



The Nebraska-based Upper Republican Natural Resources District recently purchased 3,260 irrigated acres, watered by 24 pivot systems, that will be permanently retired to help boost stream flows and aid compliance with the Republican River Compact between Nebraska, Colorado, and Kansas.

Nebraska Project Poised to Aid Interstate Water Co

Nebraska's Upper Republican Natural Resources District (URNRD) has approved the largest project of its kind in the state to reduce water consumption and enhance stream flows when necessary to stay in compliance with the Republican River Compact, which includes Kansas and Colorado. The goal of this project is to ensure that farmers do not face a widespread irrigation shutdown during a drought if additional water is needed to meet Republican River Compact requirements. The district in February approved the purchase of approximately 4,000 acres, 3,260 of which are irrigated, that will be permanently retired from irrigation. Only during dry times, when additional water is needed to stay in compliance with the compact, a lesser amount of water than what historically has been pumped to irrigate the 3,260 acres will be piped into an adjacent creek that flows into the nearby Republican River in southwest Nebraska. The project could potentially close the largest expected gap between actual water consumption and what is allowed under the compact that the district may face during dry years—roughly 10,000 acre-feet.

The total cost of the project, including land and installation of an approximately 10-mile pipeline, is expected to be between \$12 million and \$15 million. If the project relied solely on permanent retirement of irrigated acres to achieve a similar result, the cost would be roughly

twice as much.

"This project is a cost-effective way to stay in compliance with the compact while protecting our water resources and keeping farmers in the basin in business," said Jasper Fanning, PhD, URNRD's general manager.

Under the Republican River Compact, 49 percent of river water is allocated to Nebraska, 40 percent to Kansas, and 11 percent to Colorado. The augmentation project is one of several steps envisioned in new water management plans crafted cooperatively by natural resources districts and the state to stay in compliance with the compact in both the short and long term. Other actions include reducing pumping districtwide so that depletions to stream flow caused by ground water pumping do not increase. If drought and state projections suggest action is needed to stay in compliance, the URNRD will now be able to use water from the newly purchased land instead of interrupting ground water supply to area farmers near the Republican River and its tributaries.

"We believe this project has the potential to significantly aid efforts to stay in compliance with the Republican River Compact and the local integrated management plan," said Brian Dunnigan, director of the Nebraska Department of Natural Resources. "This is the type of initiative needed to help farmers throughout the Republican River Basin."



Jasper Fanning, Upper Republican Natural Resources District general manager, explaining augmentation project during public meeting. Photo courtesy of Russ Pankonin/Imperial, Nebraska, Republican Newspaper

Compact, Protect Producers

Total project costs are being funded with Nebraska's unique occupational tax on irrigated land that natural resources districts, which manage ground water in the state, are authorized to levy. Originally authorized in 2007 and modified in 2010, the occupational tax is intended to fund projects aiming to comply with formal water management plans, such as those in place in the Republican River Basin that seek compliance with the compact.

Fanning said the URNRD, which was the first in the state to regulate ground water use, remains committed to water conservation. The conservation-minded project will help with the ongoing transition into tighter water regulations that will become more economically feasible as drought-resistant crops and other technologies are developed. "It doesn't negate the need for reduced water use to stay in compliance," Fanning said of the project. "The district . . . will continue to be at the regulatory forefront of ground water management."

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A U.S. Geological Survey stream flow gauge on Rock Creek in southwest Nebraska will measure increased flows expected from the augmentation project.