance from another public water supply, industrial, or irrigation well. Like surface water, the recent drought has also prompted a number of irrigators to construct new wells to supply their crops, leading to a recent increase in the volume of inquiries about applications for waivers of statutory well spacing requirements. In the first half of 2013, for example, four well-spacing permit applications were filed, compared to only one application filed in 2012, and two filed in 2011.

The **groundwater well registrations section** maintains the Department's records on water wells in the state. This section processes new water well registrations, modifications to existing registration records, and water well decommissioning. Not surprisingly, the number of new water wells being

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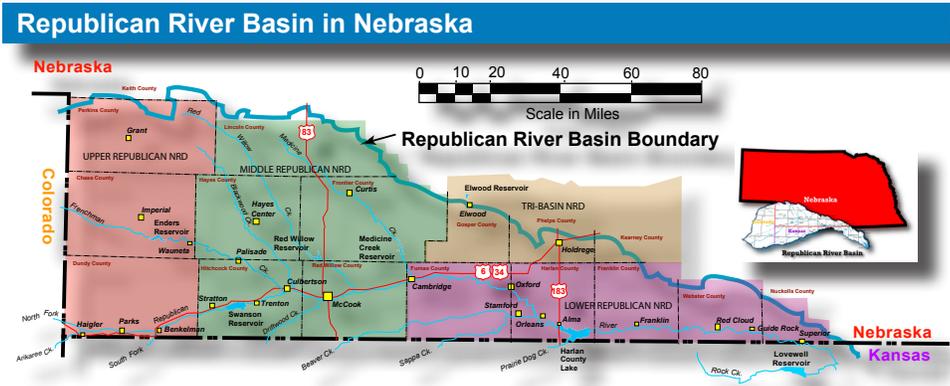


registered, particularly irrigation wells, has increased during the recent drought. For example, registrations of new and replacement water wells increased by 17% from 2011 to 2012 (Figure 3), and 2013 seems to be on track to continue this trend. Through the end of June 2013, the Department had already received 2,833 registrations of new or replacement water wells. The rate of irrigation-well registration has matched the increase in overall well registrations.

Change of ownership assists all of the abovementioned sections by updating ownership information for surface water appropriations and groundwater wells. This section also receives information such as name and address changes. This ensures that the Department's records remain current.

REPUBLICAN RIVER BASIN COMPACT CALL YEAR

On January 1, 2013, the Department of Natural Resources' Director Brian Dunnigan ordered that a Compact Call Year is in effect. Water diversions were restricted for the protection of Republican River Compact allocations. Under this call, water in the river could not be diverted for use or stored for future use and must pass through to Kansas. On June 27, 2013, the Department issued opening notices to senior appropriators. To maintain Compact compliance the Department continued monitoring throughout the irrigation season with opening and closing notices sent as conditions warranted. The integrated management plans jointly developed by the Department and the local natural resources districts are key components of managing the water in the basin.



Recent Retirees

Two long-term employees recently retired after over 90 years of combined service to the State of Nebraska. Allan Ruhge retired in June 2013 after nearly 54 years with the State. At the time of his retirement he was the Department's Survey Section Chief and he previously held various survey positions. Steve Gaul began working for the state July 19, 1976, and he retired on the same day 37 years later. Steve was the Department's Comprehensive Planning Coordinator and had previously served as the Planning Assistance Division Head along with a variety of other positions. Al and Steve will be greatly missed. The Department wishes them both happy retirements and many adventurous travels!

Director Brian Dunnigan congratulates both retirees.



Left- Allan Ruhge retired in June 2013 after nearly 54 years



Right- Steve Gaul retired in July 2013 after 37 years

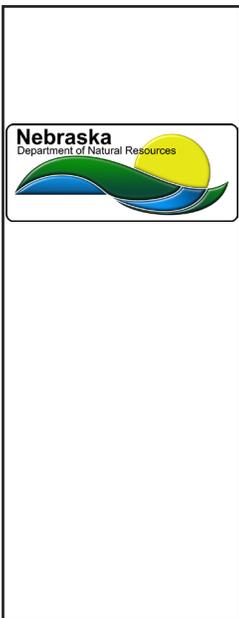
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The *Nebraska Resources* is a quarterly publication of the Nebraska Department of Natural Resources. We welcome your comments and suggestions.



Look for the
NEW DNR Website!
Coming this winter!

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