

KENEDY COUNTY GROUNDWATER CONSERVATION DISTRICT

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Dr. Sanjeev Kalaswad
Director of Conservation &
Innovative Water Technologies
Texas Water Development Board
P.O. Box 13231
Austin, TX 78711-3231
Send via email: sanjeev.kalaswad@twdb.texas.gov

Re: TWDB Implementation of H.B. 30
Designation of Brackish Groundwater Production Zones

Dear Dr. Kalaswad,

These comments are submitted on behalf of the Kenedy County Groundwater Conservation District (Kenedy District) on the matter referenced above. The District has been told that you and the outside consultant will consider stakeholder comments, even those filed after the end of the formal comment period. The District is asking that the TWDB consider these comments and the District's request that no brackish groundwater production zone (BGPZ) be designated in the Evangeline Aquifer within the District.

The District covers all of Kenedy County and portions of Brooks, Hidalgo, Jim Wells, Kleberg, Nueces, and Willacy counties. Landowners created the District to ensure that their ethic of good stewardship of the land extends to that most valuable resource, groundwater, virtually their only water source. King Ranch, Armstrong Ranch, Kenedy Trust, Kenedy Memorial Foundation, El Coyote and La Paloma ranches, Santa Fe Ranch, and the Yturria family ranches are in the District.

The sole source of water in the District is groundwater. No major inland surface water bodies exist within the District. The District encompasses approximately 3,028 square miles and is part of groundwater management area 16 (GMA-16). The primary economic activities within the District are oil and gas production and agriculture, primarily livestock. While the District does not include a large-sized city or township, it is close to the City of Kingsville, which has traditionally relied on groundwater supplies. Agriculture and livestock demands are of critical importance within the District. In addition to livestock and agricultural uses, groundwater supplies for oil and natural gas production are important as well.

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Under H.B. 30, the TWDB is tasked with identifying and designating local or regional BGPZs in areas “with moderate to high availability and productivity of brackish groundwater.” (The TWDB has defined brackish groundwater as having greater than 1,000 milligrams per liter of total dissolved solids and less than 10,000 mg/L of TDS.) In order to be designated as a BGPZ, the area must be “separated by hydrogeologic barriers sufficient to prevent significant impacts to water availability or water quality” to fresh groundwater, defined as water with a TDS level of 1,000 mg/L or less. Pertinent to the District and these comments, if the area otherwise qualifies but serves “as a significant source of water supply for municipal, domestic, or agricultural purposes,” it may not be designated as a BGPZ. See H.B. 30, Section 3, amending Texas Water Code section 16.060.

The Kenedy District retained Dr. Venkatesh Uddameri who, with the assistance of the District’s general manager, Andy Garza, prepared the enclosed report to support this request. The overall goal of this study was to perform a preliminary assessment of groundwater quality within the Kenedy District and use existing data to evaluate the delineation of potential BGPZs. As the report states, it is imperative that delineation of the BGPZs is based on the best available data and existing science. Kenedy District commissioned this study in the spirit of fostering communications on this important topic with the overarching goal of developing initial ideas and recommendations with regards to BGPZs in the District.

Based on the data presented in the enclosed report, the Evangeline Aquifer within the District falls within the Texas Water Code section 16.060(b) (5)(B)(iii) exception to areas that can be delineated as BGPZs and thus should not be designated as a BGPZ. In summary, Dr. Uddameri and Mr. Garza have concluded as follows:

- The Evangeline Aquifer is the most prolific aquifer within the District and its vicinity. It is estimated that over 90% of the wells in the District tap into this aquifer. The Evangeline Aquifer has relatively good water quality and is important due to the lack of other water sources (particularly surface water sources) in the region. While pockets of brackish groundwater can be identified within Evangeline Aquifer, considerable heterogeneity with closely spaced wells exhibiting significant water quality variations is also evident from the available data. The aquifer has high transmissivity but relatively low storage. It is likely that high production from the aquifer would create a large cone of depression around the pumping zone. This aquifer behavior coupled with connectivity between fresh and brackish water zones and the significance of the aquifer to meeting the water demands in the region show that no BGPZ should be delineated within this aquifer, which serves “as a significant source of water supply for municipal, domestic, or agricultural purposes” within the District.
- The Chicot Aquifer exists as an unconfined formation within the District. Based on the attached initial analysis, a BGPZ can be envisioned along the coast in the Chicot Aquifer, only if projects are designed to mostly draw water from the Gulf of Mexico rather than the aquifer in the hinterlands. The quality of the water and the aquifer geology are not

conducive for a BGPZ in the western sections of the Chicot Aquifer.

- Existing data and the characteristics within the Burkeville Confining Unit and the Jasper Aquifer indicate that they could be delineated as BGPZs. Based on the attached report, it is the District's position, however, that only the Jasper Aquifer be designated as a BGPZ, with the Burkeville Confining unit serving as a necessary hydrogeological barrier that would minimize the effects on the overlying formations from production of the Jasper Aquifer.

We appreciate your consideration of these comments. The underlying data are available upon request. The District is available to assist you and your team in any manner you require on this important issue.

Sincerely,



Chuck Burns
President

Cc: District Board of Directors
Mr. Steve Young, Intera
Mr. Andy Garza
Mary Sahs, Esq.
Dr. Venkatesh Uddameri