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To: Water Transfer Hearing Panel

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Re: R-9 transfer – please use science to do it right

Why am I interested in the R-9 transfer? My wife and I own 725 irrigated acres...

425 of those acres are in South Brown Township, Edwards County. Our farm headquarters and my son's home are located on S/2-09-26-19... ½ mile south of R-9's sections 4 and 5-26-19. Our original farm purchase, the N/2-21-26-19... is located one mile south of our headquarters. Actions taken at R-9 do affect my property rights, water rights and future financial security.

I am a dues paying member of the Water Protection Association of Central Kansas. I am currently a member of the Ground Water Management #5 board... representing Kiowa County. I have a personal and fiduciary interest in water quantity and quality in the entire GMD #5 area. Any views expressed in this dialog are personal and do not represent the views of Water PACK or GMD #5.

GMD #5 is unique in the state of Kansas... the aquifer is sustainable! In the early nineties... GMD #5 employed a common sense hydrologist... he saw water over-development as a real threat to the area. The district manager and board agreed with this threat and closed the district to further development. The water levels do fluctuate; but, they are reasonably stable.

This stability makes GMD #5 a destination for agricultural business ventures requiring water and stable feed supplies. This stability makes GMD #5 a target for municipal water users with inadequate local water supplies. Maintaining the stability and quality of the GMD #5 water supply is essential.

GMD #5 has invested in excess of $750,000 in a seven layer water model to provide the best information possible to everyone involved with water in the Big Bend of the Arkansas. Balleau Groundwater Inc., a world class water modeling organization built the model. The model was peer reviewed by the State of Kansas, Kansas Geological Survey and US Fish and Wildlife Service. The tool exists... use it!

Why R-9 is so important... Hays and Russell acquired a large block of real property and the associated water rights to stabilize their municipal water situations. I do not question the R-9 transfer effort. I do question the quantity of water being transferred.

The R-9 Ranch consists of deep dune sand... with water infiltration rates in excess of 5" per hour... when it rains. The water holding capacity of these sands is less than 1" per foot of soil. This lack of water holding capacity caused the operators of R-9 to pump the water permits to the limit to obtain mediocre crop production. This lack of water holding capacity results in much of the pumped water and rainfall returning to aquifer... aquifer recharge.

Water pumped into a north bound pipeline is 100% lost to the local (R-9 Ranch)... no aquifer recharge.

The R-9 has been planted to permanent grass cover. The water consumption by the grass cover is almost the same as a dryland corn or alfalfa crop... nominal recharge.

It is my understanding... the modeling used by Hays and Russell... used recharge computations based on irrigated row crop production; not, permanent, dryland grass cover. This approach would over state annual recharge and under state the impact of water removed from the R-9 Ranch. I understand the safe removal amount goes to 2,500 acre feet; instead of the proposed 4,800 acre feet.

A world class model is available. This transfer action will set the standard for future transfers. Please use science to do it right.

R-9 water quality and quantity issues... the original acquisition of R-9 Ranch appeared almost "spur of the moment" to outsiders. The public meeting in the early days indicated the water was all top quality and quantity.

The truth is water in the south-half is loaded with nitrides, sulfides and who knows what else... it seems to grow fair crops; however, it literally rots galvanized center pivots and steel well casings in five years. This water would require serious treatment BEFORE it can be delivered to customers.

The water in the north-half is better quality; however, the saturated thickness of water is less and tends to decline seasonally in July and August when usage is highest.

The best water on R-9 is located directly north of our headquarters in the south east corner of the ranch.

DWR has tentatively approved the "merger" of wells across R-9. This process allows four irrigation wells to be consolidated into one municipal well. The result is 10 or 12 municipal wells disbursed around the ranch.

These "merged" wells would pump for an extended period (possibly year round). The extended pumping period increases the cone of depression. The increased cone of depression reaches out further from the point of diversion and takes longer to recover.

A typical irrigation well is pumped hard in July, August and September. The aquifer then has nine months to rest and recover. Municipal wells pumped year round do not enjoy this same recovery period and thus have a greater local impact on the aquifer.

The cone of depression occurs when the water in the alluvial sand and gravel is withdrawn by mechanical means... pumping. The easiest example I know, is a straw in a shaved ice Slurpee... the straw pulls the semi-liquid fluid in and a cone forms in the shaved ice. Small straw... suck slow to avoid brain freeze... small cone of depression. Big straw... suck hard... big brain freeze... big cone of depression. Big brain freeze caused by big brain fart!

Over withdrawal of precious water causes problems for Hays/Russell and neighboring producers in Edwards County.

R-9 and Water Conservation Area... I have been told my concerns about a WCA for R-9 are mote; but, it is a real concern to me. WCA is a program created by DWR. WCA is intended to allow the combination of multiple water rights to "conserve" water.

Properly structured... a WCA on R-9 would allow the 10 or 12 municipal wells disbursed over 8,000 acres to become six wells disbursed over 960 acres at the extreme east margin of R-9. The intense pumping from these six wells would create havoc in our local area from draw down and cone of depression.

This potential WCA configuration makes perfect sense for R-9. The water quality and quantity of this area are very desirable. The need for extensive pretreatment is eliminated. The need for an extended collection system is eliminated.

The north bound pipeline starts at the heart of the concentrated well field. An efficient and economical delivery system for water customers along the pipeline route and Hays and Russell.

Summary of R-9 comments... Hays and Russel are to be commended for their conservation efforts. The per capita water consumption of both communities ranks among the lowest in the state. The ability to share water with their neighbors along the pipeline route through a "water quality assurance district" is noble and good business. I think 4,800 acre feet on a rolling average is excessive... based on science based information.

I would like assurances the water would be withdrawn from multiple wells disbursed over the entire R-9 Ranch.

If Hays/Russell needs and or wants more water... they can buy more water rights and use the existing delivery system... and maintain a sustainable water supply. The science is available to determine the amount of water that should be transferred on a long term basis... without damaging to Big Bend Aquifer.

This transfer process will set a precedent for all future water movement out of the Big Bend aquifer... please use the best science available and preserve our water resource for future generations.

This should be science based decision... NOT a politically expedient one!

Thanks for your time!