

## Water

### Water Resources

**Client**  
San Antonio Water System

**Location**  
San Antonio, TX, USA

## Water System ASR Program

### Project Highlights

- Aquifer Storage and Recovery (ASR) program
- First phase of the program involves developing a 227,305 CMD ASR facility and 17 wells
- Second phase of the program involves developing an additional 17 ASR wells and converting the facility into a 227,305-CMD potable water ASR facility
- Work included overseeing the work of five separate firms and providing project tracking and reporting services, as well as bidding assistance, managing drilling and testing activities, and report preparation
- We developed a web-based project control system and a program web site to facilitate project tracking and communications

### Project Description



The San Antonio Water System (SAWS) relies heavily on aquifer storage and recovery (ASR) technology to obtain sufficient water for its growing population. Both legislative and institutional requirements that limit withdrawals from the Edwards aquifer forced SAWS to evaluate alternative sources of potable water, including ASR. After assisting SAWS for 4 years in investigating the feasibility of ASR, SAWS selected CH2M HILL program manager for the utility's Aquifer Storage and Recovery Program.

SAWS' ASR program involves the development of a 227,305 CMD ASR facility in south Bexar County. The initial phase of the project will consist of 113,650 CMD groundwater production facility that will provide treated groundwater to the City of San Antonio through a 40-kilometre, 1.52-metre-diameter transmission pipeline. This project represents a significant step in reducing San Antonio's dependency on the Edwards Aquifer.

The first phase of the project involved the development of 17 wells on approximately 1,200 hectares of land acquired by SAWS, treatment facilities, a high-service pump station, and transmission pipeline. Of the 17 wells developed in the initial phase, six will be prototypical ASR test wells. All the wells will be developed for conversion to ASR wells in the future.

The second phase of the project, begun in 2003 and completed in 2005, consisted of developing an additional 17 ASR wells and converting the facility into a 227,305-CMD potable water ASR facility.

As program manager, CH2M HILL was responsible for overseeing design development by five separate firms. We were also responsible for a broad range of project tracking and reporting tasks, such as cost and schedule performance monitoring and reporting. CH2M HILL developed web-based project controls and a program web site to facilitate the project tracking and communications efforts.



CH2M HILL began providing technical support to SAWS since 1996. While the ASR program was in the planning stages, we oversaw test drilling in the Carrizo aquifer to verify findings of the Phase I ASR study completed by CH2M HILL in 1998. The test program included installing and testing four exploratory wells around the proposed ASR wellfield.

Our services during the Phase I ASR study included preparation of the testing program and contract documents, bidding assistance, managing drilling and testing activities, helping prepare the Phase I report, and working with multiple subcontractors performing geophysical logging.