

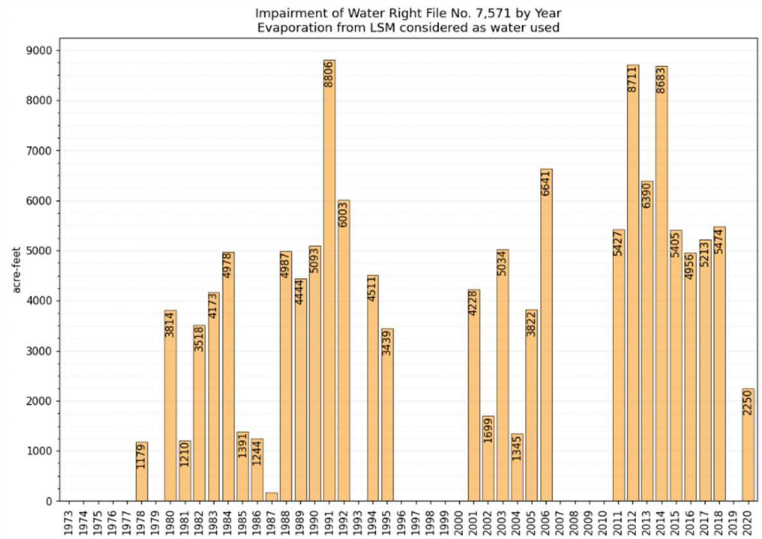
## KDA-DWR Proposed Plan to Address Impairment at Quivira National Wildlife Refuge

In a 2016 Final Impairment Report, the Chief Engineer of the Kansas Department of Agriculture, Division of Water Resources found that the US Fish and Wildlife Service’s (Service) water right at Quivira National Wildlife Refuge, Water Right File No, 7,571, which depends on surface water flows in Rattlesnake Creek, was routinely impaired by upstream junior groundwater pumping that was depleting streamflow in Rattlesnake Creek.

In response to a request to secure water by the US Fish and Wildlife Service, filed during 2023, for its Water Right, File No. 7,571, a supplement to the report made minor modifications to the evaluations that had served as the basis for the report and extended the timeframe for which data was included in the report to 2020. The 2023 supplement to the 2016 Final Impairment Report uses results of hydrologic computer modeling and gaged streamflow records and indicates that the impairment confirmed in 2016 is continuing and that groundwater pumping by water rights junior to and upstream from the Quivira National Wildlife Refuge continues to deplete flows in Rattlesnake Creek by 400-600 acre-feet per year, as measured at the USGS Zenith gage.

Kansas law provides, in K.S.A. 82a-706b, “It shall be unlawful for any person to prevent, by diversion or otherwise, any waters of this state from moving to a person having a prior right to use the same . . . Upon making a determination of an unlawful diversion, the chief engineer or the chief engineer's authorized agents, shall, as may be necessary to secure water to the person having the prior right to its use . . . Direct that the headgates, valves or other controlling works of any ditch, canal, conduit, pipe, well or structure be opened, closed, adjusted or regulated...”

Accordingly, the Chief Engineer is required by law to curtail water use by the junior water rights that are impairing the Service’s right. This document is intended to provide information as to planned water rights administration. **It is not an order of the Chief Engineer.**



Administration of water rights found to be impairing Water Right File No. 7,571 would be undertaken pursuant to the Kansas Water Appropriation Act, K.S.A. 82a-701 *et seq.* and would be implemented by orders of the Chief Engineer. Each affected junior water right holder would receive an individual order setting out the quantity of water they would be allowed to divert under their water right(s) as part of this administration plan.

As can be seen from the graphic above, which illustrates the magnitude of the impairment in acre-feet between the years 1973 and 2020, the impairment is an issue that has existed for a number of years. Full resolution of the impairment would likewise take multiple years.

The administration plan would be implemented in stages, with the goal of fully resolving the impairment by 2035. The administration plan would be in effect for an initial five-year period of 2025 – 2029 and within that time period would implement water quantity allocations that would halt additional stream depletions and would constitute a first step

toward fully satisfying Water Right File No. 7,571. This time period would also allow for addition non-administrative, voluntary actions to be taken to limit addition reductions in the subsequent five-year period.

Authorized quantities of the water rights to be administered would be reduced based upon an administered water right’s priority date and its impact to Water Right File No. 7,571. These factors would be weighed equally to determine reduced allocations for each water right. **Allocations would be based on authorized quantities of water rights, regardless of past usage.**

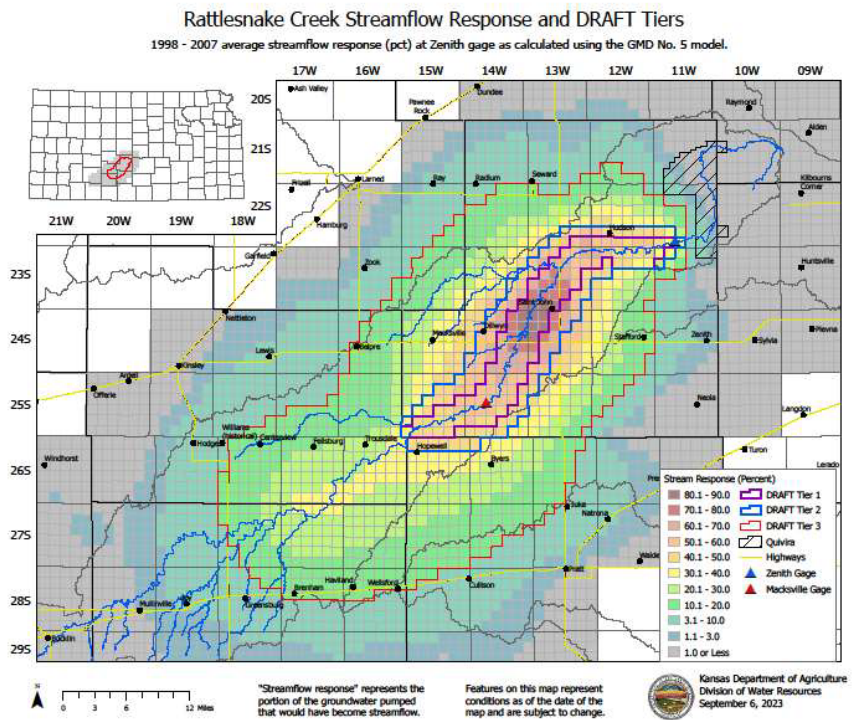
The impact of each water right on Water Right File No. 7,571 would be determined based on each water right’s geographic location within the Rattlesnake Creek Streamflow Response Region and three tiers developed using the Big Bend Groundwater Management District No. 5 hydrologic groundwater model. Administration of water rights based on the three-tier system is outlined below:

**Tier 1:** Area outlined in purple on the map, where total groundwater pumping is modeled to have 30% or greater impact to streamflow in Rattlesnake Creek within one calendar year of pumping.

**Tier 2:** Area outlined in blue on the map, where total groundwater pumping is modeled to have 30% or greater impact to streamflow in Rattlesnake Creek within one to five calendar years of pumping.

**Tier 3:** Area outlined in red on the map, where total groundwater pumping is modeled to have less than 30% impact to streamflow in Rattlesnake Creek within the next one to five years of pumping, but greater than 10% impact over the longer term.

It is the Chief Engineer’s intention to allow multi-year quantity allocations in Tiers 2 and 3. **All existing multi-year flex accounts for water rights to be administered would be vacated, under this proposed plan.**



Kansas Department of Agriculture  
Division of Water Resources  
September 6, 2023

The Chief Engineer also intends to allow allocations to be transferred within tiers and from a higher-impact tier to a lower-impact tier. Flexibilities that would be available depending on tier location are set forth in the table below:

	Tier 1	Tier 2	Tier 3
Allocation	1 Year	5 Year	5 Year
MYFA eligible	No	No	Yes
Safe Deposit Withdrawals	No	No	Yes
Annual Quantity Potential	Allocation	Water Right Quantity	Water Right Quantity + MYFA or SDA (Within 5-year allocation)
Same User Transfer	Within Tiers 1, 2, or 3; from Tier 1 to Tier 2; and from Tier 2 to Tier 3	Within Tiers 2 or 3 and from Tier 2 to Tier 3	Within Tier 3
Transfer between Users through CKWB	Within Tiers 1, 2, or 3; from Tier 1 to Tier 2; and from Tier 2 to Tier 3	Within Tiers 2 or 3 and from Tier 2 to Tier 3	Within Tier 3

In all tiers, water rights permanently retired by individual water right owners can be treated as allocation transfers, and the allocations originally assigned to those water rights would be credited to the water right owner who permanently retired the right. Water right owners would be eligible to apply credited allocations to other water rights they own with a point of diversion in an area of lower impact. Allocations originally assigned to water rights that are permanently retired water rights by public entities, such as Big Bend GMD No. 5, would be credited toward the entire Rattlesnake Creek Streamflow Response Region through adjustments to allocations, which may occur annually.

The following table sets out the number of water rights to be administered within each tier, divided into categories based on the beneficial use of those water rights:

Water Rights	FPR	IND	IRR	MUN	REC	STK	THX	Total
<b>Tier 1</b>	-	2	99	2	5	2	-	110
<b>Tier 2</b>	-	3	111	-	2	4	2	122
<b>Tier 3</b>	1	5	1,119	8	13	15	-	1,161
<b>Total</b>	1	10	1,329	10	20	21	2	1,393