November 24, 2015

Dr. Sanjeev Kalaswad, Director **via email: sanjeev.kalaswad@twdb.texas.gov**

Conservation & Innovative Water Technologies

Texas Water Development Board

P.O. Box 13231

Austin, Texas 78711-3231

Re: Input on HB 30 (Brackish Groundwater Production Zones)

Dear Mr. Kalaswad,

Thank you for the opportunity to provide input to the Texas Water Development Board (TWDB) regarding the identification and designation of local or regional brackish groundwater production zones pursuant to House Bill 30 passed by the 84th Legislature earlier this year. In the public meeting on October 26, 2015, the TWDB asked for input regarding defining several terms in the bill.

In identifying brackish zones, the TWDB specifically asked for input regarding defining “*hydrogeologic barriers* sufficient to prevent *significant impacts*”.

San Antonio Water System (SAWS) is currently developing a brackish groundwater desalination program in southern Bexar County, with the first phase of the project online next year. SAWS spent considerable time, effort, and expense to quantify the impacts of the program on others before beginning construction of the treatment facilities. The goal of this work was to quantify and determine if these impacts were significant. Ultimately, SAWS determined that our proposed project would not have detrimental impacts based on the results of the studies. While a determination of “significant impact” and “sufficient hydrogeologic barrier” is likely aquifer-specific, SAWS believes our studies are useful in identifying and designating appropriate brackish zones, particularly in the Carrizo-Wilcox Aquifer.

Specifically, the steps SAWS took included:

* Determined the general brackish water quality in the target aquifer (Wilcox) based on a review of oilfield geophysical logs in the general area of the project.
* Mapped the structure and net brackish sand thickness of the brackish target aquifer.
* Mapped the thickness of the aquitard (barrier) between the brackish aquifer (Wilcox) and overlying freshwater aquifer (Carrizo) to establish the aerial extent of the barrier and continuity.
* Conducted 48-hour pump testing of the brackish aquifer (Wilcox) while concurrently monitoring the water levels of the freshwater aquifer (Carrizo) and saw no water level decline during the pumping period.
* Conducted hydrologic modeling of the Carrizo-Wilcox based on pump test data to determine the potential water level decline (impact to the Carrizo) in the overall project area considering pumping would be for a period of 50 years.
* Provided geologic/hydrologic/water chemistry/geophysical log data to the TWDB (Brackish Resources Aquifer Characterization System (BRACS) Program)
* Considered the available options for concentrate disposal and chose a Class I Injection well over disposal in a surface water body to minimize impacts to others and the environment.

The above represents a brief overview of our study process. As noted above, the results were shared with the TWDB (through the BRACS Program) but we would be happy to provide specific data or discuss the above items in greater detail with TWDB staff and consultants. SAWS appreciates the opportunity to work with the TWDB throughout the study process and stand ready to assist in any way.

Sincerely,

