



# Republican River Accounting: How It's Done

## Annual exchange of data about water supply and use in the Republican River Basin with Kansas and Colorado

*This is the first part of an anticipated four-part series that will explore how Nebraska, Kansas, and Colorado work together to administer the Republican River Compact (Compact) and how Nebraska uses Compact accounting data to help manage water and forecast future water availability in the Republican River Basin. Part One describes NeDNR's participation in the annual data exchange, which occurs every April.*

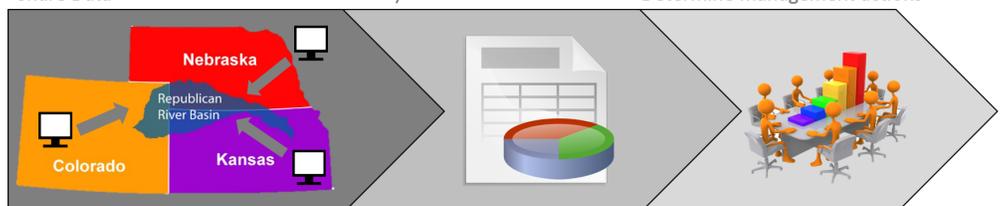
By Kari Burgert

April 15 – to Nebraska Department of Natural Resources (NeDNR) staff this is not just Tax Day. April 15 is the Republican River Compact (Compact) annual data exchange deadline. On or before this deadline each year, the states of Nebraska, Colorado, and Kansas exchange data about supplies and uses of Republican River Basin water in each state for the purposes of Compact accounting. Similar to income tax accounting, we spend months before the April 15 exchange date gathering and processing the data required to assess compliance with the Compact. To obtain information about the water supplies and uses within the Republican River Basin of Nebraska, we contact individual water users, power districts, irrigation districts, natural resources districts (NRDs), the US Geological Survey, and the US Bureau of Reclamation, among other sources.

Following the April 15 exchange, we switch gears as accountants from compiling data from our own state to processing data from all three states. Review of all three states' data and completing groundwater model runs will take place over the next several months. When all three states have completed their review of the 2016 data, the Compact Administration will take action to approve the 2016 Compact accounting. Each state's accounting data is used to assess its compliance with the Compact, following compliance tests outlined in the Compact Administration's accounting procedures.

How does the annual data exchange affect water planning, regulation, and management in Nebraska? Following procedures outlined in each NRD's integrated management plan, the data from all three states help NeDNR and the NRDs determine what water management actions are needed and assist with forecasting future water supplies for the Republican River Basin.

1. Share Data
2. Analyze Data
3. Determine management actions



# 2017 Marks 50 Years of Floodplain Management

By Mitch Paine, CFM

This year, we celebrate 50 years of floodplain management in the state and remember back to when the Nebraska Legislature enshrined into law the need for floodplain management to keep our communities safer from flooding.

The Nebraska Legislature passed the Nebraska Floodplain Regulations Act in 1967, as LB893, which predates the establishment of the National Flood Insurance Program in 1968. The Act established the authority for floodplain management in the Soil and Water Conservation Commission, the predecessor to NeDNR. The Act directed the Commission to create a floodplain management program, to establish minimum standards for land use regulations in floodplains, and to create flood maps.

The Act also instructed the Commission to provide assistance to local

governments and other government entities. LB893 acknowledged the importance of floodplain management and consisted of three parts. The first part stated that the Commission should delineate floodplains of all watercourses and evaluate the potential for flooding.

The second part directed the formulation, administration, and enforcement of regulations based on collected technical

data. The third part of the Act included a requirement to continuously update and revise regulations when new data becomes available or physical conditions change.

The Commission adopted specific objectives for its activities:

- Preventing loss of life and property damage
- Reducing public emergency spending
- Encouraging cautious development of areas within floodplains
- Preventing structures built that would increase flood heights
- Protecting landowners and potential buyers from purchasing particularly vulnerable property in a high flood hazard area
- Minimizing development that would require expensive protective measures like reservoirs and levees
- Counteracting the impediments to community growth caused by flooding history.

The responsibility for enforcement of floodplain regulations rests largely in local political jurisdictions under the Act, but the state often stepped in and issued floodplain development permits in the absence of local action in the early years. Additionally, the Commission gave responsibility to local governments to educate their citizens about flood hazards as well as to prepare plans for their jurisdictions.

In 1972, as the state reorganized the many soil and water conservation districts, reclamation districts, irrigation districts, mosquito abatement districts, and others into the 24 natural resources



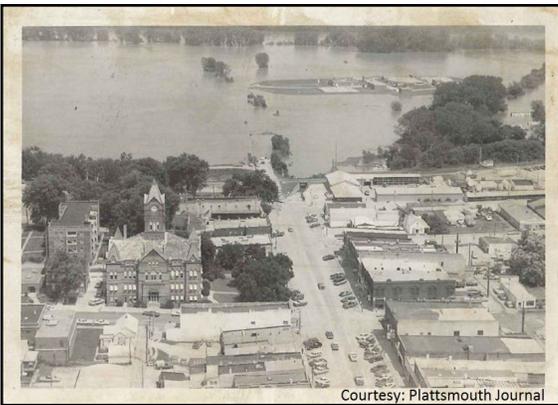
Kenesaw flooding, June 14, 1967.  
Credit Olsen, NSHS

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## Floodplain Management Continued

districts, and the Soil and Water Conservation Commission became the Natural Resources Commission.

The Natural Resources Commission existed alongside the Department of Water Resources, which at the time held the responsibility for water rights for irrigation, power, and other purposes. The DWR had permitting responsibility for floodplain development permits.



Courtesy: Plattsmouth Journal

Plattsmouth Flooding, June 14, 1984.  
Credit Plattsmouth Journal

In 1982, both the Natural Resources Commission and the Department of Water Resources introduced floodplain management bills into the Legislature, via state senators. The following year, Senators Wagner and Peterson introduced LB35, which made the Natural Resources Commission the lead agency on floodplain management. The Commission was granted authority to coordinate floodplain management activities, conduct educational outreach, provide technical assistance to local governments, prepare maps, adopt minimum standards for local floodplain regulations, and serve as the primary repository for flood data. The Department of Water Resources was given authority to

regulate counties that had not been mapped. The new system, as prescribed by LB35, streamlined floodplain management and better complied with the NFIP and other federal programs. In introducing the bill, Senator Wagner explained to the committee that the bill was based on four principles:

- Maps showing where flood hazards are located are the cornerstone of effective floodplain management. Maps must then be made available to the public.
- Cities, villages, and counties should participate in the National Flood Insurance Program to protect property with flood insurance.
- The State should provide information and should encourage the implementation of local floodplain management programs and regulations.
- Planning and construction of state-owned facilities should serve as examples of proper floodplain management practices.

The bill passed and signed by then Governor Kerrey in 1983. Essentially, under the 1967 law, the state thought that flood maps could be created relatively quickly for all parts of the state and then communities would be eager to adopt regulations based on the maps. Unfortunately, the map production involved more work than expected and only a small percentage of the state was mapped by the 1980's. Communities also were not keen on implementing additional regulations. The state had stepped in and regulated development in floodplains in mapped communities, but realized that the program was more effective if local jurisdictions took the role on themselves. LB35 acknowledged that and provided for

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## Floodplain Management Continued

full local control of floodplain management programs and state entities stepped back to study flood risk and provide technical assistance to communities. This technical assistance helped communities implement their local floodplain management regulations. After

this legislation, the rate of participation in the National Flood Insurance Program increased and by the end of the 1990's, over 300 communities had joined the program.

In 2000, LB900 was passed to merge the Natural Resources Commission and the

Department of Water Resources into one agency, the Department of Natural Resources. The bill maintained the Commission, made up of 16 members, and gave the responsibility of floodplain management to the director of NeDNR and the agency's staff.

Today, NeDNR continues to map floodplains, provide technical assistance, and coordinate the NFIP at the state level. Nebraska has 409 participating communities that have agreed to manage development in their floodplains. The relationship between NeDNR, local governments, other state agencies, and federal agencies continue to grow stronger to support our floodplain management programs throughout the state for the next 50 years.



Nebraska State Historical Society

Flooded Boathouse circa 1950.  
Credit: Nebraska Historical Society

## Process Improvement Projects Continue



NeDNR's Process Improvement Coordinator, Madeline Hoffer, works with project team members Curt Inbody and Cheryl Byler to create a process map. A process map is used to define the steps in a work process so that waste can be identified. In future meetings, the project team will brainstorm ways to improve the process, and create a new process to better serve the needs of the Department's customers.

# Rules and Regulations: What and Why?

By LeRoy Sievers

Statutes authorize and sometimes require administrative agencies, such as NeDNR, to create rules (or regulations). Rules have the same effect as laws, which means failing to follow a rule potentially can have severe consequences.

Rules essentially can be adopted by administrative agencies because of a delegation of the legislative function by a legislative body, like the Unicameral. Consequently, as in the case of statutes adopted by the Unicameral, to be effective a rule must not violate the state and U. S. Constitutions and it must have been adopted by adhering to the steps prescribed. After adoption, rules become a part of the Nebraska Administrative Code (N.A.C.) and are published on the Secretary of State's website as well as on the adopting agency's website.

NeDNR has adopted rules relating to Procedure (NAC Titles 264, 454, 459, 460 and 461), Floodplain Management (Title 455), Ground Water (Title 456), Safety of Dams and Reservoirs (Title 458) and Surface Water (Title 457).

Typically the process for amending a rule is instituted by suggestions from the public, a senator, a regulated entity (like an irrigation district) or the Department itself. Initially, a revision to a rule is created, circulated to interested persons, and comments and suggestions solicited and reviewed upon receipt. Changes are

incorporated into the draft and either recirculated for additional comments or the process proceeds to more formal steps.

The process for formal adoption of rules and their amendments includes a variety of steps and potential road blocks. After a publishing notice and sending information to the legislature, a hearing is held at which anyone may offer testimony or written comments on a rule proposal.

An agency, if it decides to move forward, must summarize the testimony and comments given at the hearing and provide written responses. After the hearing only non-substantive changes may be made to a draft rule or amendment or else it is necessary to begin the process from the start. The proposed rule or amendment is then reviewed by the Attorney General's Office and, if approved, it is then reviewed by the Governor. If approved by the Governor, the proposed rule or amendment goes to the Secretary of State, where it becomes effective shortly after receipt.

Anyone is welcome to offer suggestions to the Department for rule changes. Changes that can improve the clarity of the rules and make them more efficient and user friendly are especially helpful.



ClipartFest

## In Memoriam



NeDNR has lost a dear friend and a long-time valued colleague. Josh Lear started working for the Nebraska Natural Resources on July 1st, 1991. On March 13<sup>th</sup>, 2017, he passed away from complications following surgery.

Josh was enormously respected in the GIS community, not only in Nebraska but throughout the United States. He was instrumental in multiple GIS projects across Nebraska, involving state, local, and federal agencies. Perhaps the pinnacle of Josh's career was his role as principal National Hydrography Dataset (NHD) steward for the State of Nebraska. Josh spent many years refining the NHD

program in Nebraska and ensuring the NHD data met the business needs for the State. Josh went above and beyond his duties as steward, as he had a vision and the knowledge/skillset to use the NHD as a linking mechanism for primary NeDNR datasets such as surface water rights, dams, and stream gages. Such a linked geospatial system would add value to existing NeDNR datasets and enable a better understanding of the relationships between varied types of water features.

Through the years, Josh has contributed greatly to the development and acquisition of digital elevation data. Josh was a key player in building a statewide 30-meter digital elevation model from USGS contour lines, which would become a part of the National Elevation Dataset (NED), the authoritative elevation set for many years. When LiDAR data became available, Josh learned everything he could about acquisitions, data intricacies, and national standards. He helped write a business plan for statewide LiDAR acquisition. And as result, the final acquisition of LiDAR to complete Nebraska's statewide coverage is underway.

Josh openly shared his knowledge and skillset with many others, including numerous UNL students who were able to build a foundation in GIS understanding and skills through Josh's leadership, and ultimately move on to successful GIS careers. He was a former Soil and Water Conservation Society (SWCS) member, was a member and former officer of the Nebraska GIS/LIS Committee, NeDNR's designee for the Nebraska GIS Council, and a long-time member of Toastmasters.

Josh also was a very caring, devoted family man, who often talked about his hikes in the mountains with his boys, Kyle, Tyler, and Spencer; the numerous boy's baseball, basketball and football games he attended with his wife Cindy; and in the recent years the joys of being a grandpa to two wonderful grandkids. Josh was very friendly, humorous, and a GIS guru. He will be sorely missed by all those who have known him over these many years. Josh had a contagious smile and a sense of humor that made you forget about all your problems.

## In Memoriam



NeDNR lost a long-time friend and colleague with the recent passing of Pat Diederich, P.E. on April 13, 2017. Pat was the Chief Engineer of the Department's Dam Safety Section for nearly ten years when he resigned in January 2013 to start his own private consulting business. After leaving the Department, he continued to work to make dams safer across Nebraska, assisting several dam owners with their restoration projects. Current Dam Safety Chief Tim Gokie remembers Pat as someone who wanted to help people. "Pat was a civil engineer, and civil engineers are trained to solve problems to make the world a better place to live. That is what Pat enjoyed doing; he enjoyed solving difficult problems in order to help people."

## NeDNR hosts Western States Water Council Annual Meeting

In April the Nebraska Department of Natural Resources hosted the Western States Water Council's (WSWC) annual meeting in Nebraska City at the Lied Lodge. Members from throughout the western half of the country gathered to present information on a broad list of topics including water resources, water quality and legal concerns.

All of the presentations are available on the WSWC website: <http://www.westernstateswater.org/spring-2017-183rd-council-meetings/> Governor Pete Ricketts addressed the group on the last morning.

It wasn't all work for the group. On the first day, participants were treated to a boat tour on the Missouri River where NeDNR director Jeff Fassett and WSWC Executive Director Tony Willardson made some new friends (right). WSWC consists of representatives appointed by the governors of 18 western states who work together to foster cooperation among the member states.



## Floodplain Management



Mitch Paine, second from left, and Katie Ringland, second from right, accept the award last week in Kansas City.

The NeDNR Floodplain Management section was nominated by Sonja Wood, a flood insurance training manager for FEMA Region VII, for the Tom Lee State Award for Excellence in Floodplain Management. Katie Ringland and Mitch Paine accepted the award on behalf of the section at this year's Association of State Floodplain Managers national conference in Kansas City. Ms. Wood nominated NeDNR for the section's depth of work on all four aspects of flood risk: floodplain mapping, floodplain management, flood insurance coordination, and flood mitigation. NeDNR Floodplain Management section has previously won the award in 2007 and 2005.

# New Websites Ready for Launch

On May 15, NeDNR will launch two new websites.

Our main website, [dnr.nebraska.gov](http://dnr.nebraska.gov), has gotten a complete overhaul with the services of Nebraska Interactive. All of the data you have come to expect is still there, but it is available in a more efficient manner.

A new search bar on the first page has drop-downs with frequently asked questions, taking you to that information with minimal clicks.

We have pared down the amount of publications available on the website, but have included a request form to receive electronic versions of older publications by email.

Our interactive maps are quicker and easier to use.

NeRAIN has also received a makeover.

Those who report data to NeRAIN will need to use their email addresses for their login. Passwords will remain the same, but will need to be reset.

NeRAIN is a cooperative program with NeDNR; Community Collaborative Rain, Hail & Snow Network; Nebraska Environmental Trust; Weather Ready Nation; and the Nebraska Association of Resource Districts.

Daily reports of precipitation are gathered and reported throughout the state.

The websites are scheduled to launch at 2 p.m. on the 15th. There may be some lag time on some of the components. If you experience difficulties after Tuesday, May 16, please call NeDNR at 402-471-2363.

