Request for Proposals: Jacob's Well Options Assessment

About Texas Water Trade

Over the next thirty years, Texas' population is set to double. While the economic powerhouses of Texas—its cities and industries—are positioned to capture the water they need to enable this growth, the state's agricultural producers, its rural communities, and its environment are predicted to be less water secure than ever before. Avoiding this looming water crisis will require investments that transcend sectors and deploy innovative tools that work in Texas' pro-property rights culture. Texas Water Trade (TWT) was incorporated in 2018 in recognition of the scale of this challenge, with the mission of channeling the power of markets and technological innovation to create a future of clean, flowing water for all Texans.

About The Project

In May 2020, TWT launched the Texas Water Market Makers (Market Makers), a competitive program that awards technical resources to eligible conservation entities in priority regions across the state. The program steers resources to organizations with strong track records in land conservation and a commitment to integrate flow protection and restoration into their work.

Wimberley Valley Watershed Association (WVWA) was selected for our first cohort of Market Makers. TWT is assisting WVWA in assessing demand- and supply-side options for protecting continuous flow of at least 2 cubic feet per second at Jacob's Well, a beloved swimming hole in Hays County which issues from the Middle Trinity Aquifer. Jacob's Well is the headwaters of Cypress Creek, itself a critical cultural amenity for the Town of Wimberley. Flow at Jacob's Well provides roughly 20% of the baseflow to the Blanco River. Over the past decade flow at the Well has been observed to fall to 0 cfs numerous times—the first observations of its flow ceasing in recorded history. Based upon extensive groundwater modeling and review of instrumented wells in the area, it is believed that this cessation of flow is the result of increased demand in the Middle Trinity Aquifer from both exempt and non-exempt (municipal) wells.

TWT is now assisting WVWA in performing an initial options assessment for three potential strategies to protect flow at Jacob's Well: 1) shifting production from one municipal well completed in the Middle Trinity updip of the Tom Creek Fault Zone to an area downdip of the Tom Creek Fault Zone; 2) satisfying some proportion of future additional municipal demands from a reuse project using wastewater currently disposed of through land application; and 3) line loss reductions in a municipal utility distribution system in an area adjacent the Well.

About The RFP

TWT is seeking a qualified engineering firm to assist us in evaluating the relative cost and yield of these various options, and in identifying any "fatal flaws" that would undermine their feasibility. This is an initial options assessment which will be understood to be a high-level estimate based upon the limitations of publicly-available information and project scope.

Texas Water Trade is seeking competitive proposals for a qualified engineering firm to deliver the following services:

The Contractor will be expected to deliver:

- Task 1: An assessment of the operational feasibility and relative cost of shifting demand from a specific updip well to a new or existing downdip well in an area with a separate Certificate of Convenience and Necessity (CCN), including identification of the engineering or operational implications of interconnecting existing distribution systems and any permitting considerations for both CCNs;
- Task 2: An estimate of the available wastewater load that may be available for reuse to meet future additional demands in the Jacob's Well Groundwater Management Zone, as informed by current wastewater disposal methods and golf course irrigation demands;
- Task 3: An estimate of the potential yield and relative cost associated with line loss reduction in one municipal distribution system in the Jacob's Well Groundwater Management Zone. (There is no public information available on water loss for the system of interest beyond ten years of annual non-revenue water as reported to the Texas Water Development Board. Therefore the Contractor would be asked to estimate based upon system age and industry comparables.)

To inform WVWA's ongoing work until May 2022, TWT is seeking completion of these Tasks by no later than November 30, 2020.

To support this work, Texas Water Trade will provide the following inputs:

- historical flows in Jacob's Well
- characteristics of existing up- and down-dip wells in the Middle Trinity, including location, permitted and actual production volumes

- an initial assessment of the most conducive downdip wells to supplement current updip demands
- operating agreements between regional water users (both groundwater and wastewater)
- distribution system maps, where available
- non-revenue water reports
- Groundwater Conservation District usage reports from non-exempt users.

In selecting the Contractor, Texas Water Trade will consider competing firms':

- Demonstrated expertise in municipal distribution system operations and engineering
- Familiarity with the operational considerations of blending water from different groundwater zones
- Knowledge of distribution system efficiency assessment approaches
- Experience in developing estimated water budgets to identify opportunities for a "One Water" approach to regional water management
- Familiarity with the Texas CCN permitting environment.

Competitive proposals will include:

- An itemized breakdown of the cost for each of the three tasks as defined above
- A proposed timeline of completion
- Examples of at least 5 projects on which the Contractor has delivered technical services similar to tasks as defined herein
- Bios of the full consulting team.

Proposals will be accepted until October 1, 2020 and can be sent to Sharlene Leurig at leurig@texaswatertrade.org.