

## 7th Street & Arizona Avenue Water Quality Assurance Revolving Fund Site - January 2014

*This fact sheet is a publication of the Arizona Department of Environmental Quality (ADEQ) to inform community members near the 7th Street & Arizona Avenue Water Quality Assurance Revolving Fund (WQARF) site and is provided in accordance with Arizona Revised Statute §49-289.02. If you receive your drinking water from the City of Tucson, your current drinking water is not affected by the groundwater contamination at the site.*

*A glossary of terms is located at the end of this fact sheet.*



Fig. 1 - SVE System

### Site Boundaries

The 7th Street & Arizona Avenue WQARF site includes the former Oliver's Laundry and Dry Cleaners Co., 300 E. 7th Street, Tucson, Arizona 85705. This property is the source of soil and groundwater contamination for the WQARF site and is bounded by 7th Street to the north, Herbert Avenue to the east, 5th Avenue to the west and Downtown Auto Center and Towing is located on the parcel to the south (See Fig. 2, pg. 2).

The approximate WQARF site boundaries are based on the extent of a plume of tetrachloroethene (PCE)-contaminated groundwater underlying the site. The contaminated groundwater is perched on top of a clay layer that is keeping contamination from migrating to the lower regional aquifer.

The contamination plume begins at the former Oliver's Cleaners facility, and extends at least 3,000 feet to the northwest. A large body of locomotive diesel fuel believed to be from the Union Pacific Railroad site, is floating on the perched water table beneath the site. The diesel fuel is thought to be related to the Union Pacific Railroad Passenger Depot located approximately 1,000

feet to the south of the former Oliver's Cleaners property. PCE released at the site has dissolved into the diesel fuel and into the perched groundwater. Two leaking underground storage tank sites, Yellow Cab and Bridgestone/Firestone are located northwest of the former Oliver's Cleaners location within the extent of the PCE solute plume.

In addition to the PCE contaminated soil and groundwater associated with the WQARF site, two former underground storage tank sites existed within the WQARF site boundary. Both of these sites were sources of gasoline contamination in the perched groundwater. The former Yellow Cab facility is located diagonally across the street from the former Oliver's Cleaners property at 411 N. 5th Avenue, and there was a Bridgestone/Firestone facility located at 445 N. 6th Avenue. Neither of these sites is thought to have contributed to the PCE contamination in the WQARF site.

### Site History and Investigation

A building was constructed at the site around 1928 and dry cleaning may have been performed on the former Oliver's Cleaners property since 1935. Dry cleaning was performed continuously on the

property from 1957 until the buildings were destroyed by fire in 1989.

Seven underground storage tanks (USTs) were removed from the property in 1991. These included one 10,000-gallon and four 1,000-gallon solvent tanks and two 500-gallon heating oil or waste oil tanks. Available information indicates that petroleum distillate solvents were used at the site and that leaking tanks were the source of the contamination. The site was placed on the WQARF registry in April 2000 with a score of 40 out of a possible 120. The property is currently a 40,000-square-foot paved parking lot measuring approximately 200 feet by 200 feet.

Soil and perched groundwater have been impacted by volatile organic compounds (VOCs) associated with the former Oliver's Cleaners facility. The main site contaminants of concern (COCs) in soil vapor and in perched groundwater include PCE and its breakdown products trichloroethene (TCE), and cis-1,2-dichloroethene (cis-DCE). Concentrations of PCE up to 17 milligrams per kilogram (mg/kg) were detected in soil samples from beneath the facility during the site investigation in 1991. PCE, TCE, and

cis-DCE, have been detected in samples from perched groundwater from beneath and northwest of the facility at concentrations up to 3,200 micrograms per liter (µg/L).

The average depth to perched groundwater in March 2013 was about 71 feet. Water levels in the perched groundwater generally have declined by approximately 1½ feet since 2008. The average depth to groundwater in the regional aquifer in March 2013 was approximately 174 feet. Water levels in the regional aquifer declined significantly between 2002 and 2005 and subsequently have been relatively stable, varying over a range of about two feet.

An early response action (ERA) took place from 2006 to 2009, and included installation of a soil vapor extraction (SVE) system and a pilot test for air sparging. The SVE system was intended to address VOC contamination in the soil zone below the source property. The air sparge pilot test was intended to

evaluate potential vaporization of COCs from the diesel fuel below the property.

Over the three years of SVE system operation, about 780 pounds of VOCs and more than 10,800 pounds of hydrocarbons were removed. During the air sparging pilot test, PCE concentration in the diesel fuel was reduced 48 percent and TCE and cis-DCE concentrations were reduced 80 and 74 percent, respectively. (See Fig. 1, pg. 1)

In 2013, ADEQ conducted shallow soil gas sampling to evaluate potential health risks. Laboratory analysis indicates that the current use of the property as a parking lot poses no potential health risk or exposure pathway at the site.

However, ADEQ will ask the current property owner to attach a Declaration of Environmental Use Restriction (DEUR) on the property deed to prevent the property from being used for residential purposes.

**What are ADEQ's future plans at this site?**

ADEQ has completed a draft remedial investigation (RI) report and we are soliciting proposed remedial objectives (ROs). ADEQ will provide a 30-day comment period once the RO report is finished, which will be included in the Final RI. After publication of the Final RI report, ADEQ will then proceed with a feasibility study (FS) that will analyze potential cleanup methods for achieving the cleanup goals determined during the RI.

**What are the contaminants at this site?**

Perched groundwater at the site is contaminated with PCE, TCE and DCE, which are currently present at levels that exceed the Aquifer Water Quality Standards (AWQS). PCE is a man-made chemical compound which was used as a dry cleaning solvent at the facility. TCE is commonly used in manufacturing and is a breakdown product of PCE. DCE is a breakdown product of TCE.

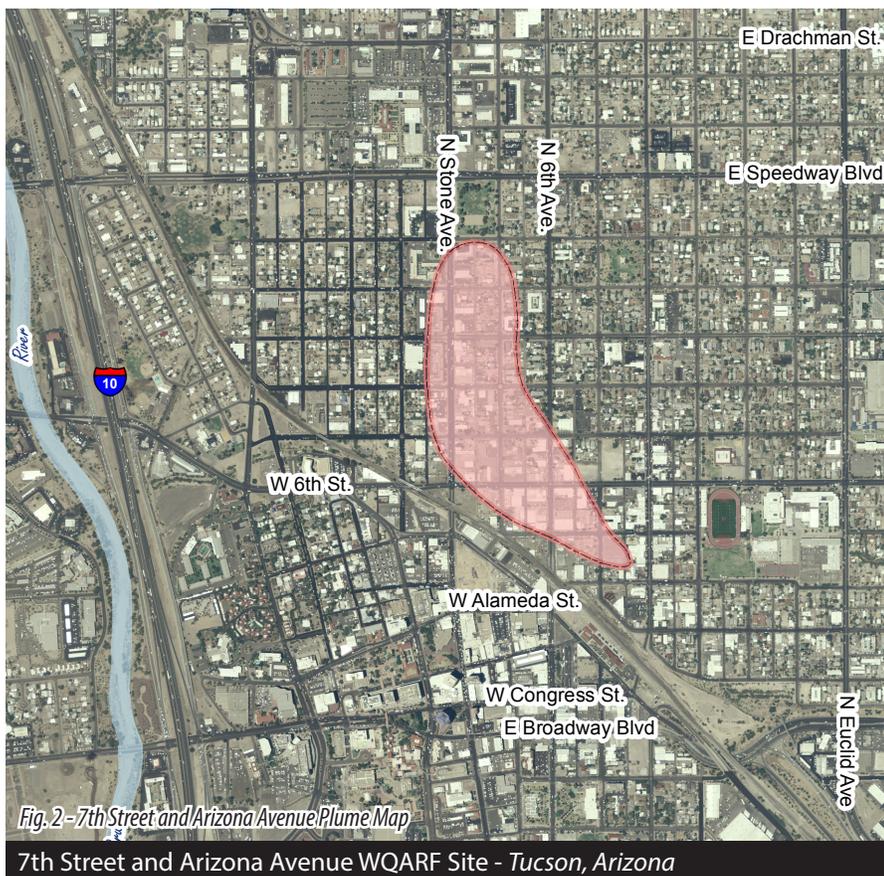


Fig. 2 - 7th Street and Arizona Avenue Plume Map

7th Street and Arizona Avenue WQARF Site - Tucson, Arizona

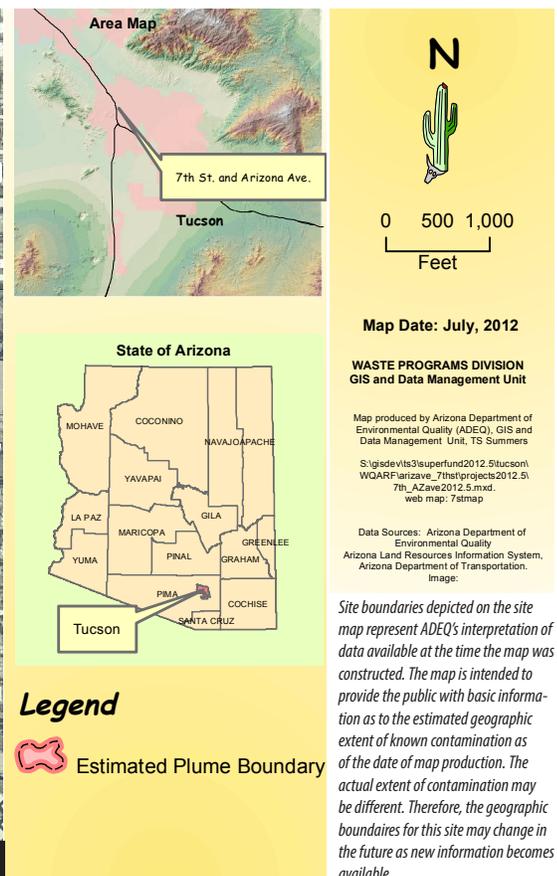




Fig. 3 - Groundwater Sampling at 7th Street and Arizona Avenue

### What are the health risks associated with this contamination?

Any risks associated with exposure to contaminated groundwater are principally through drinking the contaminated water. There are no known drinking water production wells within the boundaries of the site. The drinking water supplied by the City of Tucson meets all federal and state drinking water standards and comes from sources outside the site area. People who do drink water containing PCE, TCE or DCE in excess of the regulatory limits over many years could have an increased risk of certain types of cancer. The current use of the property as a parking lot poses no potential health risk or exposure pathway at the site.

In May 2013, ADEQ conducted a shallow soil gas survey at the site and found that current use of the property as a parking lot poses no potential health risk or exposure pathway at the site.

### COMMUNITY INVOLVEMENT

ADEQ will keep the public informed through a variety of means including fact sheets and public meetings. ADEQ is assembling a mailing list and forming a Community Advisory Board (CAB) to advise ADEQ and the public of issues and concerns related to investigations and remediation of the site. The purpose of the CAB will be to:

- provide input to ADEQ on the ROs and other cleanup and investigation issues related to the site;

- represent a diversified cross-section of the community in and around the site;
- participate in outreach to the community
- disseminate information to the community;
- make site visits if desired.

### CAB Members Needed

ADEQ is currently looking for members of the public to serve on the CAB.

- Are you concerned about the environment and protecting public health?
- Do you live, work, own property or a business in the area of the site and/or are you interested in the site?
- Do you have a minimum of two hours a day four times a year to volunteer?

If your answer is yes to these questions and you would like to apply to be a member of the CAB, please fill out and complete the enclosed application. For more information on community involvement activities at the site please call Delfina Olivarez, ADEQ Community Involvement Coordinator, at (602) 771-4710 or 1-800-234-5677 Ext. 771-4710.

### Information Repository

With 24-hour notice, an appointment to review related documentation is available Monday through Friday from 8:30 a.m. to 4:30 p.m. at ADEQ's Southern Regional Office, 400 W. Congress, Ste. 433, Tucson, Arizona, or at ADEQ's Records Management Center, 1110 West Washington Street, Phoenix, Arizona.

Please contact (520) 628-6733 in Tucson, or (602) 771-4380 in Phoenix to schedule an appointment to review these documents.

### What is WQARF and the Registry?

The WQARF Program was established by Arizona law to:

1. conduct statewide surface and groundwater monitoring;
2. study health effects;

3. perform emergency remedial actions
4. conduct long-term remedial action programs.

ADEQ established the WQARF Registry to include sites in Arizona where groundwater and/or soil contamination is present. Sites appearing on the WQARF Registry are managed by the WQARF Program for investigation and/or cleanup of contamination. Listing of the 7th Street and Arizona Avenue site on the WQARF Registry was due in part to the presence of PCE and TCE in the groundwater beneath the site.

For further information on this site or other WQARF sites, please visit the ADEQ Web site at:

[www.azdeq.gov](http://www.azdeq.gov).

Click on Waste Programs, then click on Superfund/WQARF programs. Follow the links to get to the information that you need.

For more information regarding diesel and gasoline contamination within the WQARF site, please visit the ADEQ Web site at:

<http://www.azdeq.gov/environ/waste/cleanup/vol.html>

<http://www.azdeq.gov/environ/waste/ust/index.html>

### ADEQ Contacts:

**Bob Wallin**, ADEQ Project Manager  
(520) 628- 6743 or  
toll free at (888) 271- 9302  
E-mail: [rww@azdeq.gov](mailto:rww@azdeq.gov)

**Delfina Olivarez**, ADEQ Community Involvement Coordinator  
(602) 771- 4710 or  
toll free at (800) 234- 5677 ext. 771-4710  
E-mail: [dco@azdeq.gov](mailto:dco@azdeq.gov)

Hearing impaired persons may call **ADEQ's TDD line** at (602) 771-4829.

Para información en español sobre este sitio, comuníquese con **Ray Ortega** al (602) 771-4189.

**Glossary**

***Aquifer Water Quality Standard (AWQS)***

These are standards set to protect the quality of the water in aquifers for present and foreseeable uses, including consumption of the water by humans.

***Cleanup***

Actions taken that deal with a release or threats of a release of a hazardous substance that could affect people or the environment. The term “cleanup” is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

***Contamination***

Any hazardous substance released into the environment.

***Feasibility Study (FS)***

A process to identify a reference remedy and alternative remedies that appear to be capable of achieving the remedial objectives for the site. It is often done as part of a two-phase investigation in conjunction with a remedial investigation (RI/FS).

***Groundwater***

Water found beneath the earth’s surface that fills pores between materials such as sand, clay, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

***Remedial Investigation (RI)***

Establishes the nature and extent of the contamination and the sources; identifies current and potential impacts to public health, welfare, and the environment; identifies current and reasonable foreseeable uses of land and waters of the state; and obtains and evaluates any information necessary for identification and comparison of alternative remedial actions.

***Remedial Objective (RO)***

Established remedial goals for the current and reasonably foreseeable uses of lands and waters of the state that have been or are threatened to be affected by a release of hazardous substance.

***Remediation***

Actions taken to deal with the release of a hazardous substance that could affect people or the environment. Also see the term “cleanup”.

***Soil Vapor (Soil Gas)***

Gaseous elements and compounds that occur in the small spaces between soil particles. Such gases can move through or leave the soil or rock, depending on changes in concentrations or pressure.

***Tetrachloroethene (PCE)***

A clear, colorless, nonflammable solvent that readily evaporates at room temperature. PCE is widely used for dry cleaning of fabrics and degreasing/drying of metals.

***Trichloroethene (TCE)***

TCE is a nonflammable, colorless solvent that readily evaporates at room temperature. TCE is used mainly for degreasing/drying of metals and cleaning of fabrics.

***Volatile organic compounds (VOCs)***

A large group of carbon-containing chemicals that readily evaporate at room temperature. Examples of VOCs are isopropyl alcohol (rubbing alcohol), acetone (found in some nail polish removers), and the solvents PCE and TCE (used in dry cleaning and metal degreasing).