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Sent: Wednesday, February 24, 2021 4:45 PM

To: rhonda.hutton@ks.gov; [Tessa Wendling](#); [Tim Boese](#)

Subject: Wichita ASR Phase 3, Aquifer Maintenance Credits

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Wichita ASR Phase 3 Permit Application

Feb 24, 2021

All water pumped out of the aquifer by ICT is consumptive use, it is exported out of the Equus Beds to ICT, with some sold to others who do not actually hold a water right in the Equus Beds.

Irrigation is not totally consumptive, as even DWR considers a portion of irrigation water pumped will return to the aquifer by percolation.

Virtually all domestic household use in the rural Equus beds area is not consumptive, as it is returned to the groundwater via septic system percolation. But No credit is given.

If an irrigator does not pump his full allocation because of abundant precipitation, or mild weather and low evaporation/transpiration, or rotation to low water use crops, or applying soil health Practices that retain soil moisture,

that unused, unpumped water remains in the aquifer and is available for future use by any and all water right holders, including ICT, but no credit for future use by the irrigator is given.

In reality, Part of the credit for a currently "full" aquifer should also be attributed to increased irrigation efficiency, and responsible stewardship by irrigators.

ICT is asking that a current surface water right, the Little Ark River, can be converted to a future groundwater right, specifically to be withdrawn from the most concentrated over appropriated area of the Equus Beds, i.e., the Wichita Well field.

When ICT traditionally relied heavily on this well field in the past, it created a 15 mi. in diameter cone of influence or depression. Taking 19,000 AcFt yearly, to a total of 120,000 AcFt, over 8-10 years when other water users will doubtless be heavily utilizing their own water rights as well, will exert a massive draw down impact on the well field aquifer and cone of depression.

Such impact will no doubt strongly exacerbate the movement of the intrusions of the Burrton salt water plume, and the Arkansas River salt front, threatening to permanently impact increasingly larger areas of the aquifer with water that can only be considered to be polluted, and over time reduce its usability for area homeowners and irrigators, and result in the loss of property values, and incomes without compensation.

If approved This proposal would set a precedent, without benefit of any current enabling state regulation or statute, that would doubtless be applied statewide.

DWRs unabashed support for this proposal against the considered opposition by the GMD2, would appear to be a direct effort to undermine the authority of the GMD that it was always intended to have under statute as a local authority, and thus threaten the ability to act by all the GMD's in the state.

In rebuttal City Attorned McLean stated that a 1 ft. drop in the Minimum Index level in my well in Index Cell #35, Just N of the Arkansas River,

would have no impact on the salinity of the aquifer under my land. That was pure speculation as none of the data or modeling created by Wichita or DWR to support this permit application addresses its impact on the Burrton Salt Plume nor the Arkansas River salinity intrusion into the Equus Beds.

It stands to reason that if during and 8-10 year drought, with the city pumping its 40,000 AcFt, vested water rights, an additional 19,000 Ac. Ft of ACM's a year(with a maximum total of 120,000 Ac. Ft.) plus any Earned Phase II physical recharge credits, while at the same time other Municipalities, Industrial, and Irrigation water rights holders are also exerting heaving pumping demands on the aquifer due to drought conditions, that the cone of depression centering on the Wichita Well Field will be greatly increased. Such a lowering would by force of gravity, and natural water movement thru the unconsolidated aquifer, increase water flow downgradient to fill the void created in and around the well field area. Such an increase will be characterized by both volume and velocity, the steeper the gradient, the faster the flow. The effect will ripple out creating increased flow volume and velocity towards the well field, even on the fringe of the aquifer.

This combined with the well documented ("losing stream" effect of the Gar-Peace Creek H.U.C. segment), the pressure of the saline river water pressing into the aquifer would, with even only a 1 ft. Index Well drop, draw and force the saline water faster and farther into the aquifer and under land adjoining, along, and near the river, creating long term, if not permanent damage to water quality, and negatively impacting both its irrigation and domestic usability far into the future.

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