

The City of Phoenix, along with Clear Creek Associates, Carollo Engineers, Weber Water Resources and ASR Systems, received the National Groundwater Association (NGWA) 2013 Outstanding Groundwater Project Award for Supply in recognition of their innovative collaboration on the City of Phoenix Aquifer Storage and Recovery (ASR) Wells project



This award recognized the design and installation of three ASR wells for the City, each of which pioneered innovative technology. One of the ASR wells was the first in the U.S. to incorporate the “reverse-siphon” injection method, utilizing the well pump and above-ground valving to initiate recharge without entraining air in the filter pack or formation, and without the use of a subsurface flow control valve. The second ASR well has the deepest setting of a down-hole flow control valve below the pump assembly in the United States (over 1,000 feet), and the third ASR well is the first ASR well in the U.S. to be constructed with a manufactured glass bead filter pack. These complex well designs were carefully developed to address the technical, logistical and regulatory requirements of each site, providing an operator-friendly system that is flexible and reliable, while saving the City \$110,000 to \$150,000 annually in well rehabilitation costs.

Clear Creek Associates provided permitting, design, construction management, and testing services for three City of Phoenix aquifer storage and recovery (ASR) wells. During each ASR well installation, Clear Creek Associates coordinated the activities of the drilling contractor and subconsultants.



The innovative attributes and pioneering technologies of these ASR well projects resulted in the City of Phoenix being awarded the **2013 NGWA Outstanding Groundwater Project Award as the top groundwater project in the nation (Groundwater Supply category).**

