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Big Bend GMD #5

ANOTHER VIEW

Page 1 concerns the draft LEMA plan and "THE MODEL"

\*\*\* Since October 7, 2017, Stafford County has received no rain (5 months)

Yearly rainfall for the Macksville Gage 22.69" (Below Average)

Yearly rainfall SW corner of Stafford County 21.1" (Below Average)

RSC area is in a severe/extreme drought

Yet the RSC has gained base-flow since November with no rain or snow

"THE MODEL" says that irrigation depletes aquifer 30,000-60,000 AF each year

When the average stream-flow of the RSC of 27,000 AF is added to average modeled irrigation depletion of 45,000 AF and that total is annually flowing at the Zenith Gage, QNWR will be helplessly flooded every year

Stream flow is 6-10% base-flow and 90-94% surface runoff

What is lacking? SURFACE RUNOFF from RAINFALL

In the 1950's, the RSC was completely dry during the summer months and the affect of irrigation water use was nearly zero (Few wells with no pivots to apply the water)

There were no annual flow measurements for anytime during that era and what flows that did occur occasionally would not have added up to "THE MODEL"'s minimum predicted annual flow of 30,000 AF (Irrigation Depletion) plus surface runoff each year (Kent Lamb estimate. ..less than 9,000AF per year flow at the Zenith Gage)

These conditions have occurred regularly, monthly, and yearly for decades

"THE MODEL" doesn't tell the whole story accurately or fairly

\*\*\* "THE MODEL" identified an area in the seahorse as "high stream response" (area highly affecting stream-flow)

The GMD has defined safe yield as 3,000 AF in a 2 mile radius of a point of diversion

Most of the LEMA area has points of diversion exceeding 6,000 AF that were filed before the GMD was even formed

Many of those areas are showing pumping and groundwater level declines

The high stream response area should not face reductions greater than those of the excessive diversion areas in the LEMA boun

Page 2 is a different LEMA approach to solving the RSC Impairment

\*\*\* The augmentation well field should be located west of the Big Salt Lake

The well field would be a single line of wells running north and south

The Army Corps of Engineers established in the mid 1950's that outflow load from QNWR into the Ark River to be 200 tons of salt daily

The well field location would intercept the natural groundwater flowing from the west into QNWR the Big Salt Lake

The well field would reduce the groundwater hydro-logic pressure in the area and thus reduce the flow of high salt content water that surfaces east of the Big Salt Lake  
(REMEDITATION and CLEANUP SITE)

The underground transmission pipe would run south to the QNWR point of diversion or the RSC

Connected to the pipe on the north end would be another pipe that would run north around the Big Salt Lake returning the pumped water to the RSC north of QNWR

A block (valve) would be on each end of the water pumping system to control the direction of flow to where the water is needed (South for QNWR water use...North to re mediate the salt pollution)

This plan is for the needed augmentation for QNWR, but more importantly for the remediation of the salt pollution in the Ark River

This project should involve the Army Corps of Engineers, KDHE, The Nature Conservancy, and others with interest for the planning, funding, implementation, and operation of this project

The Corps of Engineers tried to fix the salt pollution problem 65 years ago without success.

Now is the time and the opportunity to solve the salt contamination of the Ark River and provide a permanent water source for QNWR

All end guns should be removed ASAP

I think that all MDS wells should be shutdown until the above project is completed and operational

