

## Bear Canyon Recharge and Large-Scale Aquifer Storage and Recovery Projects

Albuquerque, New Mexico

### Client

**Albuquerque Bernalillo County Water Utility Authority**

### Highlights

- ◆ Recipient of the first full-scale Underground Storage and Recovery permit in New Mexico
- ◆ Obtained grant funding
- ◆ Establishing long-term drought reserve
- ◆ Recharge demonstration using instream infiltration, vadose zone, and deep injection wells
- ◆ 2014 New Mexico Chapter of the American Council of Engineering Companies Engineering Excellence Award Winner; Water Resources Category
- ◆ 2008 New Mexico Chapter of the American Council of Engineering Companies Engineering Excellence Award Winner; Studies, Research and Consulting Services

For more than a decade, DBS&A has supported the City of Albuquerque and the Albuquerque-Bernalillo County Water Utility Authority (ABCWUA) in developing and implementing the Albuquerque Water Resources Management Strategy. In particular, DBS&A is leading ABCWUA's efforts to design and implement aquifer storage and recovery (ASR) projects for conjunctive management of the surface and groundwater water resources.

DBS&A developed an ASR feasibility study using instream infiltration to recharge the Middle Rio Grande Basin Aquifer and obtained grant funding from the State of New Mexico to design and implement the Bear Canyon recharge demonstration project. The Bear Canyon project was one of the first recharge demonstration projects to be permitted in New Mexico and the project was the first to receive a full-scale permit. The demonstration project included two recharge periods that were conducted in 2008 and 2009, and was a success, with the New Mexico Office of the State Engineer recognizing an initial storage account of 1,073 acre-feet of water.

The ABCWUA plans to operate the Bear Canyon project on an ongoing basis and full-scale operations will begin in fall 2014. The ABCWUA also plans to develop additional recharge projects. DBS&A is currently working on the design and implementation of the Large-Scale ASR Project, which will establish a long-term drought reserve using treated surface water from the ABCWUA's new drinking water treatment plant. DBS&A is providing permitting support, design, construction oversight, and coordinating with the New Mexico Environment Department and the OSE.

The Large-Scale ASR project includes recharge demonstration using vadose zone and deep injection wells at the ABCWUA's drinking water treatment plant, and retrofit of existing production wells for use as injection/extraction wells. Webster Well 1 was the first production well to be retrofitted, and a brief water quality test was completed using Webster Well 1 during the spring of 2013. DBS&A and the ABCWUA are seeking a demonstration permit from the OSE for the Large-Scale ASR project.



The success of the artificial recharge project was critical to demonstrate that aquifer recharge is a viable water management strategy.

