

QUARTERLY PROGRESS REPORT NO. 8 (CY 2018)
NBU ASR Demonstration Project

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From:
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Date:
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ARCADIS Project No.:
40256004.0000

Subject:
Quarterly Progress Report for the NBU ASR Demonstration Project (**Contract No. 1600011957**) for **October 1, 2018 through December 31, 2018**.

Introduction:

The New Braunfels Utilities (NBU) Aquifer Storage and Recovery (ASR) Demonstration Project is being partially funded by the Texas Water Development Board (TWDB) under Rider 25 to HB 1 (General Appropriations Act) of the 84th Legislature. The “Project” generally consists of: coordination with TCEQ; design for wireline coring in the brackish Edwards Aquifer; wireline coring; design of a monitor well in the brackish Edwards Aquifer; construction of the monitor well and collection of data; preparation of draft and final reports; and presentations on the Project.

The Project Contractor is the Edwards Aquifer Authority (EAA) and the primary Project Participant is NBU. The Project consulting and engineering team consists of Arcadis U.S., Inc.; ASR Systems, LLC; and INTERA, Inc. (the “Arcadis Team”).

The purposes of this Quarterly Progress Report are to explain what work has been accomplished during the reporting period, and to describe any potential or anticipated challenges.

Work Completed:

Task 1: Project Management. During this reporting period project management activities included communication with EAA and NBU, and among the Arcadis team. NBU and the Arcadis Team meet monthly to review progress on the project, and the Arcadis Team has internal conference calls at least once each month.

On October 10, 2018 and December 12, 2018 NBU, EAA and the Arcadis Team held Work Group meetings, as required under the EAA-NBU Interlocal Contract.

Task 2: Coordination with TCEQ. A coordination meeting with TCEQ was held at the TCEQ offices on September 18, 2018. TCEQ was briefed on the Project, as well as NBU’s plans for construction of a full-

scale ASR well on NBU property adjacent to the New Braunfels Regional Airport. TCEQ staff provided guidance on preparing an application for a Class V Injection Well authorization for a 5X25 experimental demonstration ASR well. Arcadis completed a draft of the TCEQ application in December 2018. NBU is currently reviewing the draft application package.

Task 3: Coring Design. Completed.

Task 4: Wireline Coring. Completed.

Task 5: Monitor Well Design. Completed.

Task 6: Monitor Well Construction and Data Collection. Monitor well construction for this Project was completed. The photograph below shows the above-ground facilities of the monitor well.



As part of the Work Group activities mentioned in Task 1, EAA performed work and conducted tests at other existing monitoring wells owned and operated by EAA. During the last quarter of 2018, EAA staff equipped five existing monitoring wells with pressure transducers, sampled multiple monitoring wells and performed flow testing in one of the wells (designated the "LCRA well"). The existing EAA monitoring wells were fitted with equipment to provide near continuous water level measurements across the saline/freshwater interface of the system in the area of Comal Springs.

In addition, multiple wells were sampled for various chemical constituents to improve the overall understanding of how the fresh water/saline water interface interacts in the area of Comal Springs. Finally, EAA staff utilized the services of BESST Inc., to perform downhole vertical and horizontal flow characterization and sample collection above and below the fresh water/saline water interface in the LCRA well. The results of this work effort will contribute to the quality and completeness of the background water level and water quality research performed by EAA staff in the area of Comal Springs and the NBU ASR site.

Task 7: Draft and Final Reports. Arcadis incorporated comments from EAA and NBU on the draft report. Arcadis delivered the draft report to the TWDB on December 18, 2018. When comments are received from the TWDB, Arcadis will complete the final report.

Task 8: Presentations. No papers or presentations were completed in this reporting period. In November 2018, Fred Blumberg submitted an abstract for an ASR presentation to the Capital Area Chapter of the TAWWA. If accepted, the presentation will be in February 2019.

Challenges Identified:

No challenges were identified during this reporting period.