



East Central Phoenix Water Quality Assurance Revolving Fund (WQARF) Sites

24th Street and Grand Canal
32nd Street and Indian School Road
38th Street and Indian School Road
40th Street and Osborn Road
48th Street and Indian School Road
Phoenix, Arizona

Community Involvement Plan



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Disclaimer: All telephone numbers, email addresses, and contact names are subject to change after the date of this publication.

Introduction

CIP Purpose

The Arizona Department of Environmental Quality (ADEQ) is committed to involving communities in the Water Quality Assurance Revolving Fund (WQARF) site investigation and cleanup process. The East Central Phoenix WQARF sites Community Involvement Plan (CIP) describes how ADEQ will fulfill this commitment. The East Central Phoenix sites are comprised of the following WQARF sites: 24th Street and Grand Canal, 32nd Street and Indian School Road, 38th Street and Indian School Road, 40th Street and Indian School Road, 40th Street and Osborn Road, and 48th Street and Indian School Road. ADEQ will regularly update this plan based on site-specific developments, public comments, and community concerns. ADEQ welcomes community input on this CIP.

WQARF Process

The goal of the WQARF process is to clean up sites with groundwater and/or soil contamination to protect human health and the environment. Created under the Environmental Quality Act of 1986, WQARF receives funding from legislative appropriations, cost recovery from responsible parties, and special fees.

The WQARF program identifies contaminated sites in significant need of remediation. WQARF Registry sites are assigned an Eligibility and Evaluation (E&E) score based on several factors, such as the nature and extent of contamination and the number of people who may be exposed to the contaminants. The E&E score does not necessarily mean that the site poses a direct risk to human health and/or the environment.

The WQARF process uses a step-by-step approach to thoroughly investigate contaminated sites. ADEQ uses data from the investigation to develop a site-specific cleanup strategy, also called the remedy of the site.

The flowchart in Appendix A depicts each phase in the WQARF process. The definitions of each WQARF phase can be found in the glossary.

ADEQ Spokesperson Contact Information

The ADEQ designated spokesperson, the Community Involvement Coordinator, will act as liaison between ADEQ and the community near the East Central Phoenix WQARF sites. The spokesperson will provide notice of public meetings, plan Community Advisory Board meetings, and ensure that CIP requirements are followed. Contact information for the designated spokesperson is below:

Community Involvement Coordinator ADEQ

1110 West Washington Street, 6th Floor, Phoenix AZ 85007
602-771-8007

Or

1-800-234-5677

Fax: 602-771-4272

Email: boschert.barbara@azdeq.gov

View Community Involvement Contacts Online: azdeq.gov/WQARF

Site Information Repository

The information repository for East Central Phoenix WQARF sites contains technical reports, public notices, and this CIP. ADEQ will add site-related documents to the repository as they are completed. The site information repository is available online and in person:

Online:

azdeq.gov/ecp-24th-gc
azdeq.gov/ecp-32nd-is
azdeq.gov/ecp-38th-is
azdeq.gov/ecp-40th-osborn
azdeq.gov/ecp-48th-is

In Person:

ADEQ Records Center 1110
West Washington Street
Phoenix, AZ 85007
602-771-4380

Or

1-800-234-5677

(Please call to make an appointment)

To make alternative arrangements to review documents, contact the ADEQ Community Involvement Coordinator.

Site Overview

East Central Phoenix 24th Street and Grand Canal

The East Central Phoenix 24th Street and Grand Canal WQARF site contaminated groundwater plume is bounded approximately by East Pinchot Avenue to the north, East McDowell Road to the south, North 25th Street to the east and North 15th Street to the west. The East Central Phoenix 24th Street and Grand Canal site was placed on the WQARF Registry in May 2000 with an E&E score of 29 out of a possible 120. The major factor leading to the site's score was the presence of tetrachloroethene (PCE) in groundwater at levels exceeding Arizona Aquifer Water Quality Standards (AWQS). The primary contaminant of concern at the site is PCE.

In 2007, a remedial investigation was initiated at the site. During the remedial investigation, 16 groundwater monitoring wells and six soil vapor extraction wells were installed throughout the site. Design and implementation of a soil vapor extraction (SVE) remediation system was initiated as part of an early response action (ERA) in July 2016 near the CVS Pharmacy at the corner of 24th Street and Thomas Road.

The SVE system operated until August 2017. An in-situ chemical oxidation groundwater treatment pilot study was performed at the CVS Pharmacy property between February 2020 and June 2022. The Proposed Remedial Action Plan (PRAP) was released in April 2020. ADEQ's current interpretation of the contaminated plume boundary is depicted on the map on page eight.



**Drilling of Soil Vapor
Monitoring Wells at CVS**

East Central Phoenix 32nd Street and Indian School Road

The East Central Phoenix 32nd Street and Indian School Road WQARF site contaminated groundwater plume is bounded approximately by Indian School Road to north, McDowell Road to the south, 32nd Street to the east, and 12th Street to the west. The East Central Phoenix 32nd Street and Indian School Road site was placed on the WQARF Registry in May 2000 with a score of 29 out of a possible 120. The major factor leading to the site's score was the presence of

PCE in groundwater at levels exceeding AWQS limits. The primary contaminants of concern at the site in groundwater are PCE and trichloroethene (TCE). No other contaminants of concern were detected above an AWQS during the most recent groundwater sampling event.

Numerous groundwater and soil vapor extraction wells have been installed throughout the site. SVE systems were operated intermittently at Maroney's Cleaners and Laundry Inc. (Maroney's) and Viking Cleaners (Viking) until 2018, when both were shut down. The SVE system at Maroney's resumed operation in April 2020 and operated intermittently until May 2022. Rebound evaluations continue at Maroney's to determine the need for continued operation. An enhanced reductive dechlorination groundwater treatment pilot study was performed between February 2020 and October 2022. The PRAP was released in September 2020. ADEQ's current interpretation of the contaminated plume boundary is shown on the map on page eight.



**Maroney's Cleaners and
Laundry Inc. SVE System**

East Central Phoenix 38th Street and Indian School Road

The East Central Phoenix 38th Street and Indian School Road WQARF site contaminated groundwater plume is bounded approximately by Monterosa Street to the north, East Mitchell Drive to the south, North 38th Street to the east, and North 32nd Street to the west. The East Central Phoenix 38th Street and Indian School Road site was placed on the WQARF Registry in 1998 with a score of 20 out of a possible 120. The major factor leading to the site's score was the presence of PCE in groundwater at levels exceeding AWQS limits. The site contaminant of concern is PCE.

After three in-situ chemical oxidation injections, and subsequent groundwater sampling, in 2017 and 2018, the site was removed from the WQARF Registry in 2018. In 2019 additional groundwater sampling indicated the continued presence of PCE above AWQS, so the site was re-opened on the WQARF Registry in December, 2019.

Since 2019 ADEQ has installed additional groundwater monitoring wells and resumed regular groundwater monitoring. Current actions are focused on identifying sources of contaminant impact to groundwater and assessing remedial options. ADEQ's current interpretation of the contaminated plume boundary is shown on the map on page eight.

East Central Phoenix 40th Street and Osborn Road

The East Central Phoenix 40th Street and Osborn Road WQARF site contaminated groundwater plume is located in the 3900 block of North 40th Street near the intersection of Osborn Road.

The site is bounded by East Fairmount Avenue to the north, East Hubbell Street to the south, 42nd Street to the east, and 25th Street to the west. The East Central Phoenix 40th Street and Osborn Road site was placed on the WQARF Registry in May 2000 with a score of 30 out of a possible 120. The major factor leading to the site's score was the presence of PCE in groundwater at levels exceeding AWQS limits.



The groundwater contaminant of concern at the site is PCE. TCE was detected above the AWQS one time in November 1996, but it has not been detected at any other time before or after that event.

ADEQ has installed and sampled groundwater monitoring wells periodically since 2003. The Feasibility Study was released in July 2021. ADEQ's current interpretation of the contaminated plume boundary is shown on the map on page eight.

East Central Phoenix 48th Street and Indian School Road

The East Central Phoenix 48th Street and Indian School Road WQARF site contaminated groundwater plume is bounded approximately by Indian School Road to the north, Clarendon Avenue to the south, 46th Place to the east and 42nd Place to the west. The East Central Phoenix 48th Street and Indian School Road site was placed on the WQARF Registry in 1999 with a score of 27 out of a possible 120. The major factor leading to the site's score was the presence of PCE in groundwater at levels exceeding AWQS limits.

The groundwater contaminant of concern at the site is PCE.

From July 1, 2014, through June 30, 2015, 66 groundwater samples and 33 soil gas samples were collected. A deep groundwater monitoring well was installed at the source in April 2018. The Feasibility Study was completed in

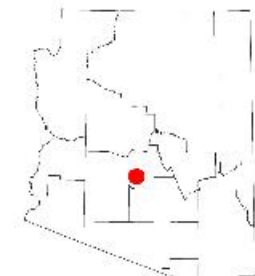
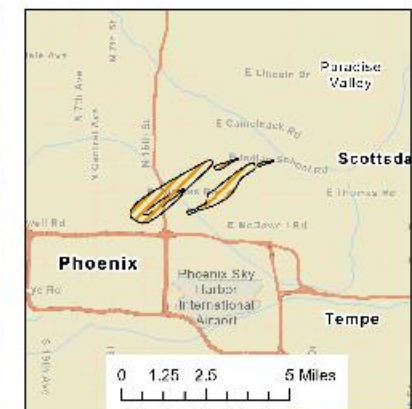
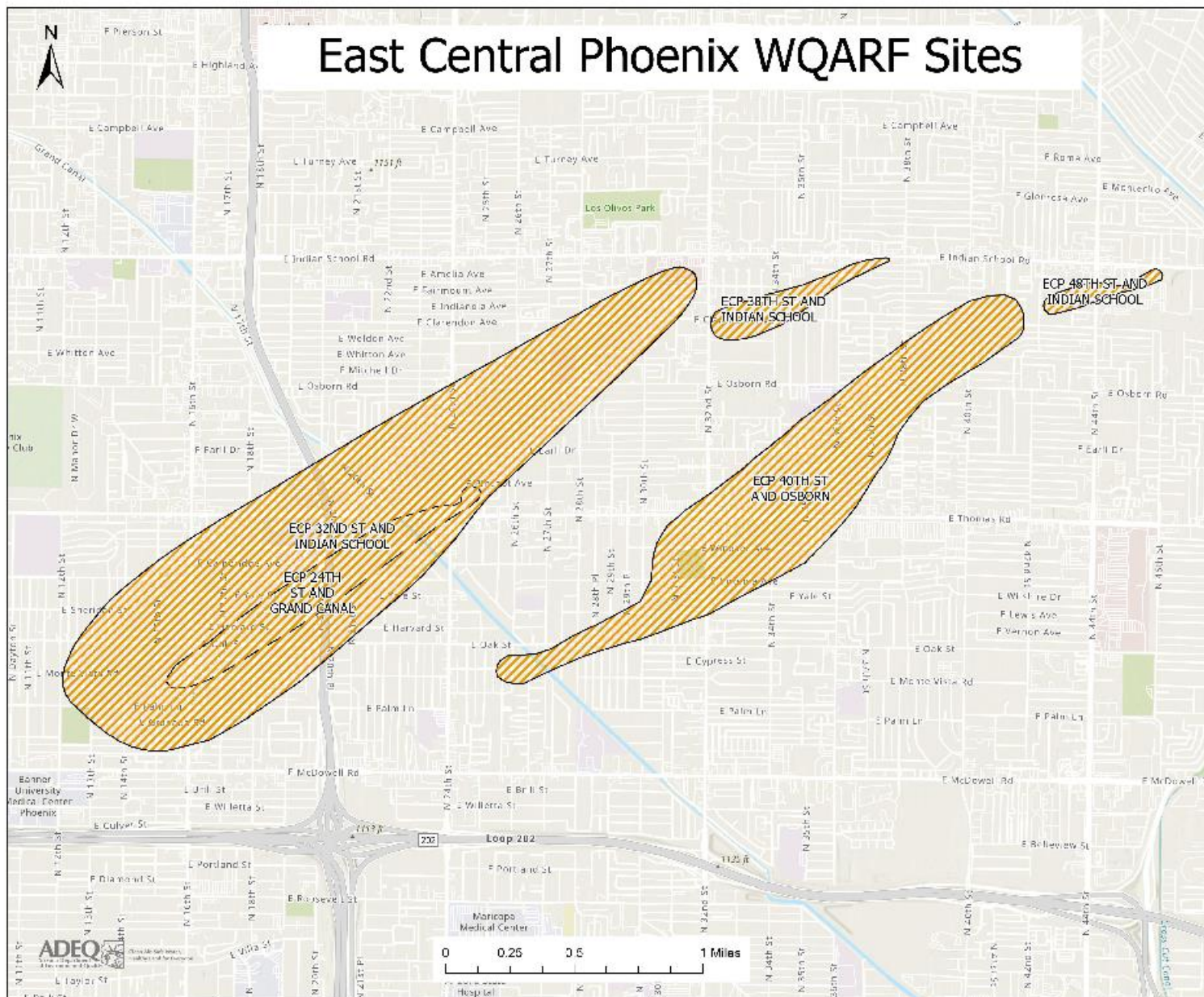


Drilling at 48th Street and Indian School Road WQARF site

July 2020. ADEQ's current interpretation of the contaminated plume boundary is shown on the map on page eight.

The following map shows the boundaries of the plumes based on the most recent groundwater monitoring data. These areas may change as ADEQ collects more information.

A full history of site activities is located in Appendix B.



| |
|---|
| ECP 24TH ST AND GRAND CANAL |
| Date Listed: 5/13/2000, Date Updated: 9/1/2021 |
| ECP 32ND ST AND INDIAN SCHOOL |
| Date Listed: 5/13/2000, Date Updated: 5/1/2022 |
| ECP 40TH ST AND OSBORN |
| Date Listed: 5/13/2000, Date Updated: 9/1/2022 |
| ECP 48TH ST AND INDIAN SCHOOL |
| Date Listed: 12/01/2017, Date Updated: 9/1/2022 |
| ECP 38TH ST AND INDIAN SCHOOL |
| Date Listed: 9/21/1998, Date Updated: 1/10/2023 |

Map Date: 2/6/2024

FPA/NPI and WQARF boundaries reported on the map represent ADEQ's interpretation of data available at the time it was produced. The map is intended to provide the public with basic information as to the geographic extent of the known study areas of the site or map production. Therefore, the boundaries for this site are subject to change in the future as new information becomes available. Dotted boundaries are the result of boundary extrapolations.

Community Profile

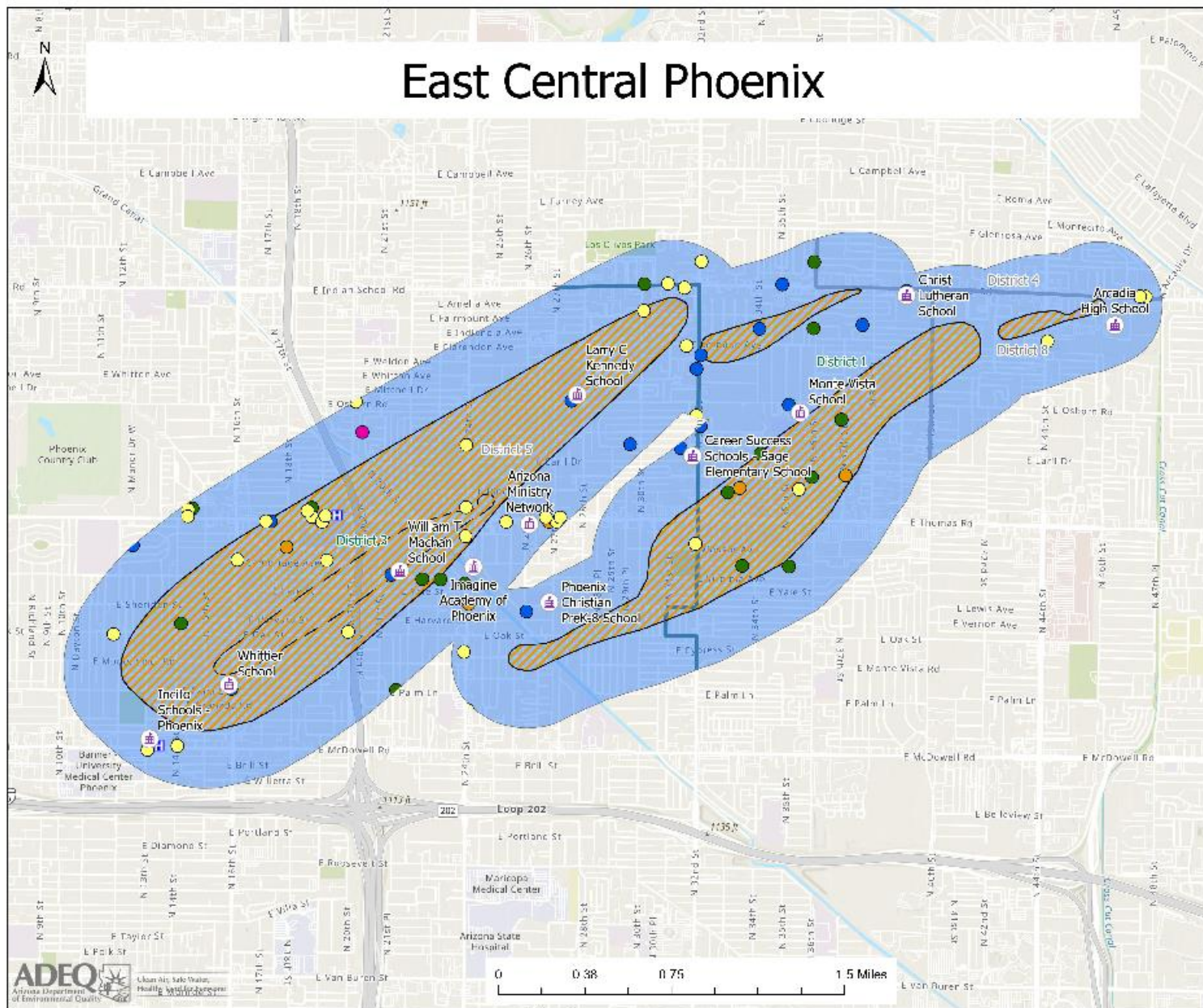
Community Involvement Area (CIA)

The CIA of the East Central Phoenix WQARF sites designates a geographic area in which ADEQ will send mass mailings and focus its outreach efforts. CIA boundaries are determined based on site-specific characteristics such as the affected media (i.e., soil, surface water, or groundwater), groundwater flow direction, exposure routes, and proximity to residential areas and public facilities. The CIA may change as ADEQ collects more information.

The map on the following page illustrates the 2024 CIA for the East Central Phoenix WQARF sites.

East Central Phoenix

Community Involvement Areas



Community Demographics

Demographics help ADEQ plan and implement tailored community involvement activities. The following page displays key demographic information for the CIA of the East Central Phoenix WQARF sites.

The East Central Phoenix WQARF sites are located in Phoenix, Arizona. The City of Phoenix has an estimated population of 1.68 million¹. Approximately 43,824 residents live within the CIA in portions of five zip codes (85014, 85006, 85008, 85016, and 85018).

Among CIA residents above age five, less than 10% speak Spanish only or limited English; 1% speak other language or limited English; 91% of residents speak English only or well/very well.. Given the low proportion of Spanish only speakers, ADEQ will provide interpretation and translation services as requested.

ADEQ looks at the community as a whole with an emphasis on the proportion of residents under age five and above age 65. These populations are considered more vulnerable to the potential health effects associated with exposure to environmental contamination. In the CIA, approximately 5.3% of the population is under age five, while 10% is above age 65.

Refer to Appendix C for a list of neighborhood associations, community schools, and vulnerable population centers. Appendix D contains a list of elected officials.

¹ Source: Arizona Demographics Interactive Map Viewer: worldpopulationreview.com/us-cities/phoenix-az-population



Community Involvement Area EAST CENTRAL PHOENIX



Population and Households

43,824
Total Population

2.5
Average Household Size

\$54,039
Median Household Income

18,228
Total households

20,392
Total Housing Units

8,065
Owner Occupied Housing Units

Vulnerable Aged Population



5.3%
Age 0-4



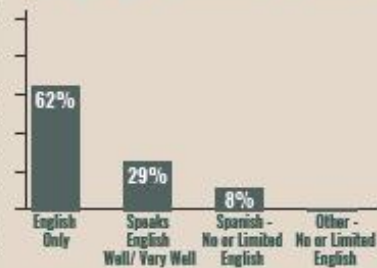
10%
Age 65+

This infographic contains data provided by Esri, ACS, Esri-MRI-Simmons, U.S. Census. The vintage of the data is 2017-2021.

Race and Ethnicity



Language Spoken at Home



Data is in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB). The standards have five categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. People may choose to report more than one race to indicate their racial mixture. People who identify their origin as Hispanic, Latino, or Spanish may be of any race.

Technology Access at Home

76.9%
Internet Access at Home

92.2%
HH Owns a Computer

Population



Community Issues and Concerns

To better understand the community and its concerns, ADEQ conducted interviews with community and CAB members who live or work near the East Central Phoenix WQARF sites. As part of this update, ADEQ conducted an online survey in 2021 to assess current concerns about the sites. The following sections summarize common concerns related to the sites along with suggestions for ADEQ outreach activities, taken from both the 2021 online survey and previous outreach interviews. ADEQ will use this community feedback to ensure that future outreach addresses community concerns and to determine effective communication methods.

Community Interview Summary

Overall, more than 60% of interviewees and survey respondents had a good awareness of the East Central Phoenix WQARF sites and the contaminants of concern.

Environmental and health concerns

The concerns expressed by community members focused on the safety of their water for drinking and other uses. Additional concerns were related to the length of time it's taking to have the sites fully remediated, and whether any contamination was underlying respondents' specific properties. The following are specific questions and comments noted by the interviewees:

- Is contamination directly below my property?
- [My concern is] making sure the remediation occurs before the groundwater needs to be accessed for drinking water by the City of Phoenix.
- I was originally much more concerned about the site when I first received the flyer than I am now that I'm more educated about the details and cleanup efforts. Clearer graphics might help.

Outreach Recommendations

Interviewees provided the following feedback and suggestions on current and future outreach activities for the East Central Phoenix WQARF sites:

- 75% of respondents reported that their overall experience of ADEQ outreach on these sites was very positive, positive, or neutral, but only 50% reported that they felt that the State has been effectively communicating with the community.
- Almost 75% of respondents felt that the information they received from ADEQ regarding the sites was clear and easy to understand.
- Of the interviewees that had attended Community Advisory Board meetings, 75% felt that they were effective or very effective.
- 100% of respondents stated that email and US mail are their preferred methods for receiving notification about site activities. 80% found visiting the ADEQ website an “acceptable” way to find out site information. 20-40% of respondents found public or community meetings an acceptable way to receive information.
- None of the interviewees noted the need for translation services.

Community Involvement Action Plan

The Community Involvement Action Summary table for the East Central Phoenix WQARF sites describes the required community involvement activities for each WQARF phase and notes the date of completed activities. This summary is followed by a description of ADEQ communication techniques to share information on the site and implement required activities.

Community Involvement Action Summary - Required Activities

The following table describes the required community involvement actions for the East Central Phoenix WQARF sites and notes which actions have been completed to date.

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|--|---|---|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Preliminary Investigation | Provide owners and operators a copy of the Draft Water Quality Assurance Revolving Fund (WQARF) Site Registry Report for a 15-day comment period prior to publishing a notice in a newspaper announcing the availability of the Draft WQARF Site Registry Report for a 30-day public comment period. | A.R.S. § 49-287.01(C) A.R.S. § 49-289.03(A)(1) | Mailing to owners and operators: <ul style="list-style-type: none"> - 24th Street and Grand Canal, May 2000 - 32nd Street and Indian School Road, May 2000 - 38th Street and Indian School Road, 1998 - 40th Street and Indian School Road, 1998 - 40th Street and Osborn Road, May 2000 - 48th Street and Indian School Road, April 1999 Public notice published in <i>Arizona Republic</i> : <ul style="list-style-type: none"> - 24th Street and Grand Canal, 2000 - 32nd Street and Indian School Road, 2000 - 38th Street and Indian School Road, 1998 - 40th Street and Indian School Road, 1998 - 40th Street and Osborn Road, 2000 - 48th Street and Indian School Road, 1999 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| WQARF Registry Listing | Following the listing of a site on the WQARF Registry, ADEQ will: <ul style="list-style-type: none"> • Establish a preliminary Community Involvement Area (see Chapter 2, Section A) within 90 days of site listing on the WQARF Registry. • Provide written notice to the community on hazardous substance contamination in the area, the actual and potential risks and routes of exposure, possible health effects, and the opportunity to join the site mailing list. • Identify ADEQ personnel to contact for further information. | A.R.S. § 49-289.02 | Notice to community and development of the East Central Phoenix WQARF sites Community Involvement Area, 1998 Community Involvement Area updated in 2000, 2001, 2012, 2015, 2018, 2020, 2022 and 2024 Notice of East Central Phoenix WQARF sites hazardous substance contamination, Spring 2003 and Summer 2007 | ✓ | | | | | |

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|---|---|--|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| WQARF Registry Listing (continued) | Develop a Community Involvement Plan that establishes a Community Advisory Board, designates a spokesperson, provides for newsletters with current information about the status of remedialactions at the site, establishes a public document repository location, and provides for schedules of Community Advisory Boardmeetings and public meetings. Update the Community InvolvementPlan at least every 2 years. | A.R.S. § 49-287.03(D) A.R.S. § 49-289.03(B) A.R.S. § 49-289.03(C) A.A.C. R18-16-404(C)(1)(i) A.A.C. R18-16-404(C)(1)(j) A.A.C. R18-16-404(C)(1)(k) A.A.C. R18-16-404(C)(1)(o) | Original East Central Phoenix Community Involvement Plan, 2008 Updated East Central Phoenix Community Involvement Plan, March 2013, October 2015, August 2016, 2018, December 2019, January 2021, January 2022 and May 2024. | ✓ | | | | | |
| Early Response Action | <p>A work plan shall be prepared for each Early Response Action that will include a description of work to be done, known site conditions, a plan for conducting the work; a description of community involvement activities for the Early Response Action under R18-16-404; and a schedule.</p> <p>Community involvement activities may include development of a community involvement plan under A.A.C. R18-16-404(C) or community involvement activities appropriate to the scope and schedule of the work performed such as a general public notice to those who may be impacted by field work as indicated in A.A.C. R18-16-404(D)(2).</p> <p>If immediate action is necessary to address a current risk to public health or the environment, to protect a source of water, or to providea supply of water, the work plan and written rationale may be prepared and the community involvement activities may be conducted after commencement of the Early Response Action.</p> | A.A.C. R18-16-404 A.A.C. R18-16-405(D)(2) A.A.C. R18-16-405(E) A.A.C. R18-16-405(G) | Early Response Action activities: - 24th Street and Grand Canal, 2015 - 32nd Street and Indian School Road, 2003, 2006, 2013, and 2015 - 38th Street and Indian School Road, 1995 - 40th Street and Indian School Road, 2003 - 40th Street and Osborn Road, None - 48th Street and Indian School Road, 2000 (Interim Remedial Action), 2013 and 2014 | ✓ | ✓ | ✓ | ✓ | | ✓ |

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|---|--|--|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Remedial Investigation | Provide notice to interested parties announcing the availability of the Remedial Investigation Scope of Work or Work Plan, Fact Sheet, and Community Involvement Plan Outline for review and a 30-day public comment period. Provide notice indicating that anyone, by written agreement with ADEQ, may develop and implement a work plan for the Remedial Investigation and Feasibility Study and solicit information regarding the current and future land and water uses at the site. These notices shall also provide an opportunity to request a public meeting. <i>Note: A potentially responsible party search is conducted concurrently with the Remedial Investigation and Feasibility Study, but does not have mandated community involvement activities.</i> | A.R.S. § 49-287.03(B) A.R.S. § 49-287.03(C) A.A.C. R18-16-301(C) A.A.C. R18-16-403(F) A.A.C. R18-16-403(G) A.A.C. R18-16-404(C)(1)(a) A.A.C. R18-16-406(B) A.A.C. R18-16-406(D) | Combined East Central Phoenix WQARF sites notice, June 2007 | ✓ | | | | | |
| | Establish a selection committee to choose Community Advisory Board members for the site. The selection committee shall consist of the following number of people from each organization: <ul style="list-style-type: none">ADEQ: 1Potentially Responsible Party: 1Local Official: 1Local Community: 2 | A.R.S. § 49-289.03(D) | East Central Phoenix WQARF sites Community Advisory Board selection committee established, November 2007 | ✓ | | | | | |
| | Establish a Community Advisory Board of between 5 to 20 members that represent a diversified cross section of the community. Within 90 days of appointment by the Community Advisory Board selection committee, the Community Advisory Board shall elect co-chairpersons and develop a charter defining operating procedures, membership terms and obligations, goals for developing issues, concerns and opportunities related to quick cleanup of the site, and any other anticipated activities for identifying and improving the public's access and understanding of information regarding the remediation process at the site. | A.R.S. § 49-289.03(C) A.R.S. § 49-289.03(E) A.R.S. § 49-289.03(F) | East Central Phoenix WQARF sites Community Advisory Board established, March 2008 | ✓ | | | | | |

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|--|---|---|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Remedial Investigation (continued) | <p>Publish a combined public notice announcing the availability of the Draft Remedial Investigation Report for review and a minimum 30-day public comment period as well as hold a public meeting to solicit Remedial Objectives for the site. The public meeting shall be held not less than 45 calendar days and not more than 90 calendar days after release of the Draft Remedial Investigation Report, unless ADEQ sets a different date for good cause.</p> <p><i>Note: If the notice is not combined, separate public notices will be provided for the Draft Remedial Investigation comment period and the Remedial Objectives solicitation and public meeting.</i></p> | <p>A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(b) A.A.C. R18-16-406(F) A.A.C. R18-16-406(I)(1) A.A.C. R18-16-406(I)(2)</p> | <p>Public notice and comment:</p> <ul style="list-style-type: none">- 24th Street and Grand Canal, March 7, 2019- 32nd Street and Indian School Road, March 7, 2019- 38th Street and Indian School Road,December 18, 2014- 40th Street and Indian School Road, December 18, 2014- 40th Street and Osborn Road, December 18,2014- 48th Street and Indian School Road, July 18, 2019 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|--|---|---|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Remedial Investigation (continued) | <p>Publish a public notice announcing the availability of the Proposed Remedial Objectives Report for a 30-day public comment period.</p> <p>Publish a public notice of the availability of the Final Remedial Investigation Report, which shall contain the results of site characterization and the Final Remedial Objectives Report. The final Remedial Investigation Report shall be accompanied by responsiveness summaries regarding comments, issues and concerns raised in the community involvement process and, if thereport is prepared by a person other than ADEQ, copies of the comments received.</p> | A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(c) A.A.C. R18-16-406(I)(5) A.A.C. R18-16-406(J) | <p>Proposed Remedial Objectives Report public notice andcomment:</p> <ul style="list-style-type: none"> - 24th Street and Grand Canal, May 31, 2019 - 32nd Street and Indian School Road, May 31, 2019 - 38th Street and Indian School Road, February 26, 2015 - 40th Street and Indian School Road, February 26, 2015 - 40th Street and Osborn Road, February 26, 2015 - 48th Street and Indian School Road, September 26,2019 <p>Final Remedial Investigation Report public notice:</p> <ul style="list-style-type: none"> - 24th Street and Grand Canal, June 27, 2019 - 32nd Street and Indian School Road, June 27, 2019 - 38th Street and Indian School Road, May 14, 2015 - 40th Street and Indian School Road, May 14, 2015 - 40th Street and Osborn Road, July 16, 2020 - 48th Street and Indian School Road, November 28, 2019 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|---|--|--|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Feasibility Study | Provide notice to interested parties announcing the availability of the Feasibility Study Work Plan <i>Although not mandated, ADEQ will also provide public notice upon completion of the Feasibility Study.</i> | A.A.C. R18-16-404(C)(1)(d) A.A.C. R18-16-407(B) | Feasibility Study Work Plan public notice: - 24th Street and Grand Canal, June 27, 2019 - 32nd Street and Indian School Road, June 27, 2019 - 38th Street and Indian School Road, May 14, 2015 - 40th Street and Indian School Road, May 14, 2015 - 40th Street and Osborn Road, July 16, 2020 -48th Street and Indian School Road, November 28, 2019 Feasibility Study public notice: - 24th Street and Grand Canal December 12, 2019 - 32nd Street and Indian School Road, December 12, 2019 - 38th Street and Indian School Road, June 28, 2018 - 40th Street and Indian School Road, June 15, 2017 - 40th Street and Osborn Road, July 8, 2021 - 48th Street and Indian School Road, July 9, 2020 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Community Involvement Action Summary | | | | | | | | | |
|--|--|---|---|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Proposed Remedial Action Plan | Publish a public notice announcing the availability of the Proposed Remedial Action Plan for a 90-day public comment period. Mail the same notice to interested parties. The notice will describe the proposed remedy and its estimated cost and identify where the Proposed Remedial Action Plan, Remedial Investigation, and Feasibility Study Reports may be inspected. | A.R.S. § 49-287.04(B) A.R.S. § 49-289.03(A)(2) A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(e) A.A.C. R18-16-408(A) | Proposed Remedial Action Plan public notice - 24th Street and Grand Canal, April 2, 2020 - 32nd Street and Indian School Road, September 3, 2020 - 38th Street and Indian School Road - 40th Street and Indian School Road - 40th Street and Osborn Road, to be determined - 48th Street and Indian School Road, to be determined | ✓ | ✓ | | | | |
| Record of Decision | Publish a public notice announcing the availability of the Record of Decision and Responsiveness Summary for review. | A.R.S. § 49-287.04(G) A.A.C. R18-16-404(C)(1)(f) A.A.C. R18-16-410 | | | | | | | |
| Implementation of Remedy (Remedial Actions) | Publish a public notice announcing a request for ADEQ to approve remedial actions at the site. The notice will provide the opportunity for a 30-day public comment period. | A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(h) A.A.C. R18-16-413 | | | | | | | |
| | Provide notice to the public and interested parties of a request for ADEQ to waive a regulatory requirement (permit) to complete remedial actions. | A.R.S. § 49-290 A.A.C. R18-16-404(C)(1)(l) | | | | | | | |
| | Provide notice to the public that fieldwork conducted to remove contaminants of concern may result in noise, light, odor, dust or other adverse impacts. | A.A.C. R18-16-404(C)(1)(m) | | ✓ | ✓ | ✓ | | ✓ | ✓ |

| Community Involvement Action Summary | | | | | | | | | |
|---|--|--|--|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Implementation of Remedy (Remedial Actions) (continued) | Provide notice to the public of a request for ADEQ to determine whether each of the Remedial Objectives for a site have been satisfied and will continue to be satisfied. The notice will provide the opportunity for a 30-day public comment period on the request. | A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(n) A.A.C. R18-16-416(B) | | | | | | | |
| Operation & Maintenance | Publish a public notice announcing the availability of the Operation& Maintenance Plan for review, where the remedy or ERA involvestreatment of water to remove contaminants of concern at the site, and a 30-day public comment period. Mail the same notice to interested parties. | A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(g) A.A.C. R18-16-411(E) | | | | | | | |
| Removal from Registry | <i>Although not mandated by Arizona statute or administrative code,ADEQ may publish a public notice upon the removal of the site from the WQARF Registry.</i> | Not applicable | - 38th Street and Indian School Road, June 28, 2018 - 40th Street and Indian School Road, June 15, 2017 | | | ✓ | ✓ | | |

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|---|--|---|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Any Phase | Publish a public notice announcing a request to ADEQ for a prospective purchaser agreement. The notice will provide the opportunity for a 30-day public comment period. | A.R.S. § 49-289.03(A)(3) A.A.C. R18-16-301(C) | <p>24th Street and Grand Canal:</p> <ul style="list-style-type: none"> - One prospective purchaser agreement notice was published in 2009 (see Appendix H). <p>32nd Street and Indian School Road:</p> <ul style="list-style-type: none"> - Two prospective purchaser agreement notices were published in 2000 and 2007 (see Appendix H). <p>38th Street and Indian School Road:</p> <ul style="list-style-type: none"> - One prospective purchaser agreement notice was published in 2000 (see Appendix H). <p>40th Street and Indian School Road:</p> <ul style="list-style-type: none"> - One prospective purchaser agreement notice was published in 1999 (see Appendix H). <p>40th Street and Osborn Road:</p> <ul style="list-style-type: none"> - No prospective purchaser agreement requests have been submitted to date. <p>48th Street and Indian School Road:</p> <ul style="list-style-type: none"> - Two prospective purchaser agreement notices were published in 2007 and 2023 (see Appendix H). | ✓ | ✓ | ✓ | ✓ | | ✓ |

| Community Involvement Action Summary | | | | | | | | | |
|--------------------------------------|---|--|--|-----------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------------|
| WQARF Phase | Mandated ADEQ Community Involvement Activity (See Chapter 4, Section B, for a detailed description of the applied communications techniques described herein.) | Statute (A.R.S) and Rule (A.A.C) References | Activity to Date | Complete | | | | | |
| | | | | 24th Street and Grand Canal | 32nd Street and Indian School Road | 38th Street and Indian School Road | 40th Street and Indian School Road | 40th Street and Osborn Road | 48th Street and Indian School Road |
| Any Phase | Publish a public notice announcing the intention of ADEQ to enter into a settlement agreement with a responsible party. The notice will provide the opportunity for a 30-day public comment period. | A.R.S. § 49-289.03(A)(4) A.A.C. R18-16-301(C) | <p>24th Street and Grand Canal:</p> <ul style="list-style-type: none"> - No settlement agreement requests have been submitted to date. <p>32nd Street and Indian School Road:</p> <ul style="list-style-type: none"> - One consent decree settlement notice was published in 2002 (see Appendix I). <p>38th Street and Indian School Road:</p> <ul style="list-style-type: none"> - One consent decree settlement notice was published in 1998 (see Appendix I). <p>40th Street and Indian School Road:</p> <ul style="list-style-type: none"> - Two consent decree settlement notices were published in 1999 (see Appendix I). <p>40th Street and Osborn Road:</p> <ul style="list-style-type: none"> - No settlement agreement requests have been submitted to date. <p>48th Street and Indian School Road:</p> <ul style="list-style-type: none"> - No settlement agreement requests have been submitted to date. | | | ✓ | ✓ | ✓ | |

Community Involvement Techniques

This section describes the specific activities and resources that ADEQ uses to communicate and engage with stakeholders and community members near the East Central Phoenix WQARF sites.

ADEQ uses the following community involvement techniques:

1. CAB: The CAB, with assistance from ADEQ, has been conducting public meetings for the East Central Phoenix WQARF sites since March 2008. The CAB advises ADEQ on sharing information on the sites and provides input on content. CAB members serve as an information resource for their community. Per Arizona Revised Statutes § 49-289.03, CAB meetings are open to the public and held at easily accessible locations. CAB meetings will be held to receive site briefings, progress reports and other pertinent information in response to site activities or a request from a community advisory board member or a city, town or county in which the sites are located. CAB meetings may be held virtually if requested. A list of current CAB members can be found in Appendix E.
2. Local Print Media: ADEQ will publish all WQARF milestone public notices in the *Arizona Business Gazette*. The Arizona Newspaper Association maintains a database of all public notices published in major Arizona newspapers (arizonapublicnotices.com). For a list of other media outlets, see Appendix F.
3. U.S. Mail and Email Lists: ADEQ created U.S. Mail and email address lists to share updates on the East Central Phoenix WQARF sites. Anyone can join the site mailing lists by contacting the ADEQ Community Involvement Coordinator or registering on GovDelivery (public.govdelivery.com/accounts/AZDEQ/subscriber/new).
4. ADEQ Website: ADEQ's website provides visitors with three areas of information related to the sites and is updated regularly:
 - Notices Page: contains WQARF site public notices and announces comment periods (azdeq.gov/notices).
 - Events Page: includes information on WQARF site public meetings, including CAB meetings (azdeq.gov/events).

- Site Information Pages: provide detailed site information and links to the site information repositories
 - azdeq.gov/ecp-24th-gc
 - azdeq.gov/ecp-32nd-is
 - azdeq.gov/ecp-38th-is
 - azdeq.gov/ecp-40th-osborn
 - azdeq.gov/ecp-48th-is.
5. ADEQ Notice Board: Notices are displayed on boards located in ADEQ's Phoenix and Tucson offices.
 6. Public Meetings: In addition to CAB meetings, ADEQ may schedule public meetings or open houses as needed or requested. Examples include meetings with neighborhood/homeowner's associations, schools, or other community groups.
 7. Site Tours: The public may request site tours through the ADEQ Community Involvement Coordinator. Tours will be arranged in conjunction with the property owners and in compliance with current regulations.

ADEQ takes reasonable measures to provide access to community involvement activities to individuals with limited English proficiency and/or to those with disabilities. The community can request language interpretation, American Sign Language (ASL) interpretation, Communication Access Realtime Translation (CART) captioning services, or disability accommodations through the ADEQ Title VI Nondiscrimination Coordinator (602-771-2288 or Drago.Leonard@azdeq.gov).

The following table of Communication Techniques illustrates how these techniques have and will be used throughout the WQARF process for the East Central Phoenix WQARF sites.

Communication Techniques

| Communication Deliverable | | | Communication Recipients/Methods | | | | |
|-------------------------------------|---|---|----------------------------------|-------------------------|--|---------------------------------|-------------------|
| Type | Why | When | CAB Members | Interested Parties List | ADEQ Website | Local Print Media | ADEQ Notice Board |
| Notice | Provide notice of availability of milestone documents, request comments, and solicit input. | Per mandate (See Community Involvement Action table). | ✓ | ✓ | ✓ (Site and calendar pages) | ✓ (Arizona Business Gazette) | ✓ |
| CAB or Public Meeting Notice/Agenda | Provide two-way communication about the status of site activities. The notice announces the meeting and provides the agenda. | Variable schedule based on level of site activity as scheduled by CAB and ADEQ, with the exception of the required public meeting for the solicitation of remedial objectives (see Community Involvement Action table). | ✓ | ✓ | ✓ (Site, calendar, and CAB history pages) | Not Applicable | ✓ |
| Technical Presentation | Provide current information about site activity or related topics. | At CAB meetings or at specially requested public meetings. | ✓ | Not Applicable | ✓ (Site and CAB history pages) | Not Applicable | Not Applicable |
| Technical Milestone Document | Provide current technical information about site investigation/remediation activities (e.g., Remedial Investigation, Feasibility Study, etc.) | According to the WQARF Process as documents are developed and become available. | ✓ | Not Applicable | ✓ (Information repository) | Not Applicable | Not Applicable |
| Site Fact Sheet | Provide current information about the site activity. | Published at the start of the Remedial Investigation and at specific milestones or other times as deemed appropriate by ADEQ and the CAB. | ✓ | ✓ | ✓ (Information repository) | Not Applicable | Not Applicable |

| Communication Techniques | | | | | | | |
|--|---|--|---|-------------------------|--------------------------------------|--|-------------------|
| Communications Deliverable | | | Communications Recipients/Methods | | | | |
| Type | Why | When | CAB Members | Interested Parties List | ADEQ Website | Local Print Media | ADEQ Notice Board |
| Public Meeting to solicit Remedial Objectives | Provide forum to solicit Remedial Objectives. (Note that this meeting may be conducted in conjunction with a CAB meeting.) | After release of Draft Remedial Investigation Report. | ✓ | ✓ | ✓ (Site and calendar pages) | ✓ (Arizona Business Gazette) | ✓ |
| Public notice announcing a prospective purchaser agreement | Provide notice of availability and request comments. | Per mandate (see Community Involvement Action table). | ✓ | ✓ | ✓ (Information repository) | ✓ (Newspaper of general circulation in Maricopa County) | Not Applicable |
| Public notice announcing settlement agreement with a responsible party. | Provide notice of availability and request comments. | Per mandate (see Community Involvement Action table). | ✓ | ✓ | ✓ (Online information repository) | ✓ (Newspaper of general circulation in Maricopa County) | Not Applicable |
| Site Tour | Provide walking or driving tour of the site to observe current site conditions and the surrounding community and environment. | If requested, and with cooperation of current property owners. | Contact ADEQ Community Involvement Coordinator. | | | | |

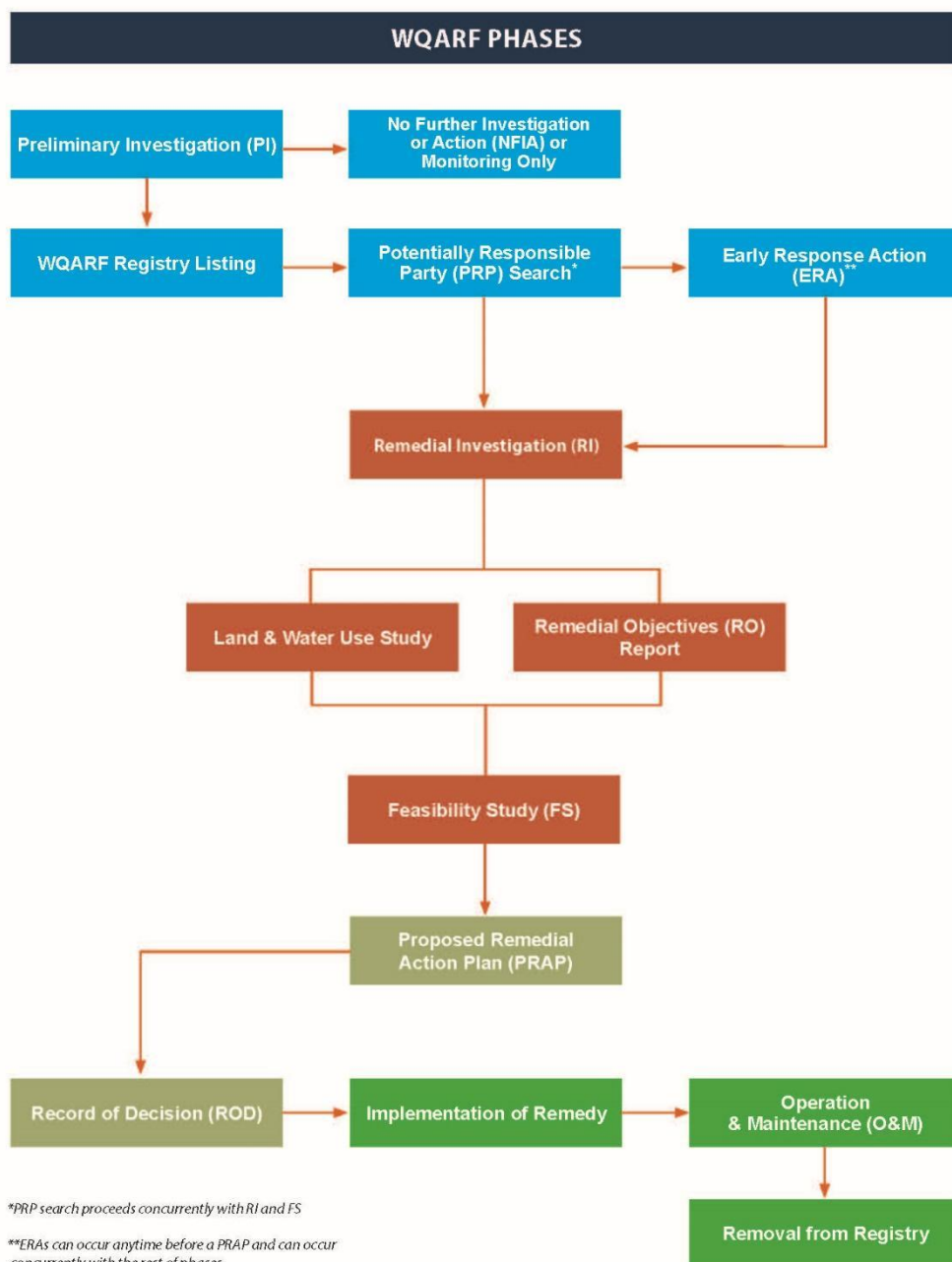
APPENDICES

The following appendices provide additional resources to support community involvement for the East Central Phoenix WQARF sites:

- Appendix A: WQARF process flowchart
- Appendix B: History of major activities at the East Central Phoenix WQARF sites
- Appendix C: Targeted communities in the CIA of the East Central Phoenix WQARF sites
- Appendix D: Elected officials representing communities within the CIA
- Appendix E: Current CAB members of the East Central Phoenix WQARF sites
- Appendix F: Local media outlets in the area
- Appendix G: Related state and local agencies
- Appendix H: Prospective purchaser agreements for property in and around the East Central Phoenix WQARF sites
- Appendix I: Consent orders and settlements related to the East Central Phoenix WQARF sites

Appendix A

WQARF Process Chart



Appendix B

Site Histories

The following presents site histories for the Arizona Department of Environmental Quality (ADEQ) East Central Phoenix Water Quality Assurance Revolving Fund (WQARF) sites.

East Central Phoenix 24th Street and Grand Canal

- 1985–1998 Groundwater samples were collected by the Salt River Project (SRP) from well 16.0E-6.8N, located east of the 24th Street and Grand Canal intersection. A sampling event conducted in January 1995 yielded the highest detection of tetrachloroethene (PCE) yet observed in the SRP well, a concentration of 8.8 micrograms per liter (µg/L).
- 2000 In May, the 24th Street and Grand Canal site was placed on the WQARF Registry with a score of 29 out of a possible 120. Groundwater sample collection from SRP well 16.0E-6.8N has generally been conducted by ADEQ on a yearly basis with levels of PCE above the Arizona Aquifer Water Quality Standards (AWQS) of 5 µg/L.
- 2002–2006 Routine groundwater monitoring activities were conducted at the site by ADEQ. The PCE concentration in SRP well 16.0E-6.8N ranged from 7.9 µg/L to 11 µg/L.
- 2007 In June, ADEQ sent out notices per Arizona Revised Statute (A.R.S.) § 49-287.03 initiating the Remedial Investigation for the site. During a routine groundwater monitoring event, PCE was detected in SRP well 16.0E-6.8N at a concentration of 12 µg/L.
- 2008 As part of a prospective purchaser agreement (PPA), CVS Pharmacy conducted a limited site assessment at the former location of a dry cleaner on the northeast corner of 24th Street and Thomas Road. As a condition of the PPA, CVS Pharmacy installed an on-site groundwater monitoring well located northeast of the North 24th Street and East Thomas Road intersection. The initial groundwater sample collected from the well had a PCE concentration of 170 µg/L. CVS Pharmacy also conducted a soil and soil vapor survey to 85 feet below ground surface (bgs). PCE concentrations in soil ranged from less than the laboratory reporting limit to 0.20 milligrams per kilogram (mg/kg). The highest concentration of PCE detected in soil vapor was 2,000 parts per billion by volume from a sample collected at 50 feet bgs.

East Central Phoenix 24th Street and Grand Canal (continued)

| | |
|------|--|
| 2008 | During a routine groundwater monitoring event, PCE was detected in SRP well 16.0E-6.8N at a concentration of 12 µg/L. The groundwater monitoring well located on the CVS Pharmacy property was sampled at multiple depths. The PCE concentrations ranged from 230 to 260 µg/L. |
| 2014 | Five groundwater monitoring wells were installed at the 24th Street and Grand Canal WQARF site and 68 groundwater samples were retrieved. |
| 2015 | Five groundwater and four soil vapor monitoring wells were installed throughout the site. A total of 124 groundwater samples and 32 soil vapor samples were collected. A planned Draft Remedial Investigation (RI) Report was postponed due to insufficient data and the need for additional groundwater assessment. |
| 2016 | Design and implementation of a soil vapor extraction (SVE) remediation system was initiated as part of an early response action (ERA) at the corner of 24th Street and Thomas Road. |
| 2017 | The SVE system was shut down in August due to low contaminant mass yield and to perform a soil vapor rebound evaluation. No significant soil vapor rebound was observed and the system remained shut down. |
| 2018 | In February, three deep soil borings were advanced to assess contaminants in the deep vadose zone. PCE was not detected in samples collected from the borings. In June, two additional groundwater monitoring wells were installed to better define the downgradient extent of the plume. In October, Geosyntec performed a Human Health Risk Assessment for the site. The assessment indicated remaining contaminant concentrations in soil vapor do not pose an unacceptable risk to site receptors. |
| 2019 | A triple-nested monitoring well was installed to delineate the downgradient portion of the plume. The Draft RI Report was released in March. The Proposed Remedial Objectives (RO) Report was released in May. The Final RI Report and Feasibility Study (FS) Workplan were released in June. The Final FS Report was completed in September. |
| 2020 | An in-situ chemical oxidation (ISCO) groundwater treatment pilot study was initiated in February 2020. The Proposed Remedial Action Plan (PRAP) was released in April 2020. |

East Central Phoenix 24th Street and Grand Canal (continued)

2021 Two new triple-nested monitoring wells were installed in the downgradient portion of the plume. The ISCO groundwater treatment pilot study continued throughout the year.

2022 The ISCO groundwater treatment pilot study continued during a portion of the year and the system was shut down in June.

2023 Two new monitoring wells were installed in the downgradient portion of the plume. Post-ISCO groundwater rebound monitoring was performed.

East Central Phoenix 32nd Street and Indian School Road

- 1989 Soil vapor surveys were conducted at multiple facilities throughout the East Central Phoenix Study Area to determine if a release of contaminants to the subsurface had occurred.
- 1989–1994 Two underground storage tanks were removed from former Unocal #6453 gas station located at 3201 East Indian School Road. During an investigation in 1994, a sample of the sludge from the western waste oil tank was analyzed and found to contain 68 mg/kg of PCE. Additionally, a soil sample collected from a depth of 12 feet bgs beneath the same tank contained 13 mg/kg of PCE.
- 1983–1998 Groundwater samples were collected by SRP from well 17.0E-8.0N, located southwest of 3201 East Indian School Road. A sampling event conducted in January 1996 yielded the highest detection of PCE observed in the SRP well at 82 µg/L.
- 2000 In May, the 32nd Street and Indian School Road site was placed on the WQARF Registry with a score of 29 out of a possible 120. In June, a limited Phase II investigation was conducted at the Maroney's Cleaners and Laundry Inc. (Maroney's) facility located at the northwest corner of 32nd Street and Indian School Road. The investigation included a soil vapor survey to 15 feet bgs and the installation and sampling of two groundwater monitoring wells. The highest concentration of PCE detected in soil vapor was 15,000 µg/L from a sample collected at 15 feet bgs in the alley just north of Maroney's. The highest detection of PCE in groundwater, 28 µg/L, was observed southwest of Maroney's in the parking area.
- 2003 In March, an ERA investigation was conducted at the former location of Viking Cleaners (Viking) at 4029 North 32nd Street. The ERA included completion of four soil borings (two inside and two outside the former dry-cleaning building) and the collection of soil vapor and groundwater samples. Results of this investigation indicated that a release of PCE had occurred and that the release had impacted groundwater. In April, air samples were collected from inside Viking building and the adjacent convenience mart. The Arizona Department of Health Services (ADHS) evaluated this data and provided a health consultation that determined there was no risk to employees under current use scenarios.
- During a routine groundwater monitoring event, PCE was detected in SRP well 17.0I-8.0N above the AWQS of 5 µg/L. The maximum PCE concentration observed was in a groundwater monitoring well west of the SRP well, at 3,600 µg/L.

East Central Phoenix 32nd Street and Indian School Road (continued)

2004 An SVE/air sparge (AS) system was installed at Viking. ADEQ began operating the SVE/AS unit in December.

2006 Three additional groundwater monitoring wells were installed within the parking lot area surrounding Maroney's. The initial groundwater samples collected from the three wells indicated a maximum PCE concentration of 100 µg/L. Soil vapor samples collected during the monitoring well drilling had a maximum PCE concentration of 468 µg/L in one well at a depth of 5 feet bgs.

In the spring, as part of a PPA, the new property owner of the former Viking property installed four SVE wells inside the facility. The wells were then connected to the SVE/AS system being operated by ADEQ. ADEQ installed a groundwater monitoring well located west of the building. The initial groundwater samples collected from the well had shallow and deep PCE concentrations of 2.9 and 2.7 µg/L, respectively.

During a routine groundwater monitoring event, PCE was detected in SRP well 17.0E-8.0N at a concentration of 5 µg/L, while the maximum PCE concentration observed in a groundwater monitoring well southwest of the SRP well was 930 µg/L.

2007 In May, a groundwater monitoring well was installed south of Maroney's. The initial groundwater samples collected from the well did not contain PCE above the AWQS. In June, ADEQ sent out notices per A.R.S. § 49-287.03 initiating the Remedial Investigation for the site. The SVE/AS system located at Viking remained operational.

2008 The SVE/AS system at Viking removed approximately 3,020 pounds of PCE. Because this system allowed cleanup criteria to be met, the system was shut down and removed from the site. In June, ADEQ installed a second groundwater monitoring well west of Viking on East Fairmount Avenue. The initial groundwater samples collected from the well had shallow and deep PCE concentrations that ranged from 32 to 2,400 µg/L.

ADEQ collected passive soil vapor samples from the 40 locations placed within one city block west to southwest of the former Viking property. The qualitative PCE mass observed in those samples ranged from less than 25 nanograms (ng) up to 66,800 ng.

During a routine groundwater monitoring event, PCE was not detected above the AWQS in SRP well 17.0E-8.0N.

East Central Phoenix 32nd Street and Indian School Road (continued)

2010 ADEQ continued to collect passive soil gas samples from an additional 25 locations placed within one and a half city blocks west to southwest of the Viking facility. The qualitative PCE mass observed in those samples ranged from less than 25 ng to 546 ng. ADEQ also installed 21 permanent soil vapor monitoring wells along East Fairmount Avenue and North 31st Street. The initial soil vapor samples collected from these wells contained PCE and trichloroethene (TCE) concentrations ranging from less than the laboratory reporting limit to 36,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 210 $\mu\text{g}/\text{m}^3$, respectively.

During a routine groundwater monitoring event, PCE was not detected above the AWQS in SRP well 17.0E-8.0N.

2011 ADEQ installed five permanent soil vapor monitoring wells at the former location of Viking Cleaners. The initial soil vapor samples collected from these wells had PCE and TCE concentrations that ranged from less than the laboratory's reporting limit to 350,000 $\mu\text{g}/\text{m}^3$ and 2,400 $\mu\text{g}/\text{m}^3$, respectively. ADEQ also installed two SVE test wells and ten SVE observation wells, and conducted an SVE pilot test. The results from the test suggest that SVE could be an effective treatment technology at the former location of Viking Cleaners.

In May, ADEQ installed a groundwater monitoring well west of Viking within the parking lot adjacent to Food City. The initial groundwater sample collected from the well contained PCE at a concentration of 1,100 $\mu\text{g}/\text{L}$.

Based on the soil vapor sampling results in 2010 along East Fairmount Avenue and North 31st Street, ADEQ installed two SVE test wells and six SVE observation wells, and conducted SVE pilot tests in February and December. The results from the tests suggest that SVE may be an effective treatment technology along East Fairmount Avenue and North 31st Street.

In April, ten permanent soil vapor monitoring wells were installed north of Maroney's. The initial soil vapor samples collected from these wells contained PCE and TCE concentrations that ranged from less than the laboratory reporting limit to 300,000 $\mu\text{g}/\text{m}^3$ and 3,800 $\mu\text{g}/\text{m}^3$, respectively. As a result, ADEQ conducted an SVE pilot test in June. The results from the test suggest that SVE may be an effective treatment technology at Maroney's.

During a routine groundwater monitoring event, PCE was not detected above the AWQS in SRP well 17.0E-8.0N.

East Central Phoenix 32nd Street and Indian School Road (continued)

2012 ADEQ installed three SVE wells at Viking in preparation for the installation of an SVE system. Eleven SVE wells and eight groundwater remediation pilot test wells were installed along East Fairmount Avenue and North 31st Street. An additional groundwater monitoring well was installed south of Fairmount Avenue on 30th Street.

By February, 12 SVE extraction wells and 10 SVE observation wells were installed in preparation for the installation of an SVE system near Maroney's.

During the spring, ADEQ conducted sampling of the soil vapor monitoring wells throughout the site. Cone Penetrometer Testing (CPT) was also performed throughout the site to investigate current hydrogeologic conditions. Additionally, a routine groundwater monitoring event was conducted.

2013 The SVE system at Maroney's began operation in June and operated continuously until November. Additionally, ADEQ installed soil vapor wells to help delineate the soil vapor plume along the eastern portion of North 32nd Street between East Indian School Road and East Glenrosa Avenue, and at the corner of East Indian School Road and North 31st Street. Soil vapor wells were also installed along the southern portion of the Viking facility.

Soil vapor samples showed concentrations of PCE varied significantly from location to location. PCE was detected in soil vapor at concentrations as high as 4,100 µg/m³. The results of soil vapor sampling delineated an area in which PCE concentrations exceeded vapor intrusion screening levels calculated from available EPA guidance. Based on this information, ADEQ went door-to-door to collect indoor air samples from residences located above the soil vapor plume to assess the potential for vapor intrusion. Sample results did not indicate a wide-spread vapor intrusion problem.

2014 Construction of the SVE system located behind the Viking facility was completed and activated in July 2014 and has been in continuous operation since that time.

A total of 13.075 pounds of volatile organic compounds (VOCs) were removed from the Maroney's SVE system. Additionally, 68 groundwater and 326 soil vapor samples were collected. Follow-up indoor air samples were also collected to further assess the potential for vapor intrusion.

East Central Phoenix 32nd Street and Indian School Road (continued)

- 2015 Four groundwater and five soil vapor monitoring wells were installed across the 32nd Street and Indian School WQARF site. A total of 117 pounds of VOCs were removed from the Maroney's and Viking SVE systems. The Maroney's SVE system was turned off due to low soil vapor concentrations. The Viking SVE system remains in operation. Additionally, 183 groundwater, 19 soil vapor, and 38 soil samples were collected.
- 2016 Several groundwater wells and borings were installed to further delineate the plume including VCMW-03B, 06B, 15-17, 20, and 22. A rebound evaluation and remediation optimization review was conducted for the Maroney's SVE system. The Viking SVE system operated for much of the year with only brief shutdown periods for maintenance and operational considerations. In December, the Arizona Department of Health Services (ADHS) published a Health Consultation and concluded that there is no inherent public health concern from subsurface PCE or TCE vapor concentrations.
- 2017 Groundwater well drilling continued in an effort to fully delineate the plume, including drilling of VCMW-08AR and VCMW-23. Additional SVE wells and vapor probes were installed to assist ongoing SVE operations at both the Maroney's and former Viking Cleaners facilities.
- 2018 Two additional wells, VCMW-24 and 26, were installed to delineate the downgradient extent of the plume. The SVE system at Maroney's was shut down for a rebound evaluation. Concentrations remained below the health-protective concentrations during the rebound evaluation period and the system was not restarted. In December, an additional soil vapor extraction well (SVE-10) was installed at the former Viking Cleaners facility
- 2019 Rebound evaluations continued at both the Maroney's and Viking Cleaners SVE systems. The Draft RI Report was released in March. The Proposed RO Report was released in May. The Final RI Report and FS Work Plan were released in June. The Final FS Report was completed in September.
- 2020 An enhanced reductive dechlorination (ERD) groundwater treatment pilot study was initiated in February 2020. The PRAP was released in September, 2020. Soil vapor extraction was performed intermittently at the former Maroney's property.
- 2021 The ERD groundwater treatment pilot study continued throughout the year. Soil vapor extraction was performed intermittently at the former Maroney's property.

East Central Phoenix 32nd Street and Indian School Road (continued)

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| 2022 | The ERD groundwater treatment pilot study continued throughout the year. The soil vapor extraction system was operated during a portion of the year at the former Maroney's property and subsequently decommissioned in October. A targeted soil excavation was performed in the footprint of the former Maroney's building after the drycleaner building was demolished. |
| 2023 | Post-ERD groundwater rebound monitoring was performed. |

East Central Phoenix 38th Street and Indian School Road

- 1989 Soil vapor surveys were conducted at multiple facilities throughout the East Central Phoenix Study Area to determine if a release of contaminants to the subsurface had occurred. ADEQ collected samples to 30 feet bgs at the former locations of The Cleaners of Phoenix, Inc. (The Cleaners) and Rose Formal Wear, Inc. (Rose Formal Wear) facilities located in the 3700 block of Indian School Road. One soil vapor sample was collected adjacent to each facility. The maximum concentrations of PCE detected in the soil vapor samples were 16,000 µg/L at The Cleaners and 400 µg/L at Rose Formal Wear.
- 1992 Eleven borings were drilled adjacent to The Cleaners. Analyses of soil samples collected from the boring indicated detectable concentrations of PCE, but at levels below regulatory standards. ADEQ installed three groundwater monitoring wells: one south, one east and one southwest of The Cleaners. The initial groundwater sample collected from the well directly south of The Cleaners had a PCE concentration of 34,000 µg/L.
- An additional eight soil borings were drilled adjacent to Rose Formal Wear. The soil concentrations of PCE were all less than the laboratory reporting limit of 0.020 mg/kg. ADEQ installed a groundwater monitoring well adjacent to Rose Formal Wear. The initial groundwater sample collected from the well had a PCE concentration of 350 µg/L.
- 1994 ADEQ installed a dual-nested groundwater monitoring well near the intersection of Amelia Avenue and 36th Street. The initial groundwater samples collected from the well had shallow and deep PCE concentrations of 5.8 µg/L and less than the AWQS of 5 µg/L, respectively. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 1,600 µg/L.
- 1995 ADEQ installed an SVE system located adjacent to The Cleaners. The SVE system became operational in July and ran periodically through the beginning of August. The SVE system was shut down to perform a soil vapor rebound test. By the end of August, the treatment system appeared to have reached the appropriate cleanup criteria and the system was shut down and removed from the site in 2003. The SVE system removed 7.7 pounds of VOCs.
- 1996 ADEQ collected confirmation soil and soil vapor samples from three borings to a depth of 30 feet bgs near The Cleaners. Analyses of soil samples indicated detectable concentrations of PCE, but at levels below regulatory standards. The soil vapor concentrations of PCE ranged from less than the laboratory limit to 140 µg/L. Based on the results, ADEQ concluded that the SVE system had reduced soil vapors in the vadose zone.

East Central Phoenix 38th Street and Indian School Road (continued)

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| 1996 | During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 2,700 µg/L. |
| 1997 | ADEQ collected several groundwater samples from two borings located near The Cleaners and Rose Formal Wear. PCE in groundwater was detected in one boring, with concentrations ranging from less than the laboratory limit to 12.9 µg/L. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 1,700 µg/L. |
| 1998 | The 38th Street and Indian School site was placed on the WQARF Registry with a score of 20 out of a possible 120. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 2,500 µg/L. |
| 2002 | During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 180 µg/L. |
| 2003 | ADEQ removed the SVE system located adjacent to The Cleaners facility. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 12 µg/L. |
| 2004–2006 | Routine groundwater monitoring was conducted at the site. The maximum PCE concentrations observed throughout the site ranged from 8.0 µg/L to 38 µg/L. |
| 2007 | In June, ADEQ sent out notices per A.R.S. §49-287.03, initiating the Remedial Investigation for the site. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 37 µg/L. |
| 2008 | ADEQ installed an additional groundwater monitoring well located west of Rose Formal Wear. The initial groundwater samples from the new well were collected from multiple depths. PCE was not detected in the well above the AWQS of 5 µg/L. The results from this sampling event indicated that the vertical extent of the plume had been assessed in this area. ADEQ conducted groundwater sampling using passive diffusion bag samplers in the site monitoring wells. The maximum PCE concentration observed throughout the site was 98 µg/L. |
| 2013–2014 | From July 1, 2013 to June 30, 2014, eight groundwater monitoring wells were installed and 89 groundwater samples were retrieved. |

East Central Phoenix 38th Street and Indian School Road (continued)

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| 2014-2015 | From July 1, 2014, to June 30, 2015, 69 groundwater and three soil vapor samples were collected. The Remedial Investigation report and a Feasibility Study Work Plan were finalized. Analytical results of soil vapor samples collected from borings around the former The Cleaners facility were compared to an attenuated industrial air screening level. The analytical results were found to be less than the attenuated screening level, indicating that PCE vapor intrusion did not currently pose an excess health risk at the former facility. |
| 2016 | ADEQ installed a groundwater monitoring well and groundwater monitoring was conducted at the site. |
| 2017 | ADEQ installed a groundwater monitoring well and groundwater monitoring was conducted at the site. Additionally, a series of ISCO injections were conducted at the site from October through the end of the year. |
| 2018 | ISCO injections initiated in the previous year were completed in February. ADEQ conducted a series of groundwater monitoring events to collect data regarding the efficacy of the ISCO injections. Analytical results from groundwater sampled during the events indicated that concentrations of PCE were below the AWQS of 5 µg/L and ADEQ issued a Feasibility Study Report recommending site closure. A public notice informing the site's stakeholders and community that the site had been removed from the WQARF registry was issued in June. |
| 2019 | ADEQ conducted groundwater monitoring in response to site stakeholder concern that the site was closed prematurely. Analytical results from sampled groundwater indicated that PCE concentrations had returned to levels exceeding the AWQS of 5 µg/L. ADEQ reopened the site for continued environmental investigation and remediation and installed four groundwater monitoring wells. |
| 2020 | ADEQ installed three groundwater monitoring wells and groundwater monitoring was conducted at the site. |
| 2021 | ADEQ installed three groundwater monitoring wells and groundwater monitoring was conducted at the site. Additionally, five triple-nested soil vapor monitoring wells were installed and sampled near former dry cleaners within the site. |
| 2022 | ADEQ installed one groundwater monitoring well and groundwater monitoring was conducted at the site. In addition, a slug test was performed at the site. |

East Central Phoenix 38th Street and Indian School Road (continued)

2023 ADEQ conducted a groundwater pump test and performed groundwater monitoring at the site.

East Central Phoenix 40th Street and Osborn Road

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| 1983–2002 | Groundwater samples were collected by SRP from well 17.9E-7.5N, located west of the Osborn Road alignment and 40th Street. A sampling event, conducted in January 1998, yielded the highest detection of PCE yet observed in the SRP well, a concentration of 210 µg/L. |
| 2000 | In May, the 40th Street and Osborn Road site was placed on the WQARF Registry with a score of 30 out of a possible 120. |
| 2003 | ADEQ installed a groundwater monitoring well in the Osborn Road alignment between 39th Street and 40th Street. The initial groundwater sample collected from the well did not contain PCE above the AWQS of 5 µg/L. During a routine groundwater monitoring event, PCE was detected in SRP well 17.9E-7.5N at a concentration of 110 µg/L. |
| 2005–2006 | Routine groundwater monitoring was conducted at the site. PCE was detected in SRP well 17.9E-7.5N at concentrations of 41 µg/L and 28 µg/L. |
| 2007 | <p>In June, ADEQ sent out notices per A.R.S. §49-287.03 initiating the Remedial Investigation for the site. During a routine groundwater monitoring event, PCE was detected in SRP well 17.9E-7.5 at a concentration of 24 µg/L.</p> <p>In December, ADEQ installed an additional groundwater well on 39th Street north of Indian School Road. The initial groundwater samples collected from the well had depth-specific PCE results that ranged from less than the laboratory reporting limit up to 310 µg/L.</p> |
| 2008 | <p>In the spring and winter, ADEQ installed three additional groundwater monitoring wells: two east of 40th Street along Weldon and Whitton Avenues and one in the Osborn Road alignment between 39th Street and 40th Street. The initial groundwater samples collected from the wells contained PCE ranging from less than the laboratory reporting limit to 110 µg/L.</p> <p>During a routine groundwater monitoring event, PCE was detected in SRP well 17.9E-7.5N at a concentration of 6.8 µg/L. The maximum PCE concentration observed throughout the site was 67 µg/L.</p> |

East Central Phoenix 40th Street and Osborn Road (continued)

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| 2014 | ADEQ monitored SRP well 17.9E-7.5N and three nearby groundwater monitor wells in 2008. Sampling of the SRP well indicated a PCE concentration of 6.8 µg/L. The PCE results from the other wells ranged from below the AWQS of 5 µg/L to 67 µg/L. In FY 2014, a total of eight groundwater monitor wells were installed and a total of 99 groundwater samples were retrieved. A Draft RI Report was released in December. It was later placed on hold when it was determined further investigation was warranted. |
| 2015 | In fiscal year 2015, one groundwater monitor well was installed and a total of 98 groundwater samples were retrieved. |
| 2016-2019 | Additional groundwater monitor wells were installed to characterize the distribution of groundwater contamination at the site. |
| 2020 | The Draft RI Report was released in April 2020. The Proposed RO Report was released in June 2020. The Final RI Report and the FS Workplan were released in July 2020. |
| 2021 | The Feasibility Study was released in July 2021. Semi-annual groundwater monitoring continued in 2021. |
| 2022-2023 | ADEQ conducted groundwater monitoring at the site. |

East Central Phoenix 48th Street and Indian School Road

- 1989 Soil vapor surveys were conducted at multiple facilities throughout the East Central Phoenix Study Area to determine if a release of contaminants to the subsurface had occurred. In October, one soil vapor sample was collected adjacent to the Sandy's Magic Touch Cleaners, Inc. (Sandy's) facility. The concentration of PCE detected in the soil vapor sample was 670 µg/L.
- 1992 Eight soil borings were drilled west of Sandy's and soil samples were collected. PCE in soil ranged from 0.024 mg/kg to 0.440 mg/kg. A wastewater sample was collected from a lint trap at Sandy's and found to contain PCE at 150 µg/L. ADEQ installed two groundwater monitoring wells: one west of Sandy's and one northwest of SRP well 19.0E-8.1N. The initial groundwater sample collected from the well west of Sandy's had a PCE concentration of 2,300 µg/L.
- 1994 One groundwater monitoring well was installed southwest of Sandy's on Arcadia High School grounds. The initial groundwater samples collected from the well did not contain PCE above the AWQS of 5 µg/L.
- During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 3,000 µg/L.
- 1996 Ten soil borings were drilled west of Sandy's and soil samples were collected. The soil concentrations of PCE ranged from 0.0011 mg/kg to 0.2 mg/kg. Soil vapor samples were also collected. A maximum PCE concentration of 5,600 µg/L was identified in one boring at a depth of 15 feet bgs.
- During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 4,000 µg/L.
- 1997–1998 ADHS evaluated the data collected in 1996 and provided three health consultations that determined there was no risk to Sandy's employees under current use scenarios. In May, ADEQ collected grab groundwater samples from five wells. The PCE concentrations in the samples ranged from less than the laboratory reporting limit to over 2,500 µg/L. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 4,300 µg/L.
- 1999 In April, the 48th Street and Indian School Road site was placed on the WQARF Registry with a score of 27 out of a possible 120.

East Central Phoenix 48th Street and Indian School Road (continued)

- 2000 ADEQ and SRP entered into a governmental services contract in which ADEQ funded SRP to conduct an interim remedial action (IRA) at the site. For the IRA, SRP would design and install an SVE system to remove soil vapor contamination from the subsurface.
- 2001 As part of the IRA, SRP installed two groundwater monitoring wells east of Sandy's and one groundwater extraction well west of Sandy's.
- 2004 SRP installed two SVE wells west of Sandy's and Maricopa County approved an air quality permit for the SVE system.
- 2006 In February, SRP began operating the SVE system. By September, the SVE system had removed approximately 248 pounds of PCE from the vadose zone. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 98 µg/L.
- 2007 In June, ADEQ sent out notices per A.R.S. §49-287.03 initiating the Remedial Investigation for the site. At the end of September, approximately 295 pounds of PCE were removed from the vadose zone by the SVE system. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 100 µg/L.
- 2008 By the end of March, approximately 309 pounds of PCE were removed from the vadose zone by the SVE system. ADEQ installed two additional groundwater monitoring wells on 47th Street, north of Indian School Road. The initial groundwater samples collected from the wells contained PCE equal to or below the AWQS of 5 µg/L. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 33 µg/L.
- 2009 In January, ADEQ collected passive soil gas samples from approximately 14 locations near North 45th Place, south of Indian School Road. By July, the SVE System had removed approximately 310 pounds of PCE from the soil in the vadose zone. Routine groundwater monitoring was not conducted.
- 2010 SRP continued to operate the SVE system. As of June, approximately 314 pounds of PCE had been removed from the vadose zone soil. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 370 µg/L.

East Central Phoenix 48th Street and Indian School Road (continued)

2011 ADEQ continued to collect passive soil gas samples from 39 locations adjacent to Sandy's and near North 45th Place. The PCE mass observed in those samples ranged from less than 25 ng to 3,512 ng. As a result, ADEQ installed 12 permanent soil vapor monitoring wells adjacent to the passive soil gas sample locations. The initial soil vapor samples collected from these wells had PCE concentrations that ranged from 16 µg/m³ to 59,000 µg/m³.

SRP continued to operate the SVE system. As of December, approximately 319 pounds of PCE had been removed from the vadose zone soil. During a routine groundwater monitoring event, the maximum PCE concentration observed throughout the site was 1400 µg/L.

2012 ADEQ installed seven SVE wells and six SVE observation wells adjacent to Sandy's in preparation for the modification to the SVE system. ADEQ also conducted an SVE pilot test. The results from the test suggested that SVE was still an effective treatment technology for the site. SRP decommissioned its SVE system in April and ADEQ managed the construction, operation, and maintenance of a new SVE treatment system.

ADEQ installed three additional groundwater monitoring wells south and southwest of Sandy's and conducted sampling of the soil vapor monitoring wells throughout the site. CPT was also performed throughout the site to investigate current hydrogeologic conditions. A routine groundwater monitoring event was conducted in April.

2013 To further delineate the soil vapor plume, ADEQ collected soil vapor samples. The soil vapor samples were collected at depths of approximately 5 and 15 feet bgs. The soil vapor concentrations of PCE ranged from less than the limit of detection of 69 µg/m³ to 830 µg/m³.

ADEQ also installed 56 temporary soil vapor wells. The results of soil vapor sampling delineated the PCE soil vapor plume at concentrations greater than the residential indoor air screening level of 9.4 µg/m³. The soil vapor plume extended from the southwestern portion of the Arcadia Towne Center southwest to an area near 44th Place, between East Fairmount and East Indianola avenues.

ADEQ then went door-to-door to collect indoor air samples from residences located above the soil vapor plume to assess the potential for vapor intrusion. Fourteen residences were sampled. Additionally, ADEQ collected indoor air samples from 30 classrooms at Arcadia High School.

East Central Phoenix 48th Street and Indian School Road (continued)

Only one of the 14 indoor air samples collected in the residential areas contained PCE at a concentration greater than the residential indoor air screening level of 9.4 µg/m³. After confirmation sampling, results indicated PCE was less than the screening level, indicating the original sample was affected by normal household activities. PCE was not detected in any of the indoor air samples collected at Arcadia High School greater than the screening level.

2014 Additional indoor air sampling was conducted. PCE was not detected in any indoor air samples at concentrations greater than their applicable screening levels.

Groundwater monitoring and soil gas monitoring activities were conducted throughout the site.

As part of the ERA, SRP operated an SVE system. By January 2012, approximately 319 pounds of PCE had been removed from the soil. In April the SVE system was dismantled by SRP in order for ADEQ to install a new system. It was anticipated that the new SVE system would be installed in 2015. Site investigation and groundwater well installation continued throughout FY15.

2015 Groundwater monitoring and soil gas monitoring activities were conducted throughout the site. A total of 66 groundwater and 33 soil vapor samples were collected.

2016 ADEQ conducted groundwater investigations to characterize the distribution of impacted groundwater at the site.

2018 A deep groundwater monitoring well was installed at the source in April.

2019 The Draft RI Report was released in July. The Proposed RO Report was released in September. The Final RI Report and FS Workplan were released in November.

2020/21 The FS Report was released in July 2020. Semi-annual groundwater monitoring continued in 2021.

2022-2023 ADEQ conducted groundwater monitoring at the site.

Appendix C

Targeted Communities

The following lists identify neighborhood associations, schools, and vulnerable population centers near the East Central Phoenix WQARF sites. phoenix.gov/nsd/programs/neighborhood-coordination

Neighborhood Associations

24th Street Block Watch

Shaun Tessensohn

602-791-6011

1934 E. Camelback Rd. 120

Phoenix, AZ. 85016

Email: greatergreengable@gmail.com

Alvarado Neighborhood Association

Nick Capaz

51 E. Monte Vista Rd., Phoenix AZ 85004

apaz@gmail.com

Arcadia Corners Neighborhood Association

Laura Stover

4039 E. Pinchot Ave.

Phoenix, AZ. 85018

arcadiacorners@live.com

Arcadia Lite Block Watch/Neighborhood Association

Ben Madsent

3321 E. Glenrosa Ave., Phoenix AZ 85018

Madsen.benjamin@gmail.com

Arcadia Osborn Neighborhood Association

Mr. Neal Haddad

3402 N. 42nd St.

Phoenix, AZ. 85018

ncgphx@gmail.com

Avalon Neighborhood Association

Bobbie Novak, President
1812 E. Cheery Lynn Rd.
Phoenix, AZ. 85016

Brentwood Historic Block Watch

Christine Ramirez
1840 E. Culver
Phoenix, AZ. 85006

Central City Precinct Phoenix Neighborhood Patrol

602-495-5005

Doreena Wiegert
1902 S. 16th St., Phoenix, AZ 85034

Coalition of East Phoenix

602-990-9555

Deborah Cookson
5950 E. Orange Blossom Ln., Phoenix, AZ 85018
Tennis3@cox.net

Coronado Fight Back East

Grace Newton, Fight Back Chair
1735 E. Palm Ln., Phoenix, AZ. 85006
trinetworkgcn@outlook.com

Coronado Fight Back Southwest

Rebecca Santiago, President
530 E. McDowell Rd. #107-489, Phoenix, AZ. 85004
vicepresident@thecoronadoneighborhood.com

Coronado Neighborhood Association

Rebecca Santiago, President
530 E. McDowell Rd. #107-489, Phoenix, AZ. 85004
vicepresident@thecoronadoneighborhood.com

Creighton Square Block Watch

Chelsea Vetsch
3016 E. Palm Ln., Phoenix, AZ. 00000
chillvetsch@gmail.com

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|---|---------------------|
| <p>Dateland Neighborhood Association Harold Lively 3428 E. Minnezona Ave., Phoenix, AZ 85018 georgethedog@q.com</p> | <p>602-955-3876</p> |
| <p>Earll Drive People Watch Ms Eileen Wells, Community leader 2207 E Earll Dr., Phoenix, AZ. 85016 wells.eileen@yahoo.com</p> | |
| <p>East Osborn Neighborhood Association Roger Pongratz 2901 E. Pinchot Ave., Phoenix, AZ 85016 east.osborn.na@cox.net</p> | <p>602-553-8996</p> |
| <p>Empire Strikes Block Bridget Dickinson, Block Watch Captain 3420 N. 31st St., Phoenix, AZ. 85016 dakjoel@cox.net</p> | |
| <p>Foote Addition Neighborhood Association Edward Duber, Board Member 2543 N. Foote Dr., Phoenix, AZ. 85008 eduber3@gmail.com</p> | |
| <p>Greater Cheery Lynn Neighborhood Association Heather Flynn 1582 E. Cheery Lynn Rd., Phoenix, AZ 85014 heatherflynn1@yahoo.com</p> | <p>602-561-2876</p> |
| <p>Greater Cherry Lynn Block Watch Ted Cotton 1509 E. Cheery Lynn Rd., Phoenix, AZ 85014 cottonTed@gmail.com</p> | |
| <p>Greater Green Gables Neighborhood Association Abraham James 2018 N. 23rd St., Phoenix, AZ 85006 abrahamj@cox.net</p> | <p>602-275-1377</p> |

H.A.R.M.O.N.Y. Neighborhood Association

Ms. Lynda Rusinek
P.O. Box 32013
Phoenix, AZ. 85064

Historic Emerson North

602-262-2212

Joanie Crawley
2525 N. Richland St., Phoenix, AZ 85006

Linden 2 HOA

602-956-0208

Jackie Holtorf
3604 N. 38th St., Apt 13, Phoenix, AZ 85018

Literacy Volunteers of Maricopa County

602-274-3430

Arcelia Zamora, Acting Executive Director
PO BOX 47330, Phoenix, AZ. 85068
support@lvmc.net

Loma Linda Neighborhood Association

Matthew Mansour, Primary Contact
Phoenix, AZ
matthew@aquacrossings.com

Mir Ra Image

602-580-7653

Jadestorm Shamsid-deen
9307 S 51st Ave., Apt. 1169, Phoenix AZ 85339
mirra.imagemtm@aol.com

Mountain View Precinct Phoenix Neighborhood Patrol

Rick Sain
3612 E Coronado Rd., Phoenix AZ 85008
usshornet@msn.com

Mulberry Block Watch

Albert DiPiazza, Resource Manager
3007 E. Flower St., Phoenix, AZ. 85016

Northeast Village Neighborhood Association

Michael Wiser, Chair

2519 N. 38th St., Phoenix, AZ. 85008

wisermike86@gmail.com

Perry Park Neighborhood Association

Teresa Sosa

2901 N. 31st St.

Phoenix, AZ. 85008

Phoenix Communities United

Michael Angulo

801 N 2nd Ave., Phoenix AZ 85003

michaelangulo@mac.com

Phoenix Community Alliance

269-535-9226

Patrick McDaniel

1 E. Washington St. #230, Phoenix, AZ. 85004

pmcdaniel@dtphx.org

Phoenix Homestead Association

Kris Straub

2640 E. Earll Dr., Phoenix, AZ. 85016

Roosevelt Row Merchant Association

Kenny Barrett, Chair

214 E. Roosevelt St., Phoenix, AZ. 85004

rooseveltrrowmerchants@gmail.com

Rudyville Block Watch

d

Morgan Sailor.nLeader

3342 E. Virginia Ave., Phoenix, AZ

m.a.sailor@outlook.com

Rudyville Neighborhood Association

480-550-2486

Chelsea Friday, Neighborhood Leader

2802 N. 30th Pl., Phoenix, AZ. 85008

rudyvilleneighborhood@gmail.com

Spanish Gardens North Block Watch

Courtney Gaertner. Leader

3066 N. 32nd St. #359, Phoenix, AZ. 85018

Sutton Place Block Watch

Bill Martin

2504 E. Osborn Rd., Phoenix, AZ 85016

Urban Phoenix Project

Ryan Boyd

ryan.boyd@urbanphoenixproject.org

Villa Seville Block Watch

Andrea Ristau, Block Watch Captain

2842 E. Clarendon Ave., Phoenix, AZ. 85016

andreablockwatch@gmail.com

Schools

The East Central Phoenix WQARF sites community involvement area is within the Creighton Elementary School District, Phoenix Union High School District, and Scottsdale Unified Elementary and High School District.

Arcadia High School

480-484-6300-

4703 E. Indian School Rd., Phoenix, AZ 85018

Career Success School -- Sage Campus

602-955-0355

3141 E. Cheery Lynn Rd., Phoenix, AZ 85018

Christ Lutheran School

602-957-7010

3901 E. Indian School Rd., Phoenix, AZ 85018

Khalsa Montessori Primary School Inc.

602-252-2275

346 E. Coronado Rd., Phoenix, AZ 85004

Larry C. Kennedy School

602-381-6180

2702 E. Osborn Rd., Phoenix, AZ 85016

Monte Vista Elementary School

602-381-6140

3501 E. Osborn Rd., Phoenix, AZ 85018

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| Phoenix Christian K-8 School 2425 N. 26th St., Phoenix, AZ 85008 | 602-956-9330 |
| Saint Agnes School 2311 E. Palm Ln., Phoenix, AZ 85006 | 602-244-1451 |
| Summit High School 728 E. McDowell Rd., Phoenix, AZ 85006 | 602-258-8959 |
| Villa Montessori – Weldon Campus 2802 E Meadowbrook Ave., Phoenix, AZ 85016 | 602-955-2210 |
| Western Bible College (SAGU) 2601 E. Thomas Rd., #210, Phoenix, AZ 85016 | 602-252-5527 |
| Whittier Elementary School 2000 N. 16th St, Phoenix, AZ 85006 | 602-257-3925 |
| William T. Machan Elementary School 2140 E. Virginia Ave., Phoenix, AZ 85006 | 602-381-6120 |

Vulnerable Population Centers

The following list includes vulnerable population centers in the East Central Phoenix WQARF sites CIAs. ADEQ considers daycares, senior living homes, and some medical facilities as vulnerable population centers due to the age of clients served. Children under age five and adults above age 65 are considered more vulnerable to the potential health effects associated with exposure to environmental contamination.

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| Blossom Family Preschool 3831 North 34th Street, Phoenix, AZ 85018 | 480-743-3264 |
| Christ Lutheran Preschool 3901 E. Indian School Rd., Phoenix, AZ 85018 | 602-957-7010 |
| Camelback Holistic Preschool 3530 N. 32nd St., Phoenix, AZ 85018 | 602-466-1085 |
| Desert Haven Care Center 2645 E. Thomas Rd., Phoenix, AZ 85016 | 602-956-8000 |

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|---|--------------|
| Desert Terrace Healthcare Center 2509 N. 24th St., Phoenix, AZ 85008 | 602-273-1347 |
| Kreative Kampus Learning Center 1729 E. Thomas Rd., Phoenix, AZ 85016 | 602-277-1441 |
| Little Big Minds Spanish Immersion Preschool 2702 E Osborn Rd., Phoenix, AZ 85016 | 602-900-0401 |
| Little Explorers Learning Center 2 L.L.C. 2846 E. Cheery Lynn Rd., Phoenix, AZ 85016 | 602-957-2128 |
| Magical Star Preschool 2232 N 36th St, Phoenix, AZ 85008 | 602-267-1539 |
| Murphy's Home Preschool 3734 E Fairmount Ave, Phoenix, AZ 85018 | 602-955-2453 |
| Nina's Family Child Care Center 3502 E. Indian School Road, Phoenix, AZ 85018 | 602-335-8951 |
| Secure Childcare 1216 E. Windsor Ave., Phoenix, AZ 85006 | 602-348-5922 |
| St. Agnes Preschool 2311 E. Palm Lane, Phoenix, AZ 85006 | 602-244-1451 |
| The Son's Children 3301 N. 32nd St., Phoenix, AZ 85018 | 602-956-7370 |
| Tutor Time Child Care / Learning Centers 4736 E. Indian School Rd., Phoenix, AZ 85018 | 844-543-8598 |
| Tutor Time Child Care / Learning Centers 725 E. Brill St., Phoenix, AZ 85006 | 855-887-8945 |

Appendix D

Elected Officials

As of the publication of this community involvement plan, the community involvement area for the East Central Phoenix WQARF sites is within Phoenix City Council Districts 4, 6 and 8; Maricopa County Supervisorial Districts 2, 3 and 5; and Arizona Legislature Districts 4, 5 and 8.

| City of Phoenix Officials City Hall 200 W. Washington St, Phoenix, AZ 85003 602-232-6011 | | |
|---|--|---|
| Mayor Kate Gallego 602-262-7111 Mayor.Gallego@phoenix.gov | Council Member - District 4 Laura Pastor 602-262-7447 council.district.4@phoenix.gov | City Manager Jeff Barton 602-232-6011 jeffrey.barton@phoenix.gov |
| Council Member - District 6 Kevin Robinson 602-262-7491 council.district.6@phoenix.gov | Council Member - District 8 Kesha Hodge Washington 602-262-7493 council.district.8@phoenix.gov | |
| Maricopa County Board of Supervisors 301 W Jefferson St , 10th Floor Phoenix, AZ 85003 maricopa.gov/224/Board-of-Supervisors | | |
| County Supervisor - District 2 Thomas Galvin 602-506-7431 district2@maricopa.gov | County Supervisor - District 3 Bill Gates 602-506-7562 district3@maricopa.gov | County Supervisor - District 5 Steve Gallardo 602-506-7092 district5@maricopa.gov |
| Arizona State Legislature 1700 W. Washington St, Phoenix, AZ 85007 azleg.gov/MemberRoster | | |
| Senator - District 4 Christine Marsh 602-926-3184 cmarsh@azleg.gov | Representative - District 4 Matt Gress 602-926-4105 mgress@azleg.gov | Representative - District 4 Laura Terech 602-926-3894 ltereich@azleg.gov |
| Senator - District 5 Lela Alston 602-926-5829 lalston@azleg.gov | Senator - District 5 Sarah Liguori 602-926-3264 sliguori@azdleg.gov | Senator - District 5 Charles W. Lucking 602-926-3280 clucking@azleg.gov |
| Senator - District 8 Juan Mendez 602-926-4124 jmendez@azleg.gov | Senator - District 8 Melody Hernandez 602-926-3449 mhernandez@azleg.gov | Senator - District 8 Deborah Nardoizzi 602-926-4858 dnardoizzi@azleg.gov |

Appendix E

Community Advisory Board

The following table presents the East Central Phoenix WQARF sites Community Advisory Board (CAB) members as of this writing.

| Community Advisory Board Members | |
|--|---|
| Thomas Lusk 480-254-1957 THOMAS.LUSK@CORGAN.COM | John Hathaway 602-340-0035 JHATHAWAYAZ@Q.COM |
| Jolene Morris 602-955-5666 MORRIS.JOLENE@HOTMAIL.COM | Kim Van der Veen 480-381-4794 KIM@BURGEONGROUP.COM |
| Ronald Roedel 602-677-9697 R.ROEDEL@ASU.EDU | |

Appendix F

Media Outlets

The community may use any media outlets to share information on the East Central Phoenix WQARF sites. ADEQ will publish all site-related public notices in the *Arizona Business Gazette*. All future public notices for the East Central Phoenix WQARF sites can be found by searching arizonapublicnotices.com.

Newspapers and Magazines

| | |
|--|--------------|
| Arcadia News 725 E. Brill St., Phoenix, AZ 85006 3850 E. Indian School Rd., Phoenix, AZ 85018 | 602-840-6379 |
| Arizona Business Gazette 200 E. Van Buren St., Phoenix, AZ 85004 | 602-444-8000 |
| The Arizona Republic 200 E. Van Buren St., Phoenix, AZ 85004 | 602-444-8000 |
| East Valley Tribune 1620 W. Fountainhead Pkwy, Ste., 219, Tempe, AZ 85282 | 602-898-6500 |
| La Voz 800 N 1st Ave., Phoenix, AZ 85003 | 602-444-3806 |

Radio

| | |
|---|--------------|
| Bonneville International Corporation (KTAR-AM/KTAR-FM, KMVP) 7740 N. 16th St., Ste. 200, Phoenix, AZ 85020 | 602-274-6200 |
| Entercom/CBS Radio Stations (KMLE, KOOL, KALV) 840 N. Central Ave., Phoenix, AZ 85014 | 602-452-1000 |

| | |
|--|--------------|
| iHeartMedia Inc. (KESZ, KMXR, KZZP, KNIX, KYOT, KFYI-AM, KGME-AM, K229DB/KOY-AM) 4686 E. Van Buren St., Ste. 300, Phoenix, AZ 85008 | 602-374-6000 |
| Hubbard Radio (K224CJ/KAZG-AM, KDKB, KDUS-AM, KSLX, KUPD) 1100 N. 52nd St. Phoenix, AZ 85008 | 602-629-8660 |
| Maricopa County Community College District (KBAQ, KJZZ) 2323 W. 14th St., Tempe, AZ 85281 | 602-833-1122 |
| Riviera Broadcasting Co. (KKFR, KMVA, KOAI) 4745 N. 7th St, Ste. 410, Phoenix, AZ 85014 | 602-648-9800 |
| Sierra H. Broadcasting, Inc. (KAJM, KNRJ) 1710 E. Indian School Rd, Ste. 205, Phoenix, AZ 85016 | 602-994-9100 |
| Univision Communications, Inc (KHOT, KHOV, KOMR, KQMR) 6006 S 30th St. Phoenix, AZ 85042 | 602-243-3333 |

Television

| | |
|---|--------------|
| KAET Channel 8 (PBS) 555 N. Central Ave., Ste. 500, Phoenix, AZ 85004 | 480-965-3506 |
| KNXV Channel 15 (ABC) 515 N. 44th St., Phoenix, AZ 85008 | 602-273-1500 |
| KPHO Channel 5 (CBS) 5555 N. 7th Ave., Phoenix, AZ 85013 | 602-207-3333 |
| KPNX Channel 12 (NBC) 200 E. Van Buren St., Phoenix, AZ 85004 | 602-257-1212 |

KSAZ Channel 10 (FOX)

511 W. Adams St., Phoenix, AZ 85003

602-257-1234

KTAZ Channel 39 (Telemundo)

4625 S. 33rd Pl., Phoenix, AZ 85040

602-648-3900

KTVW Channel 33 (Univision)

6006 S. 30th St., Phoenix, AZ 85042

602-243-3333

Appendix G

Local and State Agencies

The following list presents additional agencies that may be used by the public to address concerns related to the East Central Phoenix WQARF sites.

State of Arizona

Department of Health Services: Environmental Health 602-542-1025
150 N 18th Ave Phoenix, AZ 85007 azdhs.gov/environmentalhealth

Department of Water Resources: Permitting and Wells 602-771-8527
1110 W Washington St, Ste 310, Phoenix, AZ 85007 new.azwater.gov/permitting-wells

City of Phoenix

City of Phoenix Environmental Programs 602-256-5669
200 W. Washington St., 14th Floor Phoenix, AZ 85003 phoenix.gov/oep

City of Phoenix Water Services Department 602-262-6251
200 W. Washington St Phoenix, AZ 85003 phoenix.gov/waterservices

Public Works Department 602-262-7251
Garbage and Recycling phoenix.gov/publicworks
200 W. Washington St., 7th Floor Phoenix, AZ 85003

Other

Agency for Toxic Substances and Disease Registry – Region 9 800-232-4636
75 Hawthorne St, Ste 9410, San Francisco, CA 94105 atsdr.cdc.gov

Arizona Association of Realtors: Real Estate Seller Disclosures 602-248-7787
255 E Osborn Rd #200, Phoenix, AZ 85012
aaronline.com/wp-content/uploads/2017/10/Residential-Sellers-Property-Disclosure-Statement-SPDS_REV_01Oct2017.pdf

Salt River Project 236-3333 (customer service)
1500 N Mill Ave Tempe, AZ 85281
srpnet.com/contactus/default.aspx

Appendix H

Prospective Purchaser Agreements

The following table presents a list of parties that have requested, and received, prospective purchaser agreements from the Arizona Department of Environmental Quality for properties in or around the East Central Phoenix WQARF sites as of May 2024. The table includes WQARF site name, purchaser name, property location, the date that public notices for these agreements were issued, and the dates these agreements became effective. There are no prospective purchaser agreements for the East Central Phoenix 40th Street and Osborn Road WQARF site.

| East Central Phoenix WQARF Site | Purchaser Name | Property Location | Public Notice Date | Effective Date |
|--|--|---|---------------------------|-----------------------|
| 24th Street and Grand Canal | Cole OF Phoenix AZ, LLC | Northeast corner of Thomas Rd and 24th St., Phoenix AZ | 02/03/2009 | 07/07/2013 |
| 32nd Street and Indian School Road | Kaufman Investments, L.L.C.; Naranja Investments, L.L.C.; and RAB Properties, L.L.C. | 4027 N. 32nd St., Phoenix, AZ | 06/21/2007 | 06/27/2007 |
| | Kachina Village, L.L.C. | 3162 E. Indian School Rd., Phoenix, AZ | 12/12/2000 | 12/12/2000 |
| 38th Street and Indian School Road | Gaslight Square Retail L.L.C. | 3703 E. Indian School Rd., Phoenix, AZ | 01/19/2000 | 01/19/2000 |
| 40th Street and Indian School Road | 40th Street & Indian School, L.L.C. | 4129 N. 40th St., Phoenix AZ (also described as northeast corner of 40th St. and Indian School Rd. or the Palm Grove Shopping Center) | 05/28/1999 | 05/28/1999 |
| 48th Street and Indian School Road | PDG America Properties, L.L.C. | 4730 E. Indian School Rd., Phoenix AZ | 04/06/2007 | 04/06/2007 |
| | Whitestone Arcadia Towne Center, L.L.C. | 4730 East Indian School Road Phoenix, Arizona 85018 | 11/03/2023 | 12/05/2023 |

Appendix I

Consent Orders and Settlements

The following table presents a list of parties that have entered into settlements with the Arizona Department of Environmental Quality for properties in or around the East Central Phoenix WQARF sites as of May 2024. The table includes the WQARF site, party name, the date the consent decree was signed by the judge, and the date that public notices for the settlements were issued.

| East Central Phoenix WQARF Site | Party Name | Public Notice Date | Date Consent Decree Signed by Judge |
|--|---|---------------------------|--|
| 32nd Street and Indian School Road | Kachina Village LLC | 06/21/2002 | 06/21/2002 |
| 38th Street and Indian School Road | Frank (Yat Yin) and Sue (Woon Shing Wong) Szeto | 04/08/1998 | 04/08/1998 |
| 40th Street and Indian School Road | Palm Grove Redevelopers | 12/06/1999 | 12/06/1999 |
| | Herbert M. Potthoff Revocable Trust and Herbert M. Potthoff Revocable Trust for the benefit of Ronald B. Potthoff, Herbert B. Potthoff, II, and Suzanne M. Potthoff | 11/30/1999 | 11/30/1999 |

Acronyms and Glossary of Terms

1,1-Dichloroethane (1,1-DCA): A colorless, oily liquid with a sweet odor. Typically, it is an intermediate product in the manufacture of 1,1,1-trichloroethane (1,1,1-TCA), and to a lesser extent vinyl chloride and high vacuum rubber. In the past it was used as a surgical anesthetic. It evaporates easily at room temperature and burns easily. It does not occur naturally in the environment.

1,1-Dichloroethene (1,1-DCE): A colorless liquid with a sharp odor that is used to make certain plastics, packaging materials, and flame-retardant coatings. Typically, it is a degradation product of other chlorinated solvents.

Air Sparge: An in-situ treatment technology that uses injected air to help remove harmful vapors from polluted soil and groundwater below the water table by injecting air directly into the saturated subsurface to encourage the solvents and gasoline to evaporate faster, which makes them easier to remove with a vacuum.

Aquifer: An underground rock formation composed of such materials as sand, soil, or gravel, that can store groundwater and supply it to wells and springs. In aquifers, groundwater occurs in sufficient quantities to be used for drinking water, irrigation, and other purposes.

Aquifer Water Quality Standards (AWQS): State of Arizona maximum levels for contaminants which apply to groundwater in aquifers designated for drinking water use. For example, the AWQS for tetrachloroethene is 5 micrograms per liter (µg/L).

Arizona Administrative Code (A.A.C.): The publication in which the official rules of the state of Arizona are published. The *Code* is the official compilation of rules that govern state agencies, boards, and commissions.

Arizona Department of Environmental Quality (ADEQ): ADEQ is the executive agency of the Arizona State Government mandated to enforce and administer the State's environmental laws and regulations.

Arizona Revised Statutes (A.R.S.): State laws adopted by the Arizona State Legislature.

cis-1,2-Dichloroethene (cis-1,2-DCE): An odorless organic liquid that has two slightly different forms, a "cis" form and a "trans" form. Both the cis and trans forms (typically as a mixture) are used as a solvent for waxes and resins, in the extraction of rubber, as a refrigerant, in the manufacture of pharmaceuticals and artificial pearls, in the extraction of oils and fats from fish and meat, and in making other organics.

Cleanup: Actions taken that deal with a release or threat of a release of hazardous substances that could adversely affect public health and/or the environment. The word "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

Community Advisory Board (CAB): A diverse group of community members interested in or affected by the presence of a WQARF site. By statute, ADEQ is required to form a CAB for each WQARF Registry site where ADEQ is initiating a Remedial Investigation. ADEQ seeks the CAB's input in the decision-making process and works with them from the onset of the RI/FS process until the requirements of the record of decision have been fulfilled.

Community Involvement Area: The mailing area of residences and businesses used in the notification for public meetings and other written notices regarding a site.

Community Involvement Coordinator: The ADEQ employee responsible for ensuring that all statutes and rules related to the involvement of the public and public outreach at WQARF sites are upheld and complied with by ADEQ. Community Involvement Coordinators manage and coordinate the work of CABs for WQARF sites.

Community Involvement Plan (CIP): A document that identifies techniques used by ADEQ and EPA to communicate effectively with the public during the Superfund cleanup process at a specific site. This plan describes the site history, nature and history of community involvement, and concerns expressed during community interviews. In addition, the plan outlines methodologies and timing for continued interaction between the Agencies and the public at the site.

Cone Penetrometer Testing (CPT): A testing method used to determine the geotechnical engineering property of soils.

Contamination: Any hazardous or regulated substance released into the environment.

Contaminant: Any physical, chemical, biological or radiological substance or matter present in any media at concentrations that may result in adverse effects on air, water or soil. A harmful or hazardous matter introduced into the environment that is not normally found there, or not naturally occurring.

Early Response Action (ERA): Refers to a remedial action performed prior to the final remedy, and often prior to the Remedial Investigation. An ERA addresses current risks to public health, welfare, and the environment; protects or provides a supply of water; addresses sources of contamination; or controls or contains contamination where such actions are expected to reduce the scope or cost of the remedy needed at the site. Also referred to as an interim remedial action.

Eligibility and Evaluation score (E&E): ADEQ's method to prioritize sites for investigation and cleanup. The score is based on multiple criteria and does not always mean there is a current threat to health.

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).

Granular Activated Carbon (GAC): An effective absorbent primarily due to its extensive porosity and very large available surface area. By definition, granular activated carbon (as opposed to powdered activated carbon or PAC) is composed of particles with sizes greater than 0.8 mm, about the size of coarse sand. Activated carbon is manufactured from a variety of raw materials, including wood, coal, and coconut shells, making it plentiful, relatively inexpensive, and versatile.

Groundwater: Water located beneath the ground surface in soil pore spaces and in the fractures of geologic formations. A formation of rock or soil is called an aquifer when it can yield a usable quantity of water.

Hazardous Substance: Any material that, because of its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Information Repository: A collection of documents about a specific project. Information on certain WQARF and Superfund sites may be available at ADEQ offices and libraries throughout the state.

In-Situ Chemical Oxidation (ISCO): In-site chemical oxidation, a form of advanced oxidation processes and advance oxidation technology, is an environmental remediation technique used for soil and/or groundwater remediation to reduce the concentrations of targeted environmental contaminants to acceptable levels. The method involves injecting or otherwise introducing strong chemical oxides directly into the contaminated medium (soil or groundwater) to destroy chemical contaminants in place.

Interim Remedial Action (IRA): An interim measure to remove or isolate contamination. This action can be taken at any time during the Superfund/WQARF process and is usually taken to protect people and the environment from high levels of contamination until the final Remedial Action can be taken.

Monitoring Well (Monitor Well): A well installed for the purpose of collecting samples such as groundwater and soil gas. Analytical results from samples are used to characterize the extent of contamination, the direction of groundwater flow, and the types and quantities of contaminants present in the groundwater.

Operation and Maintenance (O&M): 1. Activities conducted after a WQARF/Superfund site action is completed to ensure that the action is effective. 2. Actions taken after construction to ensure that facilities constructed to treat wastewater will be properly operated and maintained to achieve normative efficiency levels and prescribed effluent limitations in an optimum manner. 3. Ongoing asbestos management plan in a school or other public building, including regular inspections, various methods of maintaining asbestos in place, and removal when necessary.

Plume: A well-defined area of contamination in groundwater, soil or the air often used to describe the dispersion of contamination in soil and/or groundwater.

Potentially Responsible Party (PRP): A party (individual or corporation) identified by state or federal authorities as potentially liable for cleanup costs at a contaminated site.

Preliminary Investigation (PI): The process of collecting and reviewing available information about a known or suspected hazardous waste site or release.

Proposed Remedial Action Plan (PRAP): A document that reviews the cleanup alternatives presented in the site Feasibility Study and identifies ADEQ's preferred alternative. Selection of a preferred alternative is not a closed-end commitment to use that alternative; rather, it is a way for the agency to indicate, based on experience and expertise, which alternative is the most likely course of action. ADEQ must actively solicit public review of and comment on all the alternatives under consideration.

Public Comment Period: A period during which the public can formally review and comment on various documents and ADEQ actions.

Record of Decision (ROD): A legal document that announces and explains the cleanup methods ADEQ will use at a Superfund/WQARF site. The Record of Decision is based on information and technical analysis generated during the Remedial Investigation and Feasibility Study, and on consideration of comments received during the public comment record for the Proposed Remedial Action Plan.

Remedial Action (RA): Any action taken to investigate, monitor, assess and evaluate the release or threat of release of hazardous substances or contaminants to the environment. It may also refer to the actual "cleanup" of the environment by various removal, treatment, monitored remediation, or corrective actions. The term cleanup is sometimes used interchangeably with the terms remedial action, removal action, response action, remedy, remediation, or corrective action.

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 reasonably 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: Cleanup or other methods used to remove or contain a toxic spill or hazardous materials.

Remedy: Cleanup method chosen for a site.

Responsible Party: An individual or company (*e.g.*, an owner, operator, transporter, or generator of hazardous waste) that is responsible for the contamination problems at a Superfund/WQARF site. Whenever possible, responsible parties are required to clean up hazardous waste sites they have contaminated.

Responsiveness Summary: A summary of oral and written comments (and ADEQ responses to those comments) received during the public comment period.

Soil Vapor Extraction (SVE): Soil vapor extraction removes contaminant vapors from below ground for treatment above ground. Soil vapor extraction removes vapors from the soil above the water table by applying a vacuum to pull the vapors out. The method is used for chemicals that evaporate easily, such as those found in solvents and gasoline.

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 pressure.

Superfund: The federal program operated under the legislative authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) that funds and carries out U.S. Environmental Protection Agency solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions. It provides for the cleanup of hazardous substances released into the environment, regardless of fault. The term Superfund also is used to refer to cleanup programs designed and conducted under CERCLA and its subsequent amendments.

Tetrachloroethene or Tetrachloroethylene or Perchloroethene (PCE): A clear, colorless, liquid with a chloroform or sweet odor and a low boiling point; a solvent used for dry-cleaning; degreasing and drying metals and other solids; dissolving waxes, greases, oils, fats, and gums, and in other industrial applications. PCE is a potential occupational carcinogen. Evaporation of PCE increases as temperature increases.

Trichloroethene or Trichloroethylene (TCE): A colorless liquid used as a solvent, metal degreasing agent, and in other industrial applications.

Vinyl Chloride: A colorless compound used in aerosol spray propellant, furniture and automobile upholstery, wall coverings, housewares, automotive parts, and as a refrigerant. It is a chemical intermediate, not a final product.

Volatile Organic Compounds (VOC): A large group of carbon-containing compounds that are easily dissolved into water, soil, or the atmosphere and evaporate readily at room temperature. Examples of VOCs include PCE, TCE, benzene, toluene, ethylbenzene, and xylene. These contaminants are typically generated from metal 'degreasing, printed circuit board cleaning, gasoline, and wood preserving processes.

Water Quality Assurance Revolving Fund (WQARF): Also known as the State Superfund, WQARF is the program and funding used to address hazardous substance releases within the state that are not covered by other specific programs.