

## Republican River Accounting: How It's Done

### Recent Revisions to the Republican River Compact Accounting Procedures

*This is part two of a four-part series exploring 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.*

By Kari Burgert

Accounting Procedures and Reporting Requirements (Accounting Procedures) were created and adopted by the Republican River Compact Administration (RRCA) as a consistent means of calculating whether each state is using only the portion of supply that it was entitled to (a quantity referred to as an "allocation").

Nebraska, Kansas, and Colorado agreed to the original Republican River Compact accounting procedures through the Final Settlement Stipulation dated December 15, 2002. The accounting procedures have been updated over time as technology and information have improved and as clarifications have been needed.

The latest update to the accounting procedures, approved at the May 25, 2017, Special Meeting of the RRCA, included revisions based on the August 26, 2016, RRCA resolutions regarding the operations of Harlan County Lake in Nebraska, the Colorado Compact Compliance Pipeline and Colorado Compact Compliance efforts in the South Fork subbasin, and accounting for non-irrigation season canal diversions for groundwater recharge projects.

The RRCA "Resolution Approving Long-Term Agreements Related to the Operation of Harlan County Lake for Compact Call Years" shifts the timing of Nebraska's compliance efforts. In the October preceding a compact call year, Kansas may request a portion of the projected shortfall for delivery to Harlan County Lake by June 1. Nebraska can begin supplying water necessary for annual compliance following Kansas' request or hold portions of the water necessary for annual compliance in Nebraska for delivery in later years, as requested by Kansas.

Accounting procedures edits were also made to ensure that all evaporation from water supplies in Harlan County Lake that are intended for use in Kansas other than by Kansas Bostwick Irrigation District are charged solely to Kansas. The remaining evaporation from Harlan County Lake is split between Nebraska and Kansas based on proportional diversions of Nebraska Bostwick Irrigation District and Kansas Bostwick Irrigation District.

The Nebraska Resolution also contains a change that helps Nebraska by allowing more



Republican River photo by  
Kathy Benson



## Republican River Continued

opportunities for our compact compliance calculation to be averaged over a five-year period with the accounting point downstream to the streamflow gage near Hardy, Nebraska, rather than on a two-year period with the accounting point at Guide Rock, Nebraska.

The accounting procedures were also modified based on approval of the RRCA “Resolution Approving Operation and Accounting for the Colorado Compact Compliance Pipeline and Colorado’s Compliance Efforts in the South Fork of the Republican River Basin” and resulting discussions. The accounting procedures adopted in May 2017, include the outflow of the Colorado Compact Compliance Pipeline as the Colorado Resolution Water Supply Credit. The accounting procedures also more clearly define how the unused Beaver Creek subbasin allocation is calculated during water-short years as mandated in the Final Settlement Stipulation.

Another RRCA resolution adopted in August 2016, allows for an increase in calculated canal return flow during non-irrigation-season diversion projects for groundwater recharge. As outlined in the revised accounting procedures, this will reduce the consumptive use charged to Nebraska by approximately 10% of the canal headgate diversion for these recharge projects.

Outside of the edits necessary to implement the August resolutions, the accounting procedures now include the methodology to add Nebraska’s share of the unused Colorado allocation to Nebraska’s allocation during two-year compliance averaging above Guide Rock.

Several benefits to Nebraska have been realized in 2017 as a result of latest resolutions and accounting procedures. The less-stringent trigger to use five-year averaging for accounting above Hardy, Nebraska, rather than two-year averaging for accounting above Guide Rock, Nebraska, has been met in 2017. Nebraska will receive 100% credit for the water supply increases in 2017 provided by the NCORPE and Rock Creek Augmentation projects and the Enders Reservoir release initiated by the Republican Basin NRDs, rather than splitting these supply increases with Colorado and Kansas.



Harlan Dam Outlet  
photo by Lori Arthur