

# West Central Phoenix (WCP) North Canal Plume Water Quality Assurance Revolving Fund ([WQARF](#)) Site

## Boundaries:

The WCP North Canal Plume WQARF Site (site) is bounded approximately by Indian School Road to the north, Grand Avenue to the east, West Flower Street to the south, and 45th Avenue to the west in Phoenix, Arizona.

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 plume may change in the future as new information becomes available.

## Site Status Update:

The Final [Remedial Investigation](#) (RI) Report is being completed with the information compiled to date. Data has been collected for the Land and Water Use report for the project area. This information is an integral part of the final RI report and is an essential step.

Due to current budget constraints, all work at the site has been temporarily suspended until such time as funding is made available.

## Community Involvement Activities:

A [community advisory board](#) (CAB) has been formed for the site. These meetings are open to the public. Details of meeting [agendas](#) and minutes for 2009 and 2010 can be viewed at ADEQ's Web site. The most recent [fact sheet](#) can be found on the ADEQ Web site.



Sampling at North Canal Plume

## Site History:

**1963:** The Precise/Paraflex facility is located near 39th Avenue and Clarendon Avenue. Precise/Paraflex and three subsidiary companies, Precision Marking, Paint Spray, Inc., and Perigee Metal Spinning, have operated at this property since 1963.

**1952-1973:** The former Southwest Metals facility is also located near 36th Avenue and Clarendon Avenue, across from the former [Osborn Products](#) facility. Southwest Metals operated at this property from 1952 to 1973. The manufacturing process at the site consisted of constructing sand casts to form magnesium, aluminum, and brass castings.

**1956-1984:** The former Osborn Products facility is located near 36th Avenue and Clarendon Avenue. Osborn Products operated at the Site from 1956 to 1984. Facility operations included chrome plating, machining, and grinding of parts for the aerospace industry. On-site processes included degreasing metal parts, chrome plating, and machining of parts to specification.

**1977-1989:** The former Magic Metals facility is located near 36th Avenue and Whitton Avenue. Magic Metals operated at the Site from 1977 to 1987 when the facility was abandoned by the company. Principal business activities of Magic Metals included electroplating for automobiles, custom restorations, industrial parts, and antiques. The facility generated waste electroplating baths and rinses containing cyanide, waste caustics and unspecified waste solvents from stripping tanks, and waste acids (sulfuric and chromic). Those tanks were excavated and removed from the facility in 1989.

**1982-1989:** [Volatile organic compounds](#) (VOCs) were first detected in groundwater in the WCP area in July 1982. The [City of Phoenix](#) (COP) detected [trichloroethene](#) (TCE) in four municipal public supply wells, COP wells #70, #71, #151, and #152. The [Arizona Department of Health Services](#), [Salt River Project](#), and the COP confirmed the presence of VOCs in the groundwater with sampling in 1983, 1985, and 1986. Groundwater from COP wells #70 and #71 contained the highest concentrations of TCE and, therefore, were immediately shut down. Wells #151 and #152 were monitored for VOC concentrations from 1982 until 1989. As a result of sampling conducted during February of 1989, COP elected to take both wells #151 and #152 off-line on March 7, 1989.

**1984-2007:** Field investigation activities for the Site have been conducted between 1984 and the present time. Several contaminants were detected in soil and groundwater samples collected during field investigations at the four facilities. The primary contaminants of concern found were [tetrachloroethene](#) (PCE), TCE, 1,1-[dichloroethene](#) (1,1-DCE) and [chromium](#).



**Drilling Monitor Well  
At Site**

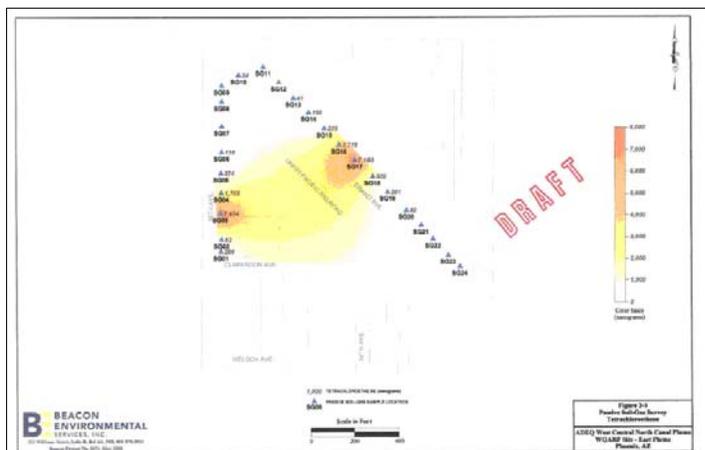
**1987-2000:** In 1987, the WCP area was designated a WQARF Priority List site. In 1997, ADEQ established the WQARF Registry which replaced the Priority List. The Site was placed on the [WQARF Registry](#) in June 1998 with a score of 22 out of a possible 120. The Site score was re-evaluated in 2000 with a revised score of 27.

**2005:** An Interim RI Report documenting all activities up to June was issued in August.

**2006:** The second [Early Response Action](#) Evaluation and Technical Report was issued in October. Several facilities were identified as likely sources of the groundwater contamination in the Site. The facilities included, but were not limited to: the former Osborn Products facility, former Magic Metals facility, former Southwest Metals facility, and Precise Metal Products/Paraflex Tool & Machine (Precise/Paraflex). Other facilities were being investigated as potential sources of groundwater contamination at the Site.

**2007:** An [aquifer](#) test was carried out in September at the former Southwest Metals facility to help determine potential groundwater treatment options for the regional groundwater plume. Additionally, ADEQ conducted a [soil vapor extraction](#) pilot test in February at the former Osborn Products facility. Based on the concentrations from the pilot test, the results did not merit a soil remediation system at that time.

**2008:** [Soil vapor](#) samples were taken across two areas at the Site to aide in the placement of new [monitor wells](#). As a result of samples taken earlier in the year, additional soil vapor samples were taken. Results of these sample events will be incorporated in the Final RI Report.



**Soil Vapor Concentration Map**

**2009:** Work on the draft RI report continued through the collection of information needed to compile a Land and Water Use report. Questionnaires were sent to various stakeholders, property owners and water providers.

### **Contaminants:**

The current contaminants of concern in groundwater include the [chlorinated solvents tetrachloroethene](#) (PCE), [trichloroethene](#) (TCE), [1,1-dichloroethene](#) (1,1-DCE) and [chromium](#). Contaminants of concern at the Site may change as new data become available. Other contaminants at the Site include methyl tertiary butyl ether ([MTBE](#)) and [nitrates](#).

### **Public Health Impact:**

To date, testing in the WCP area indicates no exposure to the contamination. Sampling shows that the contaminated soils are under asphalt parking lots or asphalt-surfaced storage areas, or under the concrete floors of buildings. Contaminated drinking water wells in the area have been shut down. In addition, notices have been sent out to all known residences within the WCP area for the testing of domestic wells for contamination.

### **Site Hydrogeology:**

The Site is located within the West Salt River Valley sub-basin of the [Phoenix Active Management Area](#). The Salt River Valley is an [alluvial](#) filled basin located in the Basin and Range physiographic province. The Site is underlain by primarily sandy silts and silty sands with interbedded clay layers and gravelly sand zones.

The Grand Canal is located along the southern edge of the Site. The Grand Canal was unlined in the vicinity of the Site until January of 1998, when it was lined on the bottom and both sides. Prior to

the lining, the canal provided extensive recharge to the water table aquifer, forming a mound in the water table. After the canal was lined, the mound dissipated and water levels dropped most significantly near the canal.

Depth to groundwater has declined considerably in the past several years. This is attributed principally to the lining of the Grand Canal and the ongoing drought. In 1996, the depth to groundwater was approximately 70 feet below ground surface (bgs) adjacent to the canal and approximately 79 feet bgs approximately 900 feet north of the canal. By 2002, the mound had dissipated, and the depth to groundwater was approximately 120 feet bgs. Prior to lining the canal, the groundwater flow direction varied from the north to the northwest beneath the Site. After lining the canal, groundwater flowed to the south beneath the Site at a gradient of approximately 0.008 as of September 2004. Depth to water in the area as of September 2004 was between 126 feet and 133 feet bgs.

**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 select Site documents at the [Burton Barr Central Library](#) (Arizona Room) located at 1221 N. Central Avenue in Phoenix, (602) 262-4636.

The complete official Site file can be reviewed at the ADEQ Main Office located at 1110 W. Washington Street, in 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.