

# **Central and Camelback**

## Water Quality Assurance Revolving Fund ([WQARF](#)) Site

### **Boundaries:**

The Central and Camelback WQARF Site (Site) consists of contaminated groundwater plumes located in the vicinity of Central Avenue near Camelback Road in Phoenix, Arizona. The plumes are bounded approximately by W. Missouri Avenue to the north, N. 1st Street to the east, W. Pierson Street to the south, and N. 3rd Avenue to the west.

The plume boundaries depicted on the [Site map](#) represent the Arizona Department of Environmental Quality's (ADEQ) interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plumes may change in the future as new information becomes available.

### **Site Status Update:**

A groundwater [pump and treat](#) system and a [soil vapor extraction](#) (SVE) system are operating at the southwest corner of Central Avenue and Camelback Road to remove contaminants from the groundwater and soil beneath the site. Groundwater monitoring and sampling is conducted at the site along with monitoring and sampling of the remedial systems as required by the site permits.

ADEQ has a [National Pollutant Discharge Elimination System](#) (NPDES) permit for discharge of treated groundwater to [Salt River Project's](#) (SRP) Grand Canal and a Significant Industrial User permit to discharge treated groundwater to the City of Phoenix (COP) sewer system when necessary. The SVE system operating along with the groundwater pump and treat system have removed approximately 2,900 lbs. of volatile organic compounds (VOCs) mostly [tetrachloroethene](#) (PCE) from the soil and groundwater.

### **Community Involvement Activities:**

A [community advisory board](#) (CAB) has been formed for this Site. These meetings are open to the public. Details of CAB meeting [agendas](#) and minutes for 2010 and 2011 can be viewed at the ADEQ Web site. The most recent [fact sheet](#) can also be viewed on the ADEQ Web site.

### **Site History:**

**1999:** The Southwest Corner Source Area (SCSA) portion of the Site was placed on the [WQARF Registry](#) in January due to the detection of PCE in the groundwater. Concentrations were found to be as high as 20,000 parts per billion (ppb) in the area. The eligibility and evaluation score for placement on the WQARF Registry was 31 out of 120.

**2000:** In June, the SCSA became listed as part of the Site with a score of 32 out of 120.

**2001:** ADEQ initiated an [early response action](#) (ERA) for the SCSA portion of the Site to remediate groundwater contamination and control the migration of contamination into an underground parking garage located on the southeast corner of Central and Camelback. The ERA has consisted of the installation of four groundwater [extraction wells](#) which were completed in December.

**2003:** The groundwater remediation system located at 21 W. Camelback Road began pumping and treating contaminated groundwater at a rate of approximately 90 gallons per minute (gpm) on January 22, 2003. The treatment system removes [volatile organic compounds](#) (VOCs) by passing the contaminated groundwater through [granular activated carbon](#). The treated water is discharged primarily to the SRP Grand Canal and, during canal dry-out periods, to the COP sanitary sewer. Periodic sampling of the effluent is conducted to assure that the treated water complies with discharge standards. Eleven groundwater monitor wells were installed to delineate the extent of the PCE plume.

**2004:** The ERA evaluation of the Maroney's Dry Cleaners facility located at 4902 N. Central Avenue was conducted in June. Four nested [soil vapor](#) wells and one groundwater [monitor well](#) were installed during the ERA evaluation.

**2005:** Based on the results of an ERA evaluation, a [soil vapor extraction](#) (SVE) pilot test was conducted in January, and SVE was chosen as an effective remedy for the subsurface soil contamination at the former Maroney's facility. Wells at the former Texaco station located at the corner of Central Avenue and E. Colter Street had PCE detected in groundwater samples. The PCE detected in the Texaco station wells is not from the plume at the corner of Central Avenue and Camelback Road.

**2006:** ADEQ moved electrical boxes on the corner of Central Avenue and Camelback Road in front of the groundwater treatment system to make room for the [Light Rail](#) utilities. Two new wells were drilled at Medlock Drive and Orange Street to delineate the northern portion of the plume. ADEQ took over ownership of three COP wells at the southwest corner of Central Avenue and Camelback Road. These wells were drilled by the COP to characterize the Site for the Light Rail activities.

**2007:** ADEQ began the [remedial investigation](#) (RI) to determine the nature and extent of the contamination at the Site. Per Arizona Revised Statutes § 49-287.03, notices were sent to 12 interested parties initiating the start of the RI phase of work at this Site. Three new wells were drilled – two south of the Site on Pierson Street and one on private property located at 15 W. Camelback Road in the proximity of the former Weiss Guys Car Wash location. The SVE system was installed and started operating in November 2007.

**2008:** ADEQ installed two groundwater monitor wells in May. The annual carbon change-out at the groundwater treatment system occurred in April. Carbon was changed out in the lead carbon canister for the SVE system in October 2008. ADEQ detected increasing levels of PCE in CC-11 on E. Orange Drive and in the Texaco wells at 5201 N. Central Avenue.

**2009:** No carbon change-outs were required at the groundwater treatment system or the SVE system in 2009. The SVE operation was altered at the end of June to two weeks of operation and two weeks of shutdown to monitor rebound of contaminant vapors in the subsurface.

**2010:** The groundwater treatment system was shut down in early January because of a restriction to discharge to the SRP canal during dry-out and cleanup of the canal. The system remained off until early March because of budget constraints. The system was operated continuously after startup in March with two of the four extraction wells in operation. The SVE system continues to operate on a two-week-on, two-week-off schedule. The SVE system was turned off from the beginning of July to early September during project contracting and funding. The SVE system carbon was changed out in early September and then returned to operation.

### **Contaminants:**

The current contaminants of concern in groundwater include [tetrachloroethene](#) (PCE), [trichloroethene](#) (TCE), and cis-1,2-[dichloroethene](#) (cis-1,2-DCE). Contaminants of concern at the Site may change as new data becomes available. Other contaminants from past [underground storage tank](#) releases include: [benzene](#), [toluene](#), [ethylbenzene](#), [total xylenes](#), methyl tertiary butyl ether ([MTBE](#)), and 1,2-[dichloroethane](#) (1,2-DCA).

### **Public Health Impact:**

There is no known public health impact since municipal groundwater in the area is not used for drinking water purposes. The area is served by the [COP](#) municipal water system or other regulated systems.

### **Site Hydrogeology:**

The depth to groundwater in the area is approximately 65-80 feet below ground surface (bgs). Water levels have declined due to the lining of the Grand Canal, the groundwater pumping at One E. Camelback Road, and the operation of the Site's pump and treat system. Groundwater flow direction in the Site area has been altered from a generally north-northwesterly flow to a generally south-southeasterly flow and is affected by pumping from the SRP irrigation wells, the groundwater pumping system at the Site and the groundwater pumping system at One E. Camelback Road.

### **Contacts:**

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\*In Arizona, but outside the Phoenix area, call toll-free at (800) 234-5677.

## **Information Repository:**

Interested parties can review Site information at the ADEQ Main Office located at 1110 W. Washington Street, Phoenix. Please contact (602) 771-4380 or (800) 234-5677 to schedule an appointment with 24-hour notice to review these documents. Once all documents requested have been collected, you will be contacted for a review Monday through Friday from 8:30 a.m. to 4:30 p.m. at the ADEQ Records Management Center, 1110 W. Washington Street in Phoenix, AZ.