Legislation Text

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Presenter/Contact
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SUBJECT:

Approval of a resolution in support of HB 481 related to storage and recovery of potable water in the brackish portion of the Edwards Aquifer.

BACKGROUND / RATIONALE:

In May 2012, New Braunfels Utilities (NBU) completed a feasibility study that evaluated Aquifer Storage and Recovery (ASR) as a water management strategy for the utility (the "ASR Feasibility Study"). ASR is a rapidly-growing water resources technology that allows water utilities to store water in underground aquifers when it is available and recover that water when it is needed during times of drought, peak demand or emergency. There are currently over 500 ASR wells successfully operating in 21 states. In Texas, successful ASR facilities are owned and operated by El Paso Water, the city of Kerrville and the San Antonio Water System (SAWS). The SAWS ASR wellfield is one of the largest in the United States, with a recovery capacity of over 60 million gallons of water per day.

The NBU Feasibility Study determined that ASR could be a very valuable management strategy which would allow NBU to more-fully and more-efficiently use its existing water rights from the Texas Commission on Environmental Quality (TCEQ), its contract for stored water in Canyon Reservoir and its groundwater permits from the Edwards Aquifer Authority (EAA). The Feasibility Study recommended that the most viable location for an ASR wellfield would be in the brackish (Saline Zone) portion of the Edwards Aquifer near the New Braunfels Regional Airport.

In 2015, the 84th Texas Legislature passed Rider 25 to H.B. 1 that appropriated $1 million to the Texas Water Development Board (TWDB) for demonstration projects to support ASR and other innovative water storage technologies. Based on a competitive process, the TWDB selected three projects for funding, including the ASR data-collection project sponsored by EAA and NBU.

The EAA/NBU demonstration project has recently been completed, and the draft final report is being reviewed by the TWDB. Based on hydrogeologic, water quality and geochemical analyses of data gathered from a wireline core and a monitoring well, NBU has confirmed that ASR is very viable in the Saline Zone of the Edwards Aquifer at and near the New Braunfels Regional Airport.

In 2017 NBU and EAA jointly developed an Interlocal Agreement (ILA) that documents the procedures, studies and monitoring required for NBU to implement an ASR program in the Saline Zone of the Edwards Aquifer without detrimentally affecting water levels or water quality at the Comal and San Marcos Springs. Using the authorizations and requirements contained in the ILA, NBU is currently permitting, designing and constructing a full-scale ASR demonstration well and three additional monitoring wells.

Source Waters for Recharge, Storage and Recovery.
Over the last 75 years, NBU has diligently developed a diverse inventory of water supply sources, including both treated surface water from the Guadalupe River and Canyon Reservoir, and groundwater from the Edwards and Trinity Aquifers. However, during times of drought, only about 50 percent of that water is available due to regulatory restrictions by TCEQ and EAA. ASR will give NBU the ability to store treated surface water and groundwater during times when excess water is available. The water to be stored will be drinking water directly from NBU's public water distribution system.

Needed Changes to the EAA Act.
When the EAA's enabling act (SB 1477) was passed in 1993 (the "EAA Act"), Legislators did not envision ASR-type projects. In the EAA Act the provisions related to aquifer recharge focus on recharge of water into the freshwater portion of the Aquifer using water from the Edwards Aquifer itself, or diversion dams and natural recharge features. Based on years of research (including the recently-completed TWDB project) and more knowledge about ASR's potential benefits to the region, EAA and NBU understand and agree that it is feasible and appropriate to store freshwater in the Saline Zone of the Edwards Aquifer through ASR wells. To greatly increase the efficiency of that recharge and storage, changes are needed to Section 1.44 of the EAA Act in order for water utilities like NBU to store water directly from the potable water distribution system into the Saline Zone of the Aquifer.

Needed Changes to Texas Water Code Section 27.051.
Likewise, changes are needed to Section 27.051 of the Texas Water Code (TWC) to allow utilities like NBU to store potable water from the public water distribution system. Currently the TWC provides that only Edwards Aquifer water and stormwater can be recharged into the Edwards Aquifer. Those provisions mean that NBU cannot recharge into an ASR wellfield any water directly from NBU's public water system because the drinking water in that distribution system is comprised of a blend of treated surface water from Canyon Reservoir and the Guadalupe River, and groundwater from the Edwards and Trinity Aquifers.

Importance of H.B. 481.
The changes proposed in H.B. 481 will allow NBU to recharge drinking water with a total dissolved solids (TDS) of less than 1,500 milligrams per liter (mg/L) into the Saline Zone of the Edwards Aquifer where the TDS is greater than 5,000 mg/L. This is important to NBU because it:

- Allows NBU to more efficiently manage its treated surface water and groundwater by storing excess drinking water when it is available; and
- Eliminates the need to make significant and costly modifications to isolate portions of NBU's water distribution system or to lay dedicated pipelines from NBU's Edwards Aquifer wells to the ASR wellfield.

As drafted, H.B. 481 specifies that domestic wastewater, municipal wastewater and reclaimed water cannot be recharged or stored.

ADDRESSES A NEED/ISSUE IN A CITY PLAN OR COUNCIL PRIORITY:
N/A

FISCAL IMPACT:

N/A

COMMITTEE RECOMMENDATION:
N/A

STAFF RECOMMENDATION:
NBU staff recommends approval of the resolution of support for HB 481.