

Drinking Water Treatment Plant Large-Scale Recharge Project

Albuquerque, New Mexico

Client

**Albuquerque Bernalillo
County Water Utility
Authority**

Highlights

- ◆ First permitted and operating potable recharge project in New Mexico
- ◆ 2020 NGWA Outstanding Groundwater Supply Project Award recipient
- ◆ Key part of the Water Authority's conjunctive management program
- ◆ Intended to establish long-term drought reserve



To achieve optimum well performance, DBS&A designed and oversaw installation of both the ASR and the vadose zone wells.

The Water Authority is implementing managed aquifer recharge projects (MAR) to allow for conjunctive management of surface water and groundwater resources using San Juan-Chama (SJC) Project water imported from the Colorado River Basin and diverted from the Rio Grande. The purpose is to recharge the Santa Fe Group aquifer system of the Middle Rio Grande Basin to establish a long-term drought reserve.

The Water Authority contracted with DBS&A to permit, design, and oversee the construction of the Drinking Water Treatment Plant (DWTP) Large-Scale Recharge Demonstration Project at the site of the existing SJC DWTP. The project is designed to recharge surface water, specifically SJC Project water, to the Middle Rio Grande basin aquifer using two methods: direct injection using an aquifer storage and recovery (ASR) well and infiltration using a vadose zone well.

DBS&A was the prime consultant for the recharge well installation phase of the project, then worked with Jacobs Engineering to provide support for the below ground project components, demonstration project start-up, and water quality sampling activities during the well equipping project phase.

Following construction, DBS&A conducted demonstration testing for effectiveness of providing artificial recharge to the Middle Rio Grande basin aquifer through both direct injection of potable water and infiltration. Recovered water, which is a mixture of groundwater and treated surface water, met all EPA drinking water and New Mexico groundwater quality standards.

This was the third full-scale underground storage and recovery permit issued in the State of New Mexico. The permit allows the Water Authority to recharge up to 5,000 acre-feet per year using this project, up to a maximum storage account of 50,000 acre-feet, and was recognized by the National Ground Water Association (NGWA) with its Outstanding Groundwater Supply Project Award in 2020.



Recharging up to 5,000 acre-feet of water per year that meets drinking water quality standards will make a significant contribution toward the Water Authority's goal of developing a 50,000 acre-foot drought reserve.



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