

Nebraska State Report Big Blue River Compact Annual Meeting

May 13, 2021

Welcome

I would like to welcome everyone who is joining us online today for the 2021 Big Blue River Compact annual meeting. For the second year we're holding this meeting by video conferencing due to the COVID pandemic. We are hopeful and optimistic that next year, we will be able to meet in person once again.

I would also like to extend thanks to the Kansas Department of Agriculture for the work they do in the Basin and for the help they provide in the administration of the Compact. I would also like to thank all of the natural resources entities, agencies, and producers who continue to work to protect the water resources of the Big Blue River Basin.

Water Supply Conditions

In the 2020 water year, the water supply conditions were more than adequate for both the Big Blue and the Little Blue River Basins in Nebraska. The precipitation was between 90% and 125 percent of normal for the year in both Basins. As a result, there were no calls for surface water administration, and all target flows pertaining to the Blue River Compact were met.

The 2021 water year to date indicates that both the Little Blue and Big Blue basins have received at least normal precipitation with areas in the headwaters of both basins having received between 150% and 200% of normal precipitation.

Overview of Statewide Water Planning

The Water Planning Division continued to collaborate Nebraska's twenty-three natural resources districts (NRDs) on integrated water management across the state. Significant achievements in 2020 included adoption of new voluntary Integrated Management Plans (IMPs) for the Little Blue River Basin portion of Tri-Basin NRD and the Middle Niobrara NRD, initiation of the first Republican River Basin-Wide plan, and the roll out of a new Decision Support System for determining when excess flows are available in the Upper Platte River Basin.

In addition, the Water Planning Division worked with Republican Basin NRDs on updates to their IMPs and with NRDs in the Niobrara, Blue, and Nemaha basins on development of voluntary IMPs. When these voluntary IMPs are complete, all of the NRDs in the state will have integrated management plans in place. The Department also continued implementation of existing IMPs for 19 NRDs in the Upper and Lower Platte, Republican, Niobrara, Blue and Missouri Tributaries Basins.

Basin-wide Planning

Twenty-twenty marked the first year of reporting for the Republican River Basin-Wide Plan, which became effective in March 2019. The plan was developed with a twenty-five-year planning outlook that includes measurable hydrologic objectives to monitor progress towards goals and objectives. In 2020 two Basin-wide meetings were held. The first meeting was held in February to discuss activities in the Basin from 2014-2018, and the second meeting was held in November to review activities from 2019. As part of the goals and objectives for the plan, the Department has partnered with the National Drought Mitigation Center at the University of Nebraska Lincoln, and the four Republican River Basin NRDs to begin planning a drought scenario exercise for the Basin.

The second 10-year increment basin-wide plan for the over-appropriated portions the Upper Platte River Basin was initiated in September 2019 and was the product of a three-year collaborative planning process between the five Upper Platte NRDs, the Department and a diverse stakeholder advisory committee. An important part of this planning process was to utilize technical analyses and stakeholder input to adjust and adapt the first increment goals for the second 10-year increment plan. Efforts to convert several models that are used throughout the Upper Platte Basin began as the Platte Over Appropriated Committee (POAC) beings to look forward to the 2023 Robust Review. The Robust Review analyzes the hydrological impacts of new or expanded permitted activities within the Basin. The year was capped off with the finalizing of the Platte River DSS public website and web-based dashboard, which provides streamflow and excess flow information in near real-time on the Platte River.

Work and coordination also continued towards implementation of the Lower Platte River Basin Water Management Plan. This basin-wide plan was developed voluntarily by the seven Lower Platte River Basin NRDs along with the Department and was adopted in 2018 and provides a 5-year accounting framework to track Lower Platte Basin stream depletions at a sub-basin and NRD scale. Ongoing modeling efforts in the Basin seek to use Airborne Electromagnetic (AEM) data to help more accurately describe groundwater availability and flow. The Department and the Lower Platte Basin Coalition have been working with HDR to develop a Basin-wide drought planning table-top exercise that is based off the triggers in the Lower Platte River Drought Contingency Plan. The tabletop exercise is to be held in summer, 2021.

Integrated Water Management in the Blue River Basins

Integrated management planning in the Little Blue and Big Blue River Basins has continued to progress since our last Compact meeting.

Little Blue River Basin Planning

In mid-April of 2020, Tri-Basin NRD's voluntary IMP for the portion of the district in the Little Blue River Basin became effective and implementation continued for the Little Blue NRD's voluntary IMP. The Department views the Little Blue Basin IMPs as an important first step in improved coordination and communication between NRDs, leading to more

holistic water management across the basin. Both IMPs have action items to promote data sharing, cooperative development of data and tools, collaborative research/studies, and resolution of data discrepancies between the NRDs.

Big Blue River Basin Planning

IMP development continued to progress in the Upper Big Blue River Basin. As we reported last year, the IMP process for the Upper Big Blue NRD is unique as it is the first time that the Department, the Nebraska Department of Environment and Energy and a NRD have coordinated development of both a water quality plan and water quantity plan. This was essentially accomplished by holding a collaborative public participation process to concurrently develop goals and objectives for both a 319 water quality plan and a voluntary IMP. Voluntary IMP writing, a public hearing process and adoption of the Upper Big Blue NRD are subsequent steps slated for 2021.

Progress was also made on voluntary IMP development for the Lower Big Blue NRD. The first two stakeholder meetings for the plan were hosted by HDR, Inc. via video conferencing and were well attended. An additional stakeholder meeting is planned for 2021, with a public hearing process and adoption of the voluntary IMP also possible in 2021.

Voluntary Water Use Reporting

To compliment integrated management planning activities, the Department continues to utilize our voluntary online water use-reporting tool that is currently being used by water users throughout the State of Nebraska. We continue to be pleased with these response rates, which shows interest from the community in collaborative monitoring of surface water use. The Department will continue requesting this data across the State moving forward.

Legislative Updates

The ninety-day, First Session of the 2021 Legislature is scheduled to conclude June 10, 2021. No bills directly affecting water resources management in the Basin are pending. However, one bill pertinent to the Basin was enacted by the Nebraska Legislature since the last compact meeting. Sections of LB632, effective Nov. 14, 2020 and codified as *N.R.S.* §§61-225 to 61-229, require the Department to evaluate the flood issues that occurred in 2019 and identify cost-effective flood mitigation strategies for incorporation into a free-standing addition to the State Flood Hazard Mitigation Plan of the Nebraska Emergency Management Agency. Work on developing the plan has begun at this time and completion is required by July 1, 2022.

Water Sustainability Funds

The Nebraska Water Sustainability Fund, established in 2014, accepted its sixth round of applications in July 2020. The Department reviewed all of the applications and moved seven forward to the Nebraska Natural Resources Commission. The Commission

approved six of those applications, which resulted in over \$8.1 million dollars of new funding for water sustainability projects and studies.

Sponsors of projects that were previously approved by the Commission, submit annual reports that briefly describe project status, accomplishments, and plans for the next year. The annual reports are available to the public on the Commission’s website, which we will provide in our written report (<https://nrc.nebraska.gov/water-sustainability-fund-reports>). The seventh round of applications for the Water Sustainability Fund must be submitted between July 16 and July 31, 2021. The Commission is anticipating that over \$12.8 million will be available for new applications.

Three groundwater recharge projects have been completed in the Little Blue NRD, when combined, they received over half of a million dollars in Water Sustainability Funds. In addition, the Fund supports a major project for Nitrate and Uranium mitigation in the City of Hastings, Nebraska; the funded amount of this project is well over four million dollars. The Upper Big Blue NRD was awarded \$105,000 for, and has developed, water use allocation software. Our written report provides a table that summarizes these four Water Sustainability Fund projects located within the Blue River Basins.

Table 1. Summary of Water Sustainability Fund projects in the Blue River Basin

Water Sustainability Fund Projects in the Little Blue and Big Blue River Basins					
<i>Year Funded</i>	<i>Project Score</i>	<i>Project Number</i>	<i>Applicant</i>	<i>Project Title</i>	<i>Funded Amount</i>
2015	47	4117	City of Hastings (Utilities)	Aquifer Storage and Restoration Nitrate and Uranium Control Project, Hastings, Nebraska	\$4,410,000
2016	42	4146	Little Blue NRD	Instream Weir Stabilization/Recharge Pilot Project	\$100,979
2016	42	4147	Little Blue NRD	Low-head Embankment Stabilization/Recharge Pilot Project	\$100,153
2017	44	5197	Little Blue NRD	LBNRD Oxbow Reconnections for Groundwater Recharge	\$389,820
2019	47	5241	Upper Big Blue NRD	UBBNRD Allocation Software	\$105,000

Dam Safety

The Nebraska Dam Inventory contains 621 dams located within the Little Blue and Big Blue River Basins that undergo periodic inspections by the Department. In 2020, the Department conducted 173 dam inspections throughout these areas, including all 13 high hazard potential structures. The most common reoccurring problems found at dam sites were large trees and rodent holes in the embankments; wave erosion; and rusted, corrugated metal pipe conduits running through the dams.

Conclusion

I would like to thank Kansas for continuing the partnership to work together to proactively manage waters the Blue River Basin. I will now turn it over to Justin Hladik who will give a report on Nebraska water administration, which will be followed by the NRD reports.