Groundwater depletions for water-short year projected at 36,800 AF

By Russ Pankonin

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Next year's forecast of groundwater depletions by the Department of Natural Resources for the Republican River Basin contained both some bad news and some good news.

The bad news comes in the projected groundwater depletions over what's allowed under the compact for 2017 in the basin—40,600 acre feet (AF). Of that, the Upper Republican will be responsible for 17,400 AF of the depletions.

On a positive note, the basin finished 2016 with a positive balance of 3,800 AF, leaving 36,800 AF to be made up.

The natural resources districts in the basin can use augmentation pumping to make up the shortfall.

Secondly, Kansas has only requested that 20,000 AF be delivered into Harlan County Lake by June 1.

That leaves Kansas with the right to request the balance of 16,800 AF in 2017. If they don't need or request that additional water next year, then the NRDs in the basin will not have to pump the augmentation projects to cover that deficit.

Kansas would retain rights to that water in the future, for a maximum of five years.

These conditions are all part of a permanent agreement Nebraska, Kansas and Colorado reached earlier this year. The new agreement addresses compact compliance issues.

Upper Republican NRD Assistant Manager Nate Jenkins said that under the agreements in place last year, the NRDs would have needed to offset the entire deficit with augmentation pumping.

Under the new agreement, Nebraska still calculates the projected depletions due to groundwater pumping in the basin.

Then, Kansas must indicate to Nebraska how much water they want delivered to Harlan County Lake for use by their irrigators in the Kansas Bostwick Irrigation District.

This year, Kansas said they needed 20,000 AF of the 36,800 AF deficit in Harlan by the June 1 deadline to meet their needs.

Based on the preliminary projections, Jenkins said the NRDs began pumping in the Lincoln County augmentation project Monday. He said they are only using 10 of the 30 wells in the project.

He said the URNRD will likely start pumping from the Rock Creek augmentation project this week with five to seven of the 10 wells.

Over the course of the next six months, Jenkins said it's likely the pumping can add the necessary water in Harlan to meet Kansas' request.

He noted some of the 20,000 AF could be offset by natural flow and rain occurrences. That could potentially reduce the amount of pumping needed to meet the 20,000 AF request.

That would generate significant savings to the NRDs by not having to pump all 36,800 AF. At the cost of $45/AF, the savings would be well into six-figures.

Jenkins explained that the quantity of water Kansas carries over each year decreases by 20 percent annually, if not used the following year.

The water-short year was triggered because Harlan did not hold the necessary 119,000 AF, he added.

As a result, the depletions are projected over the last two-year period. When Harlan exceeds the 119,000 AF, depletions are figured over a five-year average.