



Central Phoenix

7th Avenue and Bethany Home Road

7th Street and Missouri Avenue

16th Street and Camelback Road

Central and Camelback

Water Quality Assurance Revolving Fund (WQARF) Sites

Community Involvement Plan



Central and Camelback



7th Street and Missouri Avenue



7th Avenue and Bethany Home



16th Street and Camelback

February 2023

ADEQ Document No. EQR-23-01

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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 Central Phoenix WQARF Sites Community Involvement Plan (CIP) describes how ADEQ will fulfill this commitment. 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 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

602-316-4270

Or

1-800-234-5677

Fax: 602-771-4272

Email: marks.tereza@azdeq.gov

View Community Involvement Contacts Online: azdeq.gov/WQARF

Site Information Repository

The information repository for 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/7th-bethany

azdeq.gov/7th-missouri

azdeq.gov/16th-camelback

azdeq.gov/central-camelback

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

7th Avenue and Bethany Home Road

The 7th Avenue and Bethany Home Road WQARF Site is located in Phoenix, Arizona. The approximate boundaries of the Site are Maryland Avenue to the north, Bethany Home Road to the south, 4th Drive to the east, and 8th Avenue to the west. The Site was placed on the WQARF Registry on August 25, 2004, with an eligibility and evaluation (E&E) score of 29 out of a possible 120. The major factor leading to the score was the presence of Tetrachloroethene (PCE) in groundwater at levels exceeding Arizona Aquifer Water Quality Standards (AWQS).

Environmental investigations at the 7th Avenue and Bethany Home Road WQARF Site identified two separate source areas, both dry cleaning operations, that operated on the northeast and northwest corners at the intersections of Bethany Home Road and 7th Avenue. Multiple early response actions (ERAs), including soil excavation removal and soil vapor extraction (SVE) treatment, were implemented at the source area properties. The ERA actions resulted in successful remediation of soil contamination to levels below applicable soil remediation levels (SRLs) and groundwater protection levels (GPLs).

The Record of Decision (ROD) for the Site was issued in June 2016. The ROD set forth the selected remedy for the Site, which included enhanced reductive dechlorination (ERD) and monitored natural attenuation (MNA). The remedy has been implemented in accordance with the ROD.

The following map shows the plume boundaries based on the most recent groundwater monitoring data. This area may change as ADEQ collects more information.

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

7th Street and Missouri Avenue

The 7th Street and Missouri Avenue WQARF Site is located in Phoenix, Arizona. The approximate boundaries of the Site are Montebello Avenue to the north, Georgia Avenue to the south, 10th Street to the east, and 6th Street to the west. The site was placed on the WQARF Registry on June 24, 2016, with an E&E score of 42 out of a possible 120. The major factor leading to the score was the presence of PCE and trichloroethene (TCE) in groundwater at levels exceeding AWQS.

Two areas of elevated PCE concentrations were found during the Preliminary Investigation (PI). In 2016, Fashion Cleaners entered into ADEQ's Voluntary Remediation Program (VRP) to address cleanup of their portion of the contamination, which was determined to be separate from the 7th Street and Missouri Avenue WQARF Site. Research into the history of the other area of elevated PCE concentrations found that a former dry cleaner operated in this location prior to the current building, which was constructed in 1986.

The RI, which occurred from 2016 to 2018, identified the southwest corner of 7th Street and Missouri Avenue as the likely source area. The Final RI Report was released on Nov. 22, 2018. In October 2018, ADEQ installed an SVE as an ERA for source control. In November 2018, ADEQ installed an Ozone Sparge Injection Pilot Test System to evaluate the technology as a possible remedy for groundwater at the site.

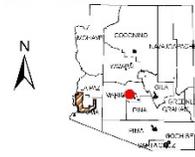
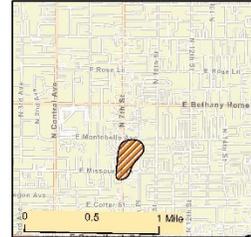
ADEQ issued the Feasibility Study (FS) Report in November 2019. The Proposed Remedial Action Plan (PRAP) was approved in June 2020. An expansion to the Ozone Sparge System was installed as an ERA in July 2020. The ROD was issued November 2, 2021. The selected remedy is SVE for soils, and Ozone Sparge with MNA for groundwater.

The ROD and implementation of the final remedy are on hold as ADEQ and SRP work together to determine a path forward at this and other Phoenix sites. ADEQ is currently awaiting approval from SRP to sample the SRP well at this Site to help with this determination.

The following map shows the plume boundaries based on the most recent groundwater monitoring data. This area may change as ADEQ collects more information.

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

7th Street and Missouri Avenue



Counties
 Estimated WQARF Boundary

(WQARF) Water Quality Assurance Revolving Fund Site

Publication Number: M 22-31
 Plume Data Update: 2/1/2022

Plume boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plume for this site may change in the future as new information becomes available.



Date Saved: 12/6/2022

S:\gdelev\27\WQARF\ABWQARF_MapSeries.aprx

16th Street and Camelback Avenue

The 16th Street and Camelback Avenue WQARF Site is located in Phoenix, Arizona. The approximate boundaries of the Site are Camelback Road to the north, Highland Avenue to the south, 17th Street to the east, and 15th Street to the west. The site was placed on the WQARF Registry on April 21 1999, with an E&E score of 23 out of a possible 120. The major factor leading to the score was the presence of PCE in groundwater at levels exceeding AWQS.

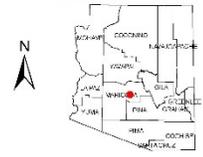
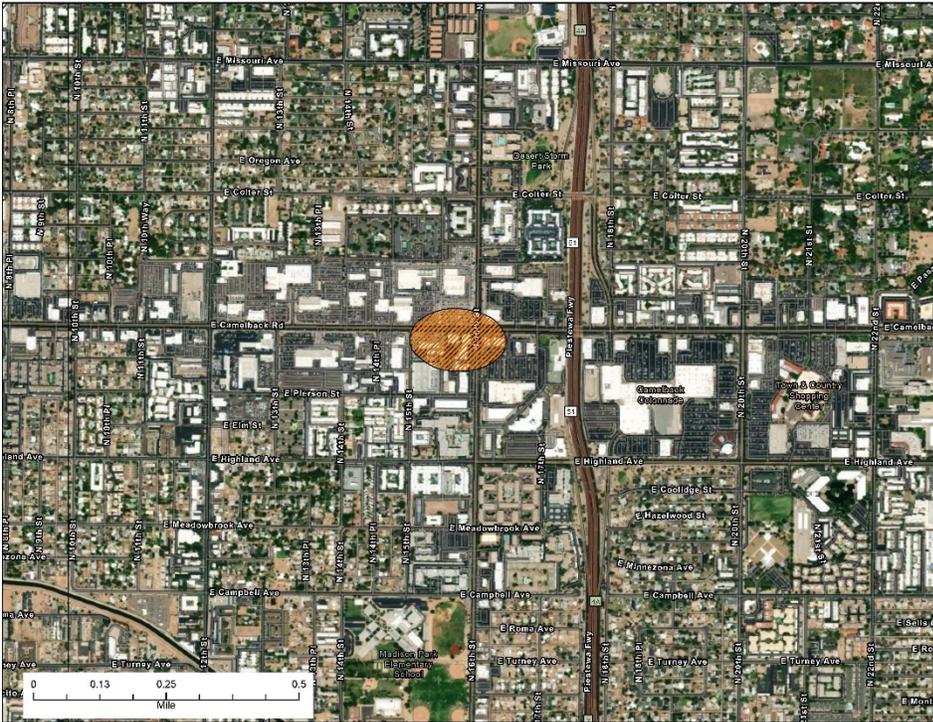
An ERA in 2003 determined that SVE was not a feasible remedy for the Site. Due to a lack of funding, Site activities were suspended from 2008 to 2012. In the spring of 2013, groundwater monitoring activities were resumed. Two additional wells were installed to complete characterization of the Site.

The Final RI Report was completed in May 2015. The FS Report was completed in July 2015 and the PRAP recommended MNA as the remedy for the Site. In April 2016 and June 2017, ADEQ initiated ERD injections to determine if ERD could be implemented cost effectively to accelerate MNA. In 2017, ADEQ finalized the ROD and completed an additional round of ERD injections. Additional ERD injections were completed and groundwater sampling was conducted in 2018 and 2019. This technology was incorporated in to the final MNA remedy as a contingency for the Site to facilitate accelerated delisting.

The following map shows the plume boundaries based on the most recent groundwater monitoring data. This area may change as ADEQ collects more information.

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

16th Street and Camelback Road



Estimated WQARF Boundary
 Counties

(WQARF) Water Quality Assurance
 Revolving Fund Site

Publication Number: M 22-02
 Plume Data Update: 2/1/2022

Plume boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the plume for this site may change in the future as new information becomes available.

ADEQ
 Arizona Department
 of Environmental Quality
 Date Saved: 12/6/2022

S:\gdelev\27\WQARF\ABWQARF_MapSeries.aprx

Central and Camelback

The Central and Camelback WQARF Site is located in Phoenix, Arizona. The approximate boundaries of the Site are Camelback Road to the north, Mariposa Street to the south, 1st Street to the east, and 1st Avenue to the west. The site was placed on the WQARF Registry on June 21, 2000, with an E&E score of 32 out of a possible 120. The major factor leading to the score was the presence of PCE and TCE in groundwater at levels exceeding AWQS

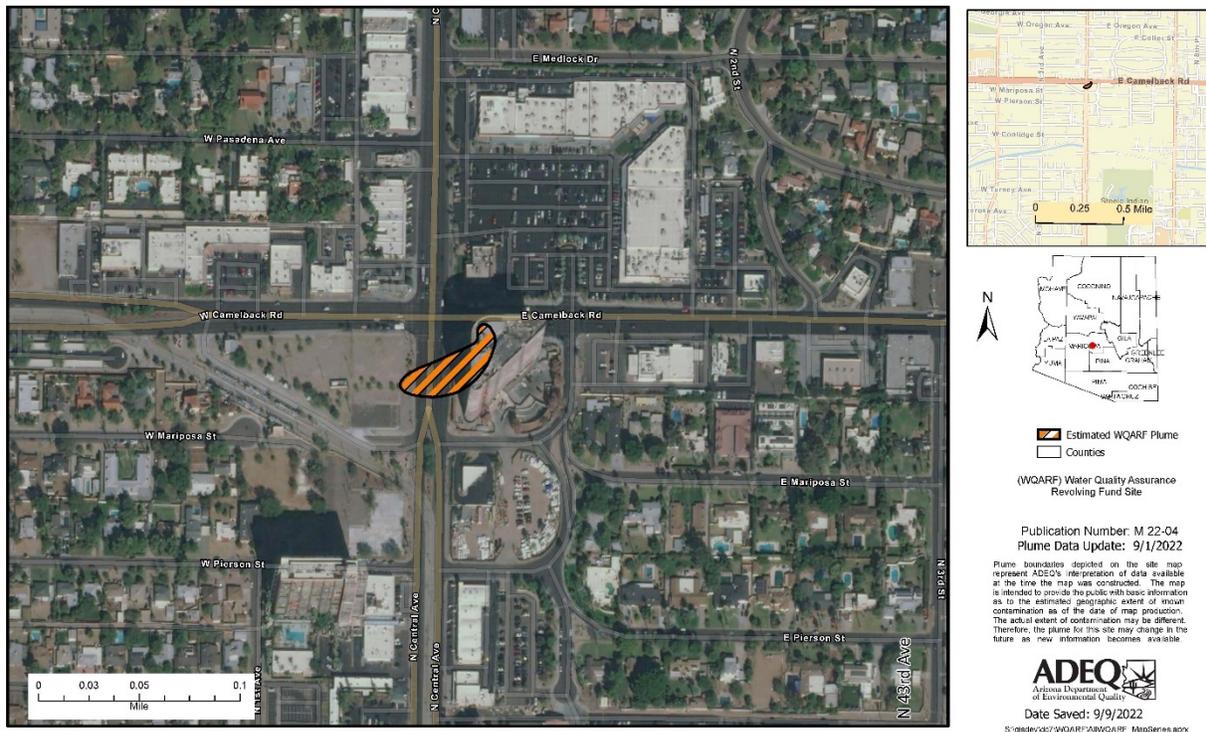
Environmental investigations at the Central and Camelback WQARF Site identified one source area property, a dry-cleaning operation, that operated on the southwest corner at the intersection of Central Avenue and Camelback Road. Multiple ERAs from 2003 to 2018 including groundwater extraction treatment and SVE, were implemented at the source area property.

The PRAP for the Central and Camelback WQARF Site was finalized in 2017. A ROD is currently being drafted for the Site.

The following map shows the plume boundaries based on the most recent groundwater monitoring data. This area may change as ADEQ collects more information.

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

Central Avenue and Camelback Road



Community Profile

Community Involvement Area (CIA)

The CIA of the 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 maps on the following pages illustrates the 2022 CIAs for the Central Phoenix WQARF Sites.

Community Demographics

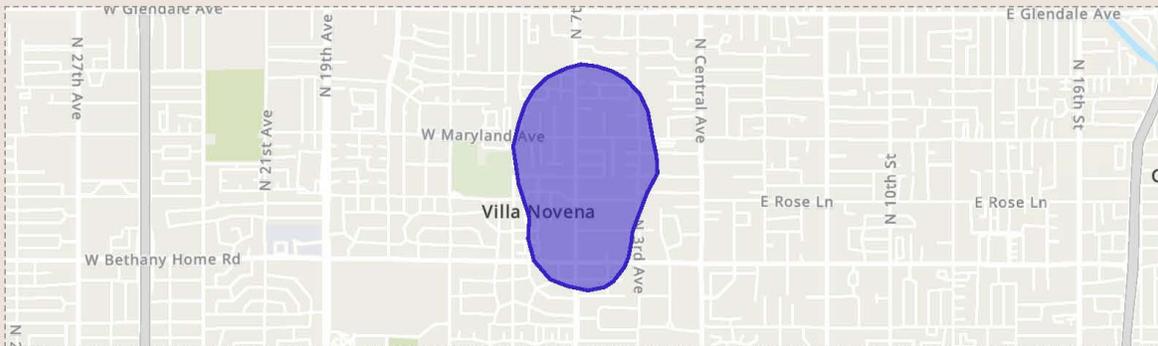
Demographics help ADEQ plan and implement tailored community involvement activities. The following page displays key demographic information for the CIAs of the Central Phoenix WQARF Sites.

The Central Phoenix WQARF Sites are located in Phoenix, Arizona. The current estimated population of Phoenix is 1,591,119 people¹. The CIAs contain a mix of residential, commercial, and industrial areas within zip codes: 85012, 85013, 85014, and 85016. An estimated 8,317 people live in 4,784 households within the Sites CIA.

¹ Source: Arizona Demographics Interactive Map Viewer: <https://geo.azmag.gov/maps/azdemographics/>



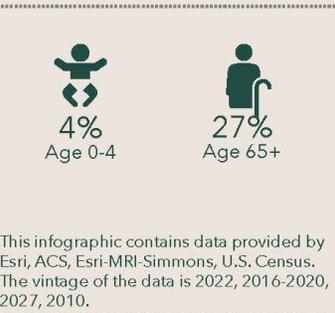
Community Involvement Area 7TH AVENUE AND BETHANY HOME ROAD



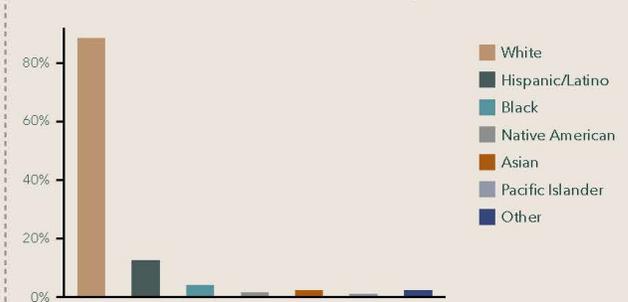
Population and Households



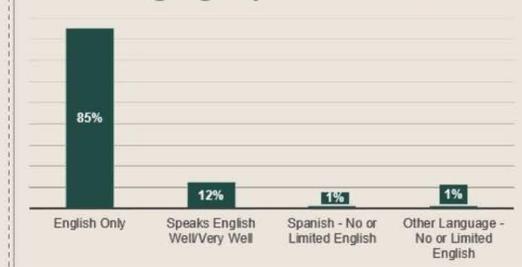
Vulnerable Aged Population



Race and Ethnicity

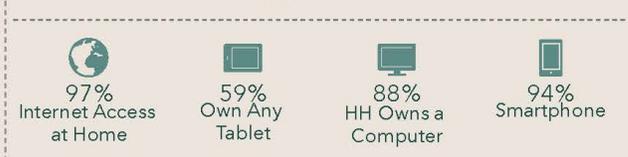


Language Spoken at Home

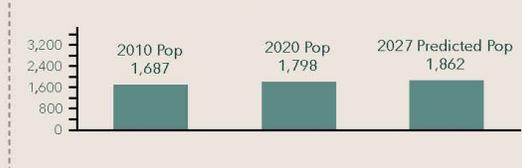


Data is in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB). The standards have five categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. People may choose to report 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



Population



7th Avenue and Bethany Home Road

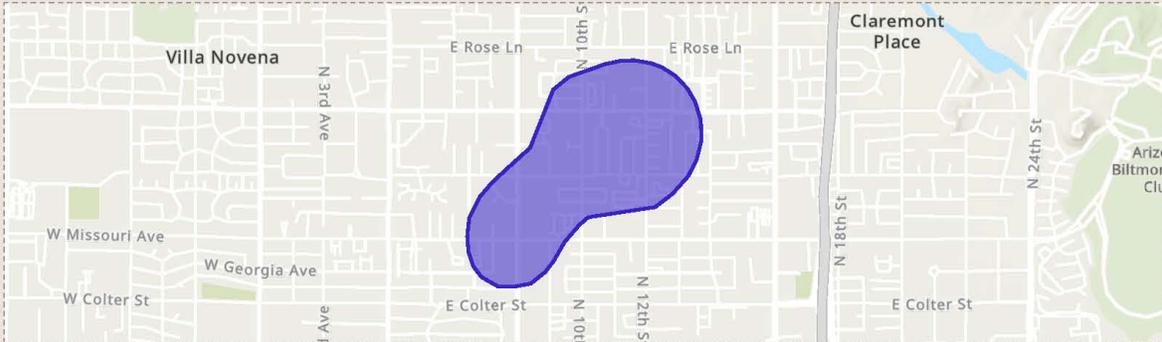
An estimated 1,816 people live in the 916 households within the CIA for this Site. Among CIA residents above age five, 1% speak Spanish only or limited English; 1% speak other language or limited English; 12% speak English very well/well; 85% of residents identified English as their only language. Given 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 4% of the population is under age five, while 27% 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.



Community Involvement Area 7TH STREET AND MISSOURI AVENUE



Population and Households

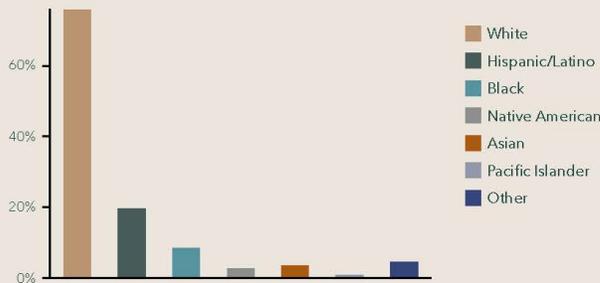


Vulnerable Aged Population



This infographic contains data provided by Esri, ACS, Esri-MRI-Simmons, U.S. Census. The vintage of the data is 2022, 2016-2020, 2027, 2010.

Race and Ethnicity



Language Spoken at Home

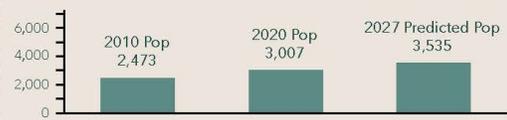


Data is in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB). The standards have five categories for data on race: American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White. People may choose to report 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



Population



7th Street and Missouri

An estimated 3,192 people live in the 1,752 households within the CIA for this Site. Among CIA residents above age five, 1% speak Spanish only or limited English; 11% speak English very well/well; 88% of residents identified English as their only language. 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 4% of the population is under age five, while 23% 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.



Community Involvement Area 16TH STREET AND CAMELBACK



Population and Households

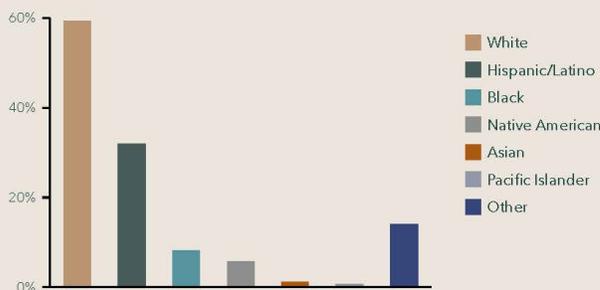


Vulnerable Aged Population

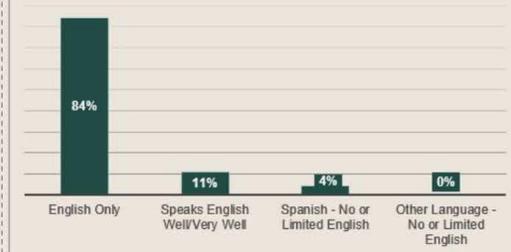


This infographic contains data provided by Esri, ACS, Esri-MRI-Simmons, U.S. Census. The vintage of the data is 2022, 2016-2020, 2027, 2010.

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



Population



16th Street and Camelback Road

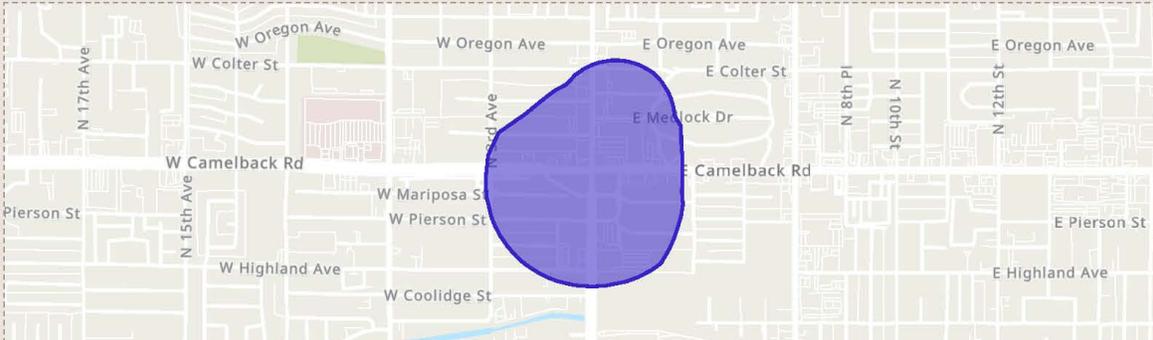
An estimated 2,449 people live in the 1,606 households within the CIA for this Site. Among CIA residents above age five, 4% speak Spanish only or limited English; 11% speak English very well/well; 84% of residents identified English as their only language. Given the low proportion of Spanish only speakers, 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 6% 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.



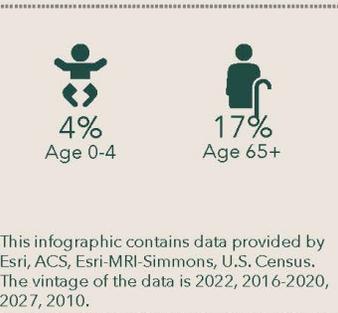
Community Involvement Area CENTRAL AVE AND CAMELBACK ROAD



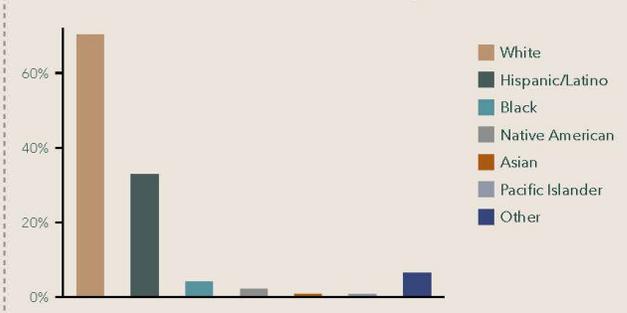
Population and Households



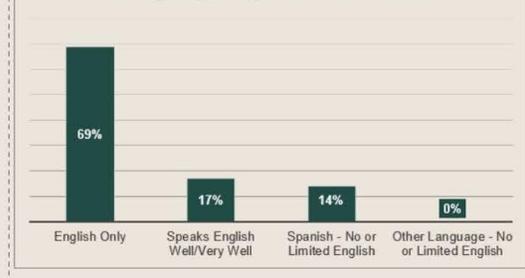
Vulnerable Aged Population



Race and Ethnicity

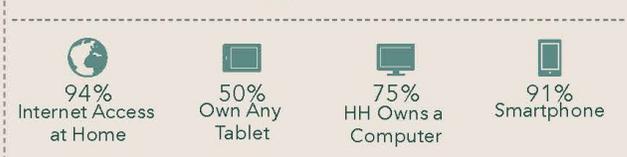


Language Spoken at Home



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



Population



Central and Camelback

An estimated 860 people live in the 510 households within the CIA for this Site. Among CIA residents above age five, 14% speak Spanish only or limited English; 17% speak English very well/well; 69% of residents identified English as their only language. 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 4% of the population is under age five, while 17% 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.

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 Central Phoenix WQARF Sites. As part of this update, ADEQ conducted an online survey in 2021 to assess current concerns about the Site. The following sections summarize common concerns related to the Site along with suggestions for ADEQ outreach activities. ADEQ will use this community feedback to ensure that future outreach addresses community concerns and to determine effective communication methods.

Community Interview Summary

Many interviewees were very familiar with the Site. Historically, the concerns expressed were more in line with the future of the Sites, possible health issues related to the Sites, and the condition of the water supply. Many of the interviewees expressed interest in “redevelopment [of the Site] into something useful” for the community. For the 7th Street and Missouri Avenue and Central and Camelback Sites, recent survey results show the main concern is the time involved in addressing the situation. Survey results from the 7th Avenue and Bethany Home Road 16th Street and Camelback Sites showed concerns with the spreading of the contaminants and future development.

Environmental and health concerns

Specific environmental and health concerns originally expressed by the interviewees included the following:

- Could the contaminated groundwater affect drinking or irrigation water supplies?
- How could the contamination affect water quality?
- Would building on the Sites consider all environmental issues?
- Could the contamination harm property values, future development or traffic?
- How toxic are the Sites and how does contamination affect people living near.?
- Is it safe to live in or near the Sites?

Recent surveys conducted in 2021 did not indicate these concerns had changed over time. Almost all of the interviewees wanted to know about the overall remedy for the Sites, as well as future investigations and the timeline for cleanup.

Outreach Recommendations for Central Phoenix WQARF Sites

For the Central Phoenix WQARF Sites, interviewees suggested the following community outreach and involvement strategies to ADEQ:

Sharing site information:

- Many of the respondents stated that the current electronic, in person meetings and U.S. mail communication methods in place by ADEQ were the best methods to share updates on the Central Phoenix WQARF Sites, with a few referencing publishing in the local paper, using the ADEQ web site, and holding open houses.
- A few community members stated the need for ADEQ to engage the community through articles in the newspaper.
- One (a 2021 interviewee) suggested publishing meeting summaries in the *North Central News*.

Community Involvement Action Plan

The Community Involvement Action Summary table for the 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 Sites and implement required activities.

Community Involvement Action Summary - Required Activities

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

Community Involvement Action Summary

WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Complete			
				7th Avenue and Bethany Home	7th Avenue and Missouri Avenue	16th Street and Camelback	Central and Camelback
Preliminary Investigation	Provide owners and operators a copy of the Draft 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: -7th Avenue and Bethany Home Road, March 2004 -7th Street and Missouri Avenue, April 2016 -16th Street and Camelback, June 2014 -Central and Camelback, February 2000 Public notice/comment; published in <i>Arizona Business Gazette</i> or <i>The Arizona Republic</i> : -7th Avenue and Bethany Home Road, July 2004 -7th Street and Missouri Avenue, May 2016 -16th Street and Camelback, June 2014 -Central and Camelback, April 2000			✓	
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 a community involvement area: -7th Avenue and Bethany Home Road, October 2008 (hazardous substance notice first appeared in 2004 fact sheet) -7th Street and Missouri Avenue, July 2016 -16th Street and Camelback, June 2014 -Central and Camelback, June 2000			✓	
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 remedial actions at the site, establishes a public document repository location, and provides for schedules of Community Advisory Board meetings and public meetings. Update the Community Involvement Plan 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)	Site-Specific CIPs: -7th Avenue and Bethany Home Road, February 2014 -7th Street and Missouri Avenue (combined CIP), August 2016 -16th Street and Camelback (combined CIP), December 2014 -Central and Camelback, September 2000 Combined CIP Updates: - August 2016; November 2018; January 2019; November 2019; December 2020, December 2022			✓	

Community Involvement Action Summary

WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Complete			
				7th Avenue and Bethany Home	7th Avenue and Missouri Avenue	16th Street and Camelback	Central and Camelback
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 provide a 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>	<p>A.A.C. R18-16-404 A.A.C. R18-16-405(D)(2) A.A.C. R-18-16-405(E) A.A.C. R18-16-405(G)</p>	<p>Public Notices:</p> <ul style="list-style-type: none"> -7th Avenue and Bethany Home Road, October 2004 -7th Street and Missouri Avenue, June 2018 -16th Street and Camelback, June 2014 -Central and Camelback, June 2001 	✓			
Remedial Investigation	<p>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 any person 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.</p>	<p>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)</p>	<p>Combined notices:</p> <ul style="list-style-type: none"> -7th Avenue and Bethany Home Road, April 2009 7th Street and Missouri Avenue, August 2016 -16th Street and Camelback, June 2014 -Central and Camelback, February 2001 (A.R.S. § 49-287.03) notices were submitted in 2007 	✓			

Community Involvement Action Summary

WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Complete			
				7th Avenue and Bethany Home	7th Avenue and Missouri Avenue	16th Street and Camelback	Central and Camelback
Remedial Investigation (continued)	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: 1 • Potentially Responsible Party: 1 • Local Official: 1 • Local Community: 2 	A.R.S. § 49-289.03(D)	Selection committee: -7th Avenue and Bethany Home Road, March 2010 -7th Street and Missouri Avenue, no selection committee; merged with existing Community Advisory Board -16th Street and Camelback, no selection committee; merged with existing Community Advisory Board -Central and Camelback, August 2000	✓	Not Applicable	Not Applicable	✓
	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)	Establish Community Advisory Board (CAB): -7th Avenue and Bethany Home Road, May 2010 -7th Street and Missouri Avenue, joined existing CAB August 2016 -16th Street and Camelback, joined existing CAB July 2014 -Central and Camelback, September 2000 7th Avenue and Bethany Home Road and Central and Camelback CABs merged on August 20, 2013; 16th Street and Camelback CAB merged on July 23, 2014; 7th Street and Missouri merged in August 2016.	✓			
	Publish a combined public notice announcing the availability of the Draft Remedial Investigation Report for review and a minimum 30-day public comment period and the date of 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. The Draft Remedial Investigation Report should be provided to the Community Advisory Board, interested local government agencies, affected water providers and the Department of Water Resources.	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)	Draft Remedial Investigation public notice and comment: -7th Avenue and Bethany Home Road, August 2010 -7th Street and Missouri Avenue, May 2018 -16th Street and Camelback, January 2015 -Central and Camelback, May 2014 Remedial Objectives public meeting: -7th Avenue and Bethany Home Road, July 2010 -7th Street and Missouri Avenue, July 2018 -16th Street and Camelback, March 2015 -Central and Camelback, July 2014	✓			

Note: A potentially responsible party search is conducted concurrently with the Remedial Investigation and Feasibility Study, but does not have mandated community involvement activities.

Community Involvement Action Summary

WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Complete			
				7th Avenue and Bethany Home	7th Avenue and Missouri Avenue	16th Street and Camelback	Central and Camelback
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 the report is prepared by a person other than ADEQ, copies of the comments received.</p>	<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>	<p>Proposed Remedial Objectives Report public notice and comment: -7th Avenue and Bethany Home Road, February 2011</p> <p>-7th Street and Missouri Avenue, August 2018</p> <p>-16th Street and Camelback, April 2015</p> <p>-Central and Camelback, October 2014</p>	✓			
			<p>Final Remedial Investigation Report public notice: -7th Avenue and Bethany Home Road, April 2011</p> <p>-7th Street and Missouri Avenue, November 2018</p> <p>-16th Street and Camelback, May 2015</p> <p>-Central and Camelback, January 2015</p>	✓			
Feasibility Study	<p>Provide notice to interested parties announcing the availability of the Feasibility Study Work Plan</p> <p>Although not mandated, ADEQ will also provide public notice upon completion of the Feasibility Study.</p>	<p>A.A.C. R18-16-404(C)(1)(d) A.A.C. R18-16-407(B)</p>	<p>Feasibility Study Work Plan public notice: -7th Avenue and Bethany Home Road, June 2010</p> <p>-7th Street and Missouri Avenue, November 2018</p> <p>-16th Street and Camelback, May 2015</p> <p>-Central and Camelback, February 2015</p>	✓			
Proposed Remedial Action Plan	<p>Publish a public notice announcing the availability of the Proposed Remedial Action Plan for a 90-day public comment period. (If not combined, separate public notices will be provided for the Draft Remedial Investigation/comment period and the Remedial Objectives solicitation and public meeting.) Mail the same notice(s) to interested parties. The notice(s) 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.</p>	<p>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)</p>	<p>Proposed Remedial Action Plan public notice: -7th Avenue and Bethany Home Road, April 2015</p> <p>-7th Street and Missouri Avenue, March 2020</p> <p>-16th Street and Camelback, August 2016</p> <p>-Central and Camelback, July 2017</p>	✓			
Record of Decision	<p>Publish a public notice announcing the availability of the Record of Decision and Responsiveness Summary for review.</p>	<p>A.R.S. § 49-287.04(G) A.A.C. R18-16-404(C)(1)(f) A.A.C. R18-16-410</p>	<p>Record of Decision public notice: -7th Avenue and Bethany Home Road, June 2016</p> <p>-16th Street and Camelback, May 2017</p> <p>-7th Street and Missouri Avenue, November 2021</p>	✓	✓	✓	

Community Involvement Action Summary

WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Complete			
				7th Avenue and Bethany Home	7th Avenue and Missouri Avenue	16th Street and Camelback	Central and Camelback
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)	Done as needed			✓	
	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. R18-16-4-16(B)					
Operation & Maintenance	Publish a public notice announcing the availability of the Operation & Maintenance Plan for review 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)	7th Avenue and Bethany Home Road, September 2016	✓			
Removal from WQARF Registry	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.	Not Applicable					
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)	<u>Central and Camelback:</u> Two prospective purchaser agreement notices published in 1998 and January 2008 (see Appendix H).				✓
	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)	<u>7th Avenue and Bethany Home Road:</u> One consent decree settlement notice published in 2005 (see Appendix H). One consent decree settlement 2016 (see Appendix H). <u>16th Street and Camelback:</u> One consent decree in 1994 (see Appendix H); notice date unknown.	✓		✓	

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 Central Phoenix WQARF Sites.

ADEQ uses the following community involvement techniques:

1. CAB: The CAB, with assistance from ADEQ, has been conducting public meetings about the Central Phoenix WQARF Sites since 2000. The Central and Camelback CAB began meeting in 2000 and the 7th Avenue and Bethany Home CAB began in 2010. These two CABs merged on August 20, 2013. The 16th Street and Camelback CAB joined with the combined CAB on July 23, 2014, after which the CAB name changed to the Central Phoenix CAB. The 7th Street and Missouri Avenue CAB joined the Central Phoenix CAB in August 2016. 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 site is 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 Central Phoenix WQARF Sites. Anyone can join the Sites' 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 Site 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 Page: provides detailed site information and links to the site information repository (azdeq.gov/7th-bethany, azdeq.gov/7th-missouri, azdeq.gov/16th-camelback, and azdeq.gov/central-camelback).
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 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).	✓	✓	✓ <i>(site and calendar pages)</i>	✓ <i>(Arizona Business Gazette)</i>	✓
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).	✓	✓	✓ <i>(site, calendar, and CAB history pages)</i>	Not Applicable	✓
Technical Presentation	Provide current information about site activity or related topics.	At CAB meetings or at specially requested public meetings.	✓	Not Applicable	✓ <i>(site page)</i>	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	✓ <i>(information repository)</i>	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.	✓	✓	✓ <i>(information repository)</i>	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.	✓	✓	✓ <i>(site and calendar pages)</i>	✓ <i>(Arizona Business Gazette)</i>	✓
Public notice announcing a prospective purchaser agreement	Provide notice of availability and request comments.	Per mandate (see Community Involvement Action table).	✓	✓	✓ <i>(information repository)</i>	✓ (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).	✓	✓	✓ <i>(online information repository)</i>	✓ (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.				

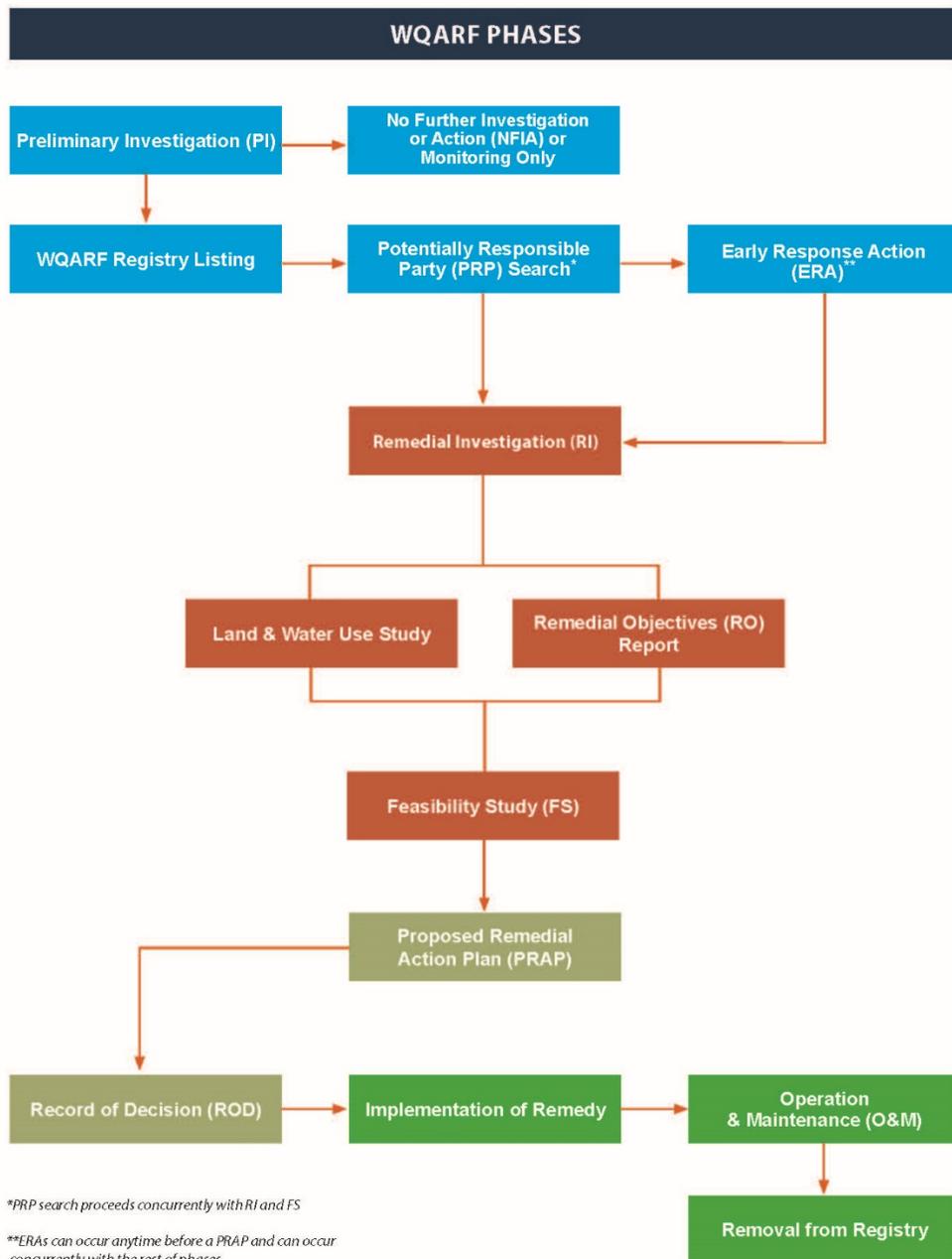
APPENDICES

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

- Appendix A: WQARF process flowchart
- Appendix B: History of major activities at the Central Phoenix WQARF Sites
- Appendix C: Targeted communities in the CIA of the Central Phoenix WQARF Sites
- Appendix D: Elected officials representing communities within the CIA
- Appendix E: Current CAB members of the 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 Central Phoenix WQARF Sites
- Appendix I: Consent orders and settlements related to the Central Phoenix WQARF Sites

Appendix A

WQARF Process Chart



Appendix B

Site History

7th Avenue and Bethany Home Road

1952–1960 A small shopping center with a market, commercial shops, and a dry cleaner operated on the northeast corner of North 7th Avenue and Bethany Home Road. The dry cleaner opened in 1955.

1995–2001 Three investigations confirmed the presence of PCE contamination in the Site’s soil and groundwater.

2004 ADEQ added the Site to the WQARF Registry in August. PCE groundwater concentrations were found as high as 15,000 micrograms per liter ($\mu\text{g/L}$) beneath the northeast corner source area property. The eligibility and evaluation (E&E) score was 29 out of 120.



In October, ADEQ initiated an ERA evaluation to characterize the source area of PCE contamination beneath the Site. The ERA evaluation consisted of drilling 10 soil borings, installing five SVE wells and two groundwater monitoring wells.

2005–2007 Based on the results of the ERA investigation, ADEQ installed an SVE system. After operating from June 2005 to January 2006, the system removed approximately 380 pounds of PCE from the soil. ADEQ decommissioned the SVE system in April 2007 after confirming PCE concentrations below SRLs and GPLs.

2008 ADEQ investigated a property at 6022 North 7th Avenue that operated a dry cleaner from the 1960s until approximately 1990. Results indicated that PCE had been released to the Site’s groundwater. PCE concentrations ranged from 8.0 to 24 $\mu\text{g/L}$. TCE and vinyl chloride (VC) were detected above their respective AWQS.

2009 ADEQ began the RI and completed the outline for the site’s community involvement plan (CIP).

7th Avenue and Bethany Home Road (continued)

2010	ADEQ released the Site's Draft RI Report and solicited Remedial Objectives (ROs) from the public. Groundwater sampling conducted in November indicated that the contaminated groundwater plume continued to move north.
2011	The Final RI and RO Reports were released in May.
2012	ADEQ completed the FS in November. Groundwater sampling detected contaminants of concern (COCs) generally at higher concentrations than detected in September 2010.
2013	In April, ADEQ pilot tested ERD at the Site. Groundwater samples collected in August indicated the pilot test effectively reduced PCE concentrations within 15 feet of the injection wells; PCE concentrations as high as 550 µg/L reduced to less than 1 µg/L after the pilot test.
2014	ADEQ sampled all 18 groundwater monitoring wells in March. In general, COC concentrations were slightly lower than those detected in April 2013.
2015	ADEQ released the PRAP for public comment in April. The plan proposed ERD with MNA as the Site's remedy.
2016	ADEQ issued the ROD in June.
2017	ADEQ collected groundwater samples in February and May to monitor ERD injection results.
2018–2022	ERD injections continued along with performance monitoring to ensure the Site's remedy remained effective.

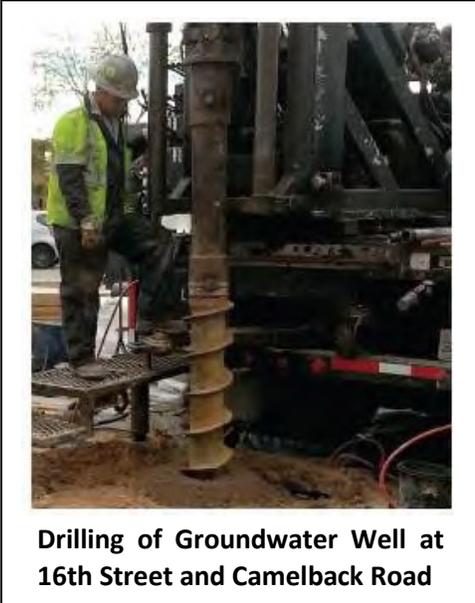
7th Street and Missouri Avenue

- 1969–1981 Kino Drapery Cleaners, the source of the site’s COCs, operated on the southwest corner of 7th Street and Missouri Avenue.
- 1995 ADEQ detected PCE in groundwater wells monitoring a Leaking Underground Storage Tank (LUST) on the northwest corner of 7th Street and Missouri Avenue. PCE was detected at 720 µg/L, above the AWQS.
- 1998 SRP reported PCE concentrations over AWQS in their well located northwest of the 7th Street and Missouri Ave intersection.
- 2000 PCE and TCE were detected in groundwater samples from several monitoring wells in the area of 7th Street and Missouri Avenue.
- 2008 ADEQ conducted a soil vapor survey to determine the source of the Site’s PCE and TCE contamination.
- 2010 Based on the results of the soil vapor survey, ADEQ installed monitoring wells near the Fashion Cleaners facility at 736 East Missouri Avenue.
- 2013 ADEQ installed additional monitoring wells near the former Kino Drapery Cleaners at 5340 North 7th Street. Groundwater monitoring results indicated a release of PCE at this location. ADEQ determined there were no upgradient PCE sources after installing a groundwater monitoring well upgradient of the former Kino Drapery Cleaners.
- 2014 ADEQ collected soil and soil vapor samples beneath the Missouri Falls building on the southwest corner of 7th Street and Missouri Avenue, where Kino Drapery Cleaners formerly operated. Results indicated a PCE release had occurred at this location.
- 2016 ADEQ added the Site to the WQARF Registry in June with an E&E score of 42 out of 120.
- 2017 As part of the site’s RI, ADEQ installed additional boreholes and groundwater monitoring wells to fully characterize the groundwater plume, in addition to determining the extent of the Site’s contaminated soil vapor.



- 2018 In October, ADEQ installed an SVE system in the Missouri Falls basement as an ERA. The Final RI Report and FS work plan were released in November. ADEQ pilot tested Ozone Sparge Injection as a possible groundwater remedy for the site.
- 2019 The SVE system operated until June and removed approximately 540 pounds of PCE from soil under the Missouri Falls building. The Ozone Sparge Injection System ran until July. ADEQ released the Site's FS Report in October.
- 2020 ADEQ released the PRAP in March for public comment. In July, ADEQ expanded the Ozone Sparge Injections System as an ERA and began initial operations.
- 2021 - 2022 The ROD was released in November. The selected remedy is SVE for the soils, Ozone Sparge with MNA for the groundwater. The ROD is on hold as ADEQ and SRP work on a path forward.

16th Street and Camelback Road

1994	In January, ADEQ signed a Consent Decree with Bank One, the property owner. Bank One paid a settlement to ADEQ to investigate and remediate the Site; ADEQ installed six monitoring wells to begin the PI.	 <p>Drilling of Groundwater Well at 16th Street and Camelback Road</p>
1995	ADEQ conducted a soil vapor survey at the Site. PCE concentrations detected in soil ranged from 1.3 to 2.3 µg/L.	
1996	ADEQ installed four additional permanent groundwater monitoring wells and four temporary groundwater well points.	
1999	ADEQ added the Site to the WQARF Registry in April, with an E&E score of 23 out of 120.	
2002	In May, ADEQ began an ERA evaluation to determine if a combination of SVE and air sparging (AS) could control and remediate the PCE groundwater contamination.	
2003	After pilot testing an SVE/AS system, ADEQ determined the system was not a feasible remedy for the Site.	
2004–2005	In January, ADEQ installed an additional monitoring well on the southwest corner of 16 th Street and Camelback Road to define the downgradient extent of PCE contamination. Groundwater monitoring continued.	
2006	ADEQ installed a monitoring well to collect contamination data from the source area of the southern plume. In the southern groundwater plume, 1,2-dichloroethane (1,2-DCA) was detected at 7 µg/L. Groundwater sampling detected PCE concentrations as high as 89 µg/L in the northern plume.	
2007	Groundwater monitoring of the northern and southern groundwater plumes detected PCE and 1,2-DCA as high as 24 µg/L and 3.4 µg/L, respectively.	
2008	ADEQ continued to sample the northern and southern groundwater plumes.	
2009–2012	Due to funding limitations, ADEQ suspended Site activities.	

- 2013 ADEQ began installing two groundwater monitoring wells to better define the downgradient extent of PCE contamination in the northern plume. Groundwater monitoring in May detected PCE at 31.9 µg/L. Concentrations of 1,2-DCA in groundwater remained below the laboratory detection limit.
- 2014 ADEQ issued the RI/FS scope of work, fact sheet, and CIP. Groundwater sampling detected concentrations of PCE and 1,2-DCA as high as 13.3 µg/L and 0.62 µg/L, respectively.
- 2015 ADEQ released the Draft RI and solicited ROs from the public. ADEQ completed the Final RI Report in May. The FS Report was released in July. Groundwater monitoring results indicated decreasing contaminant concentrations.
- 2016 In April, ADEQ conducted an ERD injection to determine if it could accelerate MNA cost effectively. ADEQ released the PRAP for public comment in July.
- 2017 ADEQ finalized the ROD and completed an additional round of ERD injections.
- 2018 ADEQ completed two additional rounds of ERD injections to accelerate the MNA at the Site. Due to decreasing groundwater levels, ADEQ replaced two monitoring wells.
- 2019 ADEQ completed two additional rounds of ERD injections, along with groundwater sampling in April.
- 2020 ADEQ conducted groundwater sampling in March to monitor the performance of ERD injections and MNA remedy. Groundwater sampling detected PCE concentrations as high as 10.4 µg/L.
- 2021-2022 ADEQ conducted groundwater monitoring in March and October.

Central and Camelback

- 1950s–2006 Several dry cleaners operated on Central Avenue, north and south of Camelback Road. Maroney’s Cleaners and Laundry, located at 4902 North Central Avenue, operated until 2006. ADEQ later identified Maroney’s as the facility that contributed to the release of COCs to the Site groundwater and soil.
- 1999 ADEQ added the Southwest Corner Source Area (SCSA) portion of the Site to the WQARF Registry after detecting PCE concentrations in groundwater as high as 20,000 µg/L. The E&E score was 31 out of 120.
- 2000 In June, ADEQ expanded the Central and Camelback WQARF Site boundaries, with a new E&E score of 32.
- 2001 As an ERA, ADEQ installed four groundwater extraction wells to remediate groundwater beneath the SCSA and contain the plume’s migration.
- 2003 A groundwater treatment system began operating at 21 West Camelback Road. The system removed Volatile Organic Compounds using granular activated carbon (GAC) filters. The system discharged treated water into the SRP Grand Canal or City of Phoenix sanitary sewer. ADEQ also installed 11 groundwater monitoring wells to determine the extent of the PCE plume.
- 2004 As part of an ERA evaluation, ADEQ installed four nested SVE wells and groundwater monitoring wells at the former Maroney’s facility.
- 2005 ADEQ pilot tested an SVE as an ERA to remediate subsurface soil contamination at the former Maroney’s facility.
- 2006 Two new wells were drilled at Medlock Drive and Orange Street to delineate the northern portion of the PCE groundwater plume.
- 2007 ADEQ began the RI, drilled three new monitoring wells, and began operating the SVE system as an ERA. The SVE system utilized GAC to treat contaminated soil vapor.
- 2008 ADEQ detected increasing levels of PCE in monitoring wells on East Orange Drive and in wells at 5201 North Central Avenue.



2009	At the end of June, the SVE operational schedule changed to monitor the “rebound” of soil-vapor contamination in the Site’s subsurface.
2010–2011	The groundwater treatment system shut down throughout the year due to SRP canal repairs and budget constraints. The SVE system operated intermittently. ADEQ installed nested SVE wells as part of a soil-gas investigation.
2012	The SCSA groundwater treatment system operated continuously until June. ADEQ pilot tested extraction from the newly installed SVE well, which was later connected to the existing SVE system.
2013	ADEQ conducted a passive soil-gas survey on Central Avenue, north of Camelback Road, to investigate possible PCE releases that contributed to the area’s groundwater plume. To better define the plume’s extent, ADEQ also installed two groundwater monitoring wells north of Camelback Road.
2014	ADEQ released the RI and RO Reports. ADEQ investigated potential sources of groundwater contamination through a sewer line and soil investigation near the northern portion of the PCE plume.
2015	ADEQ completed the FS Work Plan and FS Report.
2016	The groundwater treatment system and SVE system continued to operate full-time. Groundwater samples indicated reduced concentrations of the Site’s COCs. A soil vapor survey at the former Maroney’s property indicated that lowered concentration of COCs in soil vapor warranted rebound testing.
2017	ADEQ released the Site’s PRAP in June. ADEQ stopped the groundwater treatment system to pilot test In-Situ Bioremediation injections. The SVE system shut down for rebound sampling.
2018	ADEQ installed three double-nested soil vapor probe and performed soil vapor rebound sampling. ADEQ installed three additional groundwater monitoring wells as part of continued monitoring. The SCSA groundwater treatment and SVE systems remained offline.
2019	ADEQ installed two new groundwater monitoring wells, along with conducting an aquifer step test. Semiannual groundwater monitoring was conducted in spring and fall. ADEQ also conducted soil vapor rebound sampling. The groundwater treatment and SVE systems remained offline.
2020	ADEQ re-started the SVE system on an intermittent schedule; soil vapor rebound sampling was performed according to the SVE operation schedule. Groundwater monitoring was conducted. The groundwater treatment system remained offline.

2021-2022 The SVE system operated intermittently and rebound sampling was performed. An Ozone Sparge pilot study was implemented to enhance SVE performance. The groundwater treatment system was decommissioned. Multiple groundwater monitoring wells were abandoned. Semiannual groundwater monitoring was conducted in Spring and Fall. A ROD is currently being drafted.

Appendix C

Targeted Communities

Neighborhood Association

7th Avenue and Bethany Home Road

Avendia Siete Oeste Amy Vogelsson; azaimala@gmail.com	No phone number provided
DelMonte Estates Block Watch Heather Maldonado; Maldo5828@gmail.com	602-246-2957
Desert Horizon Precinct Block Watch AJ Marsden; Ajstillinaz@gmail.com	602-234-2567
Maryland Site Council Rebecca Potavin	602-347-2300
Mountain View Precinct Phoenix Neighborhood Patrol Rick Sain; usshornet@msn.com	No phone number provided
North Central Phoenix Neighborhood Association Mary Crozier; marycrz@cox.net	No phone number provided
North Central Phoenix Homeowners Association info@ncpha.org	No phone number provided
Rancho Solano Water Improvement District Tim Sprague; tsprague@habitatmetro.com	No phone number provided
Sun View Estates #1 Property Owners Association Rachel Milne; Sunview.estates@gmail.com	No phone number provided

7th Street and Missouri Avenue

Bethany Estates Neighborhood Association

Peter Alper
1011 E. Vavalier Dr., Phoenix, AZ 85014

No phone number provided

Camel Square Neighborhood Association

Tony Sissions; tsissons@aol.com

602-390-6187

Marlen Grove

Trish Bigler; tlbilger@gmail.com

No phone number provided

Madison United Neighborhood Association

Tom Gannon; djobin@cox.net

602-241-0406

Montebello Walk Neighborhood Association

Debra Jobin

602-463-9277

Mayfair Manor BW

Maureen Tollman

No phone number provided

Uptown Business Coalition

Kimberly Lanning; kimber@localfirstaz.org

No phone number provided

Windsor Square Block Watch

Suzanne Dohrer; dwlaw@prodigy.net

No phone number provided

Windsor Square Special Planning District

Tom Hilditch; president@windsorsquarephoenix.com
windsorsquarephoenix.com

No phone number provided

16th Street and Camelback Road

Alondra-Mirada Condominium Association 602-670-4560
Bryan Anderson; bcander2@cox.net

Biltmore Area Partnership 602-957-6483
Edward Rossi; azbapphx@aol.com

Canal North Neighborhood Association 602-400-7984
Leatrice Kitchell; leatricekitchell@msn.com

Coalition of East Phoenix 480-990-9555
Deborah Cookson; tennis3@cox.net

Central and Camelback

Brophy Concerned Neighbors Association No phone number provided
Sam Sprague; Sam9@cox.net

Medlock Business Group No phone number provided
Georganne Bryant; info@francesvintage.com

Medlock Place Historic Neighborhood Association No phone number provided
Ellen Bilbrey; EllenBilbrey2011@gmail.com

Pierson Place Historic District Neighborhood Association 602-279-6250
Charles Jones; piersonplace@cox.net

St. Francis District Neighborhood Association No phone number provided
Vicki Guffey, 314 E Pierson Street, Phoenix, AZ 85012

Windsor Square Special Planning District No phone number provided
Tom Hilitch; President@windsorsquarephoenix.com

Schools

7th Avenue and Bethany Home Road

All Saints Episcopal Day School 602-274-4866
6300 N Central Avenue, Phoenix, AZ 85012
www.allsaints.org

Montessori Children's House 602-264-0096
516 W. Bethany Home Road, Phoenix, AZ 85013
www.phxchildrenshouse.com

Madison Meadows Middle School 602-664-7600
225 W. Ocotillo Road, Phoenix, AZ 85013
www.madisonaz.org/meadows

7th Street and Missouri Avenue

New World Education Center 602-238-9210
5818 N. 7th Street, Phoenix, AZ 85014
www.nweccharter.com

Central and Camelback

Brophy College Preparatory 602-264-5291
4701 N. Central Avenue, Phoenix, AZ 85012
www.brophyprep.org

Central High School 602-764-7500
4525 N. Central Avenue, Phoenix, AZ 85012
www.pxu.org/central

Phoenix Coding Academy 602-764-7500
4445 N. Central Avenue, Phoenix, AZ 85012
www.pxu.org/coding

Saint Francis Xavier School 602-266-5364
4715 N. Central Avenue, Phoenix, AZ 85012
school.sfxphx.org

Xavier College Preparatory
4710 N. 5th Street, Phoenix, AZ 85012
www.xcp.org

602-277-3772

Vulnerable Population Centers

7th Avenue and Bethany Home Road

Marian Adult Care Home
1002 W. Rose Lane, Phoenix AZ 85013

602-433-9102

Stella Lane Adult Care Home
531 W. Stella Lane, Phoenix, AZ 85013
zafterschool.org

602-441-4696

Maryland Gardens Care Center
31 W. Maryland Avenue, Phoenix, AZ 85013
windsormarylandgardens.com/

602-341-6111

7th Street and Missouri

My Little School
624 E. Missouri Ave., Phoenix, AZ 85012
mylittleschoolaz.com

602-341-6111

Arizona Center for Afterschool Excellence
301 E. Bethany Home Road, Site A222, Phoenix, AZ 85014
zafterschool.org

602-734-5434

The Perfect Companion
5333 N. 7th Street, Phoenix AZ 85012
<https://www.azperfectcompanion.com/>

602-595-9096

Appendix D

Elected Officials

As of the publication of this community involvement plan, the community involvement area for the Central Phoenix WQARF Sites falls under three Phoenix City Council Districts (4, 5, and 6) Maricopa County Supervisorial District 3 and three Arizona Legislature Districts (4, 5 and 26).

Phoenix City Council	Maricopa Board of Supervisors	Arizona State Legislature
200 W. Washington Phoenix, AZ 85003 602-262-7111 phoenix.gov/mayorcouncil/staff	301 W Jefferson St 10th Floor Phoenix, AZ 85003 maricopa.gov/224/Board-of-Supervisors	1700 W. Washington St Phoenix, AZ 85007 azleg.gov/MemberRoster
Mayor Kate Gallego 602-262-7111 mayor.gallego@phoenix.gov	District 3 Supervisor Bill Gates 602-506-7562 district3@mail.maricopa.gov	District 4 Senator Christine Marsh Room 315 602-926-3184 cmarsh@azleg.gov
Vice Mayor Yassamin Ansari 602-262-7492 Council.district.7@phoenix.gov		District 4 Representative Matt Gress Room 112 602-926-4105 mgress@azleg.gov
District 4 Councilmember Laura Pastor 602-262-7447 council.district.4@phoenix.gov		District 4 Representative Laura Terech Room 323 602-926-3894 lterech@azleg.gov
District 5 Councilmember Betty Guardado 602-262-7446 council.district.5@phoenix.gov		District 5 Senator Lela Alston Room 315 602-926-5829 lalston@azleg.gov
District 6 Councilmember Sal DiCiccio 602-262-749 Council.district.6@phoenix.gov		District 5 Representative Jennifer Longdon Room #115 602-926-3264 jlongdon@azleg.gov
		District 5 Representative Amish Shah Room 123 602-926-3280 ashah@azleg.gov

		District 26 Senator Raquel Teran Room 213 602-926-3308 rteran@azleg.gov
		District 26 Representative Flavio Bravo Room 121 602-926-4033 fbravo@azleg.gov
		District 26 Representative Cesar Aguilar Room 122 602-926-3953 caguilar@azleg.gov

Appendix E

Community Advisory Board

The Central Phoenix WQARF Sites Community Advisory Board (CAB) was first established in 2000 with the Central and Camelback CAB. The 7th Avenue and Bethany Home CAB was established in 2010 and merged with Central and Camelback CAB in 2013. The 16th Street and Camelback CAB joined with the combined CAB in 2014, after which the CAB name changed to the Central Phoenix CAB. The 7th Street and Missouri Avenue CAB joined the Central Phoenix CAB in August 2016. The following table lists CAB members of the Central Phoenix WQARF Sites as of January 2023

Community Advisory Board Members	
Pam Perry, Co-Chair 602-279-6250 pamperry@cox.net	Chad Johnson, Co-Chair 480-329-2920 Chad.johnson@sci-us.com
Paul Barquinero 602-677-5050 barquinero@aol.com	Marshall Peterson 602-402-4136 Mcpete82@yahoo.com
Lynn Morrow 602-277-7445 l.d.morrow@cox.net	Stan Watts 602-279-7488 dwlaw@compuserve.com
Tony Sissons 602-390-6187 tsissons@aol.com	Matthew Newman 917-864-3122 Mnewman7771@gmail.com
Paul Cox 602-904-2878 Tom.cox.ceo@gmail.com	

Appendix F

Media Outlets

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

Newspapers and Magazine

The Arizona Business Gazette 602-444-8000
200 E. Van Buren Street, Phoenix, AZ 85004
azcentral.com

The Arizona Republic 602-444-8000
200 E. Van Buren Street, Phoenix, AZ 85004
azcentral.com

La Voz 602-444-3821
200 E. Van Buren Street, Phoenix, AZ 85004
azcentral.com

North Central News 602-277-2742
1645 E Missouri Avenue Suite 450, Phoenix, AZ 85016
northcentralnews.net

Radio

Bonneville International Corporation (KMVP, KTAR) 602-274-6200
7740 N. 16th Street, Suite 200, Phoenix, AZ 85020
ktar.com

Audacity Inc. 602-452-1000
(KMLE, KOOL-FM, KALV-FM, KZON)
840 N. Central Avenue, Phoenix, AZ 85014
audacityinc.com

iHeartMedia 602-374-6000
(KESZ, KFYI, KGME, KNIX-FM, KMXP, KTZR, KXEW, KYOT, KZZP)
4686 E. Van Buren Street, Suite 300, Phoenix, AZ 85008
iheartmedia.com

Maricopa County Community College District 480-834-5627
(KBAQ, KJZZ)
2323 W. 14th Street, Tempe, AZ 85281
kbaq.org

Hubbard Radio Phoenix 480-629-8660
(KAZG, KDKB, KDUS, KSLX-FM, KUPD)
1900 W. Carmen Street, Tempe, AZ 85283
hubbardbroadcasting.com

Riviera Broadcasting Co. 602-648-9800
(KEXX, KKFR, KMVA, KOAI)
4745 N. 7th Street, Suite 410, Phoenix, AZ 85014
desertvalleymediagroup.com

Sierra H. Broadcasting, Inc. 480-994-9100
(KAJM, KNJR)
1710 E. Indian School Road, Suite 205, Phoenix, AZ 85016
sierrah.com

Univision Radio License Corporation 602-308-7900
(KHOT-FM, KNOV-FM, KKMR, KOMR, KQMR)
4745 N. 7th Street, Suite 140, Phoenix, AZ 85014
univision.com

Television

KAET Channel 8 (PBS) 602-496-8888
555 N. Central Avenue, Suite 500, Phoenix, AZ 85004
azpbs.org

KNXV Channel 15 (ABC) 602-273-1500
515 N. 44th Street, Phoenix, AZ 85008
abc15.com

KPHO Channel 5 (CBS)/KTVK (3TV) 602-207-3333
5555 North 7th Avenue, Phoenix, AZ 85013
azfamily.com

KPNX Channel 12 (NBC) 602-444-1212
200 E. Van Buren Street, Phoenix, AZ 85004

KSAZ Channel 10 (FOX) 602-257-1234
511 W. Adams Street, Phoenix, AZ 85003
fox10phoenix.com

KTAZ (Telemundo)

4625 South 33rd Place, Phoenix, AZ 85040

telemundoarizona.com

602-648-3907

KTVW (Univision)

6006 South 30th Street, Phoenix, AZ 85042

univision.com/local/arizona-ktvw

602-232-3505

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 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

Housing Department 602-534-1974
830 East Jefferson Street, Phoenix AZ 85034 <https://www.phoenix.gov/housing>

Water Services Department 602-262-6251
305 W. Washington street, Suite 200, Phoenix AZ 85003 <https://www.phoenix.gov/waterservices>

Public Works Department: Garbage and Recycling 602-262-7251
200 W. Washington Street, 7th Floor, Phoenix, AZ 85007 <https://www.phoenix.gov/publicworks>

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: Irrigation Customer Service 602-236-3333
P.O. Box 52149, Phoenix AZ 85072-2149 Srpnet.com

Appendix H

Prospective Purchaser Agreements

The following is 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 Central Phoenix WQARF Sites.

Central Phoenix WQARF Sites	Party Name	Date Settlement Signed by Judge	Public Notice Date
Central and Camelback	Cornerstone at Central & Camelback, LLC; Cornerstone at Central, LLC; Cornerstone at Camelback, LLC; Central & Camelback Edge, LLC; Central & Mariposa, LLC; Cornerstone at Camelback, L.L.C.; and Central & Camelback Edge, L.L.C.	3/21/2008	1/24/2008
Central and Camelback	Outdoor Systems	4/15/1998	Unknown

Appendix I

Consent Orders and Settlements

The following table presents a list of parties that have entered into consent decree settlements with the ADEQ for properties in or around the Central Phoenix WQARF Sites as of January 2023.

Central Phoenix WQARF Sites	Party Name	Date Settlement Signed by Judge
16th Street and Camelback	Bank One	1/1994
7 th Avenue and Bethany Home Road	Bayless Investments & Trading Company	4/20/2005
7 th Avenue and Bethany Home Road	SCI AZ Funeral Services	6/28/2016

Acronyms and Glossary of Terms

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 ($\mu\text{g/L}$).

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.

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.

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.

Enhanced Reductive Dechlorination (ERD): The process of modifying chemical, physical and biological conditions in the aquifer (groundwater) to stimulate the microbial breakdown of contaminants under anaerobic conditions to harmless end products.

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: In its original place; unmoved unexcavated; remaining at the site or in the subsurface.

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.

Ozone Sparge: The process of adding an oxidizer, ozone, to a water source in order to breakdown contaminants.

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 Remediation Level (SRL): A pre-determined risk-based standard protective for residential or non-residential use based upon the total contaminant concentration in soil. In addition to meeting the SRLs, it must also be shown that soil contaminant levels do not: 1) Cause or threaten to cause a violation of Water Quality Standards that are protective of aquifer water quality and surface water quality; 2) Exhibit a hazardous waste characteristic of ignitability, corrosivity, or reactivity; and 3) Cause or threaten to cause an adverse impact to ecological receptors. SRLs have replaced what were known as Health-Based Guidance Levels or HBGLs.

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.

Underground Storage Tanks (USTs): A tank, or a combination of tanks and connected underground piping and impact values used (or once used) to contain regulated substances, like gasoline.

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.