

Carrizo Aquifer Storage and Recovery - Public Water Supply Development

Owner:

San Antonio Water System
2800 U.S. Hwy 281 North
San Antonio, Texas 78298-2449
Mr. Michael Brinkmann
(210) 704-7297

Client:

Same as above

Location:

Bexar County, Texas

Services:

ASR Well Design
Monitor Well Design
Aquifer Testing
Wellfield Infrastructure Design
Hydrogeologic Assessment
Bidding Assistance
Construction Oversight

Performance Period:

Phase I (2001-2002)
Phase II (2003-2007)

Project Cost:

Phase I (\$65K)
Phase II (\$915K)

Key Personnel:

Grant L. Snyder, P.G.
Senior Hydrogeologist
Well Design Task Leader

**Project Background**

The Carrizo Aquifer in southern Bexar County, Texas is a sandstone, water-bearing unit comprised of the Carrizo Sand Formation. In particular, prolific groundwater resources occur in the Carrizo Aquifer of Texas. This confined aquifer occurs in an area that produces water suitable for public supply and irrigation use. The San Antonio Water System (SAWS) embarked upon an aquifer storage and recovery (ASR) program within this aquifer to create the 2nd largest ASR project in the U.S at 64 MGD capacity.

SAWS requested hydrogeologic and construction oversight services in Phase I (30 MGD) and conduct of the engineering design of the Phase II expansion (34 MGD addition) of the ASR wellfield. This project is comprised of design of 29 large-capacity ASR wells and associated wellfield infrastructure. The project will store more than 22,500 acre-feet of source water from the Edwards Aquifer pumped from the Seale and Artesia pump stations, transmitted via a 27-mile pipeline. The stored water will then be recovered during peak demand periods in the summer months. The project also serves to provide conjunctive-use base production from the Carrizo Aquifer. Specific services provided in the project were:

- Aquifer Storage/ Recovery well design;
- Oversight of construction;
- Well performance and aquifer testing,
- Borehole geophysical logging;
- Civil design of wellfield infrastructure;
- Mechanical design;
- Electrical and controls design; and
- Construction costing and bidding assistance.

Mr. Grant L. Snyder, PG. served as Well Design Task Leader for URS Corporation, the Prime Design Firm on the SAWS Carrizo ASR Phase II Well Addition Project and Project Hydro Geologist on Phase I of the Carrizo ASR Program.