

# 56<sup>th</sup> Street and Earll Drive Water Quality Assurance Revolving Fund (WQARF) site 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 56<sup>th</sup> Street and Earll Drive WQARF site 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 site's remedy.

The flowchart in Appendix A depicts each phase in the WQARF process. Refer to the glossary for definitions of each WQARF phase.

### **ADEQ Spokesperson Contact Information**

The ADEQ designated spokesperson will act as liaison between ADEQ and the community near the 56<sup>th</sup> Street and Earll Drive WQARF site. 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- 292-0218 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 56<sup>th</sup> Street and Earll Drive WQARF site information repository 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/56th-earll

#### 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

The 56<sup>th</sup> Street and Earll Drive WQARF Site is located in Phoenix, Arizona. The approximate boundaries of the site are Earll Drive to the north, Roosevelt to the south, 56<sup>th</sup> Street to the east, and 26<sup>th</sup> Street to the west. The site was placed on the WQARF Registry on June 2004, with an eligibility and evaluation (E&E) score of 40 out of a possible 120. The major factor leading to the score was the presence of volatile organic compounds in groundwater at levels exceeding Arizona Aquifer Water Quality Standards (AWQS).

The site groundwater contaminants of concern are trichloroethene (TCE) and tetrachloroethene (PCE).

ADEQ and Freescale Semiconductor, Inc. (Freescale), now NXP USA, Inc. (NXP), negotiated an agreement for NXP to implement an Early Response Action (ERA) to address the PCE and TCE in the groundwater. NXP constructed a groundwater pump-and-treat system as part of the Early Response Action and began operating it in November 2013. Groundwater is extracted and treated, then discharged into the Grand Canal for nonpotable beneficial reuse as irrigation water under an agreement with Salt River Project.



**Grand Canal Discharge** 

In 2014, ADEQ and NXP negotiated Consent Orders for operation and maintenance of the groundwater treatment system and for the Remedial Investigation and Feasibility Study reports. The Final Remedial Investigation Report and the Feasibility Study work plan were completed in 2018. Soil gas investigations began in 2018 as part of the Remedial Investigation data gaps. Residential indoor air investigations and a soil gas investigation were completed near the former source area. Indoor air results from homes that elected to participate as well as soil gas results are part of the Feasibility Study. The Feasibility Study was released in March 2022.

NXP continues to operate and maintain the groundwater pump-and-treat system as the ERA. Groundwater samples and water level data are collected by NXP in April and October each year.

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.

## 56th Street and Earll Drive











(WQARF) Water Quality Assurance Revolving Fund Site

Plume Data Update: 5/10/2022 Publication Number: M 22-03

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



Date Saved: 5/10/2022

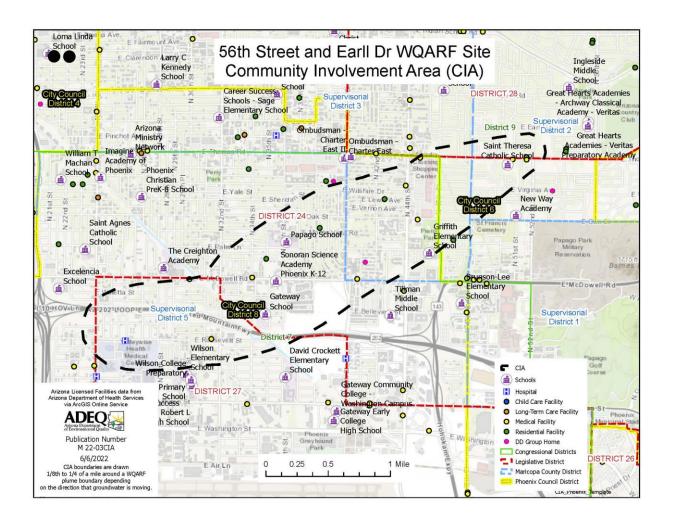
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## **Community Profile**

### Community Involvement Area (CIA)

The 56<sup>th</sup> Street and Earll Drive WQARF site CIA 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 below illustrates the 2022 CIA for the 56<sup>th</sup> Street and EarlI Drive WQARF site.



### **Community Demographics**

Demographics help ADEQ plan and implement tailored community involvement activities. The following page displays key demographic information for the 56<sup>th</sup> Street and Earll Drive WQARF site CIA.

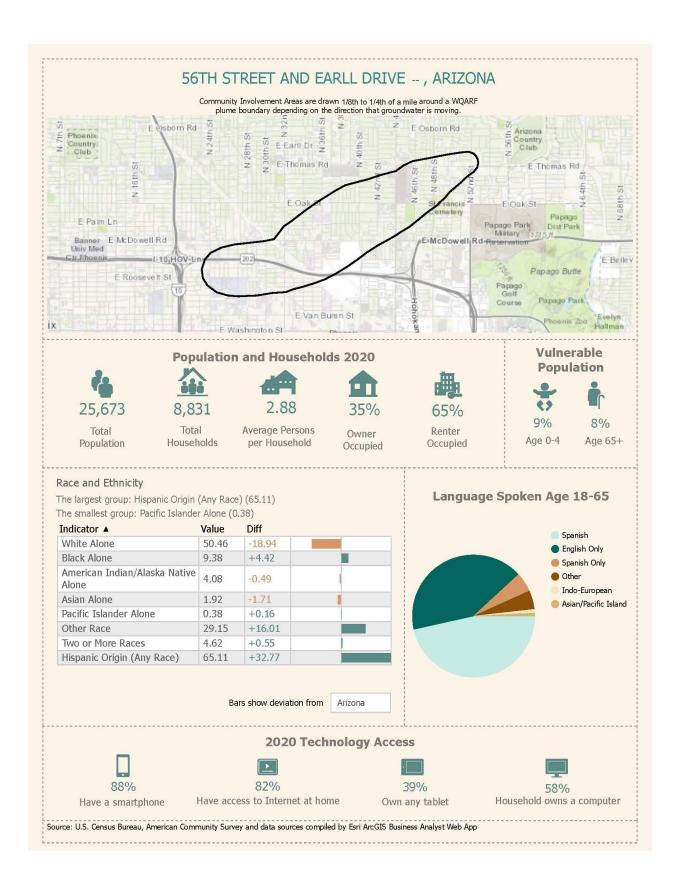
The 56<sup>th</sup> Street and Earll Drive WQARF site CIA is located primarily in Phoenix. The current estimated population of Phoenix is 1,658,422 people<sup>1</sup>.

The CIA contains a mix of residential, commercial, and industrial areas within two zip codes (85008 and 85018). An estimated 25,673 people live in 8,831 households within the CIA. Among CIA residents above age five, almost 50% speak Spanish, with varying levels of English proficiency. Approximately 40% of residents identified English as their only language. Given the high proportion of Spanish 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.

Refer to Appendix C for a list of neighborhood associations, community schools, and vulnerable population centers. For elected officials in the CIA, see Appendix D.

<sup>&</sup>lt;sup>1</sup> Source: Arizona Demographics Interactive Map Viewer: <a href="https://geo.azmag.gov/maps/azdemographics/">https://geo.azmag.gov/maps/azdemographics/</a>



## **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 56<sup>th</sup> Street and Earll Drive WQARF site. 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 not familiar with the 56<sup>th</sup> Street and EarlI Drive WQARF site. Most interviewees were concerned with the severity of the contamination and the length of remedial action activities.

#### **Environmental and health concerns**

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

- Can ADEQ maintain effective control of the contamination?
- Are contaminants getting into the drinking water aquifer? Will we have potable water in the future?
- What activities are currently being completed at the site? Are indoor air quality samples being collected?
- Why is it taking so long?

Almost all of the interviewees wanted to know about the overall remedy for the sites, as well as future investigations.

#### **Outreach Recommendations**

Interviewees suggested the following community outreach and involvement strategies to ADEQ:

Sharing site information:

- Many of the respondents stated that the current electronic and U.S. mail communication methods in place by ADEQ were the best methods to share 56<sup>th</sup> Street and Earll Drive WQARF site updates.
- Most interviewees stated that ADEQ has done a good job of answering community
  questions in a timely manner. However, these interviewees also felt that the majority of
  the community was unaware of the groundwater contamination.

- Some interviewees felt that public meetings were the best way to keep the general public informed, but they also supported mailings and public notices. One interviewee recommended that at least one public meeting be held each year.
- One interviewee stated that there are many rental properties in the area and there is a
  high level of resident turnover that may affect communication efforts. Another
  interviewee stated that residents new to the area likely are not aware of the WQARF site.

## **Community Involvement Action Plan**

The 56<sup>th</sup> Street and Earll Drive Community Involvement Action Summary table 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 site information and implement required activities.

### **Community Involvement Action Summary - Required Activities**

The following table describes the required community involvement actions for the 56<sup>th</sup> Street and Earll Drive WQARF Site and notes which actions have been completed to date.

	Community Involvement Action Summary						
WQARF Phase	ADEQ Community Involvement Activity	Ivement Activity Statute (A.R.S.) and Activity to Date Rule (A.A.C) References		Complete			
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, February 2004 Public notice, <i>Arizona Republic</i> February 2004	*			
WQARF Registry Listing	Following the listing of a site on the WQARF Registry, ADEQ will:  • 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.		Notice to community and development of a community involvement area, Fall 2004	*			
	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)	Original CIP, July 2007  Updated CIP, February 2015, March 2019, April 2020, July 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			
Early Response Action	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.  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).  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.	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)	Multiple Early Response Actions, 1993–1996, 2005–2006, and 2009–2014	*			
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 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.	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 notice, October 11, 2004	*			

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			
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:	A.R.S. § 49-289.03(D)	Selection committee, February 2006	*			
	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)	CAB established, May 9, 2006	*			
	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)	Notice published September 2018  CAB meeting held September 2018	*			

	Community Involvement Action Summary						
WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Complete			
Remedial Investigation (continued)	Publish a public notice announcing the availability of the Proposed Remedial Objectives Report for a 30-day public comment period.  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.	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)	Notice published November 2018	*			
Feasibility Study	Provide notice to interested parties announcing the availability of the Feasibility Study Work Plan  Although not mandated, ADEQ will also provide public notice upon completion of the Feasibility Study.	A.A.C. R18-16-404(C)(1)(d) A.A.C. R18-16-407(B)	FS notice and report published March 2022	*			
Proposed Remedial Action Plan	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.	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)					
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					

	Community Involvement Action Summary							
WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Complete				
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)(I)						
	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)	Notice published August 2014	*				
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)	One prospective purchaser agreement notice was published January 2013.	<b>*</b>				
	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)	One consent order was finalized in April 2011.	*				

#### **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 56<sup>th</sup> Street and Earll Drive WQARF site.

ADEQ uses the following community involvement techniques:

- 1. CAB: The CAB, with assistance from ADEQ, began holding public meetings about the 56<sup>th</sup> Street and Earll Drive WQARF site in May 2006. The CAB advises ADEQ on sharing site information 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. There are currently less than the required minimum number of CAB members, so CAB meetings have not been held since 2018. For a list of current CAB members, see 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 (<u>arizonapublicnotices.com</u>). 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 56<sup>th</sup> Street and Earll Drive WQARF site. Anyone can join the site mailing list 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 (<u>azdeq.gov/notices</u>).
  - 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 <a href="mailto:azdeq.gov/56th-earll">azdeq.gov/56th-earll</a>.

- 5. ADEQ Notice Board: Notices are displayed on boards located in ADEQ's Phoenix and Tucson offices.
- 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, ASL interpretation, 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 56<sup>th</sup> Street and Earll Drive WQARF site.

Communication Techniques							
Communication Deliverable			Communication Recipients/Methods				
Туре	Why	When	CAB Interested ADEQ Website Local Print Media Members Parties List			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).	*	*	<b>✓</b> (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	<b>✓</b> (site page)	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.	*	>	<b>✓</b> (information repository)	Not Applicable	Not Applicable

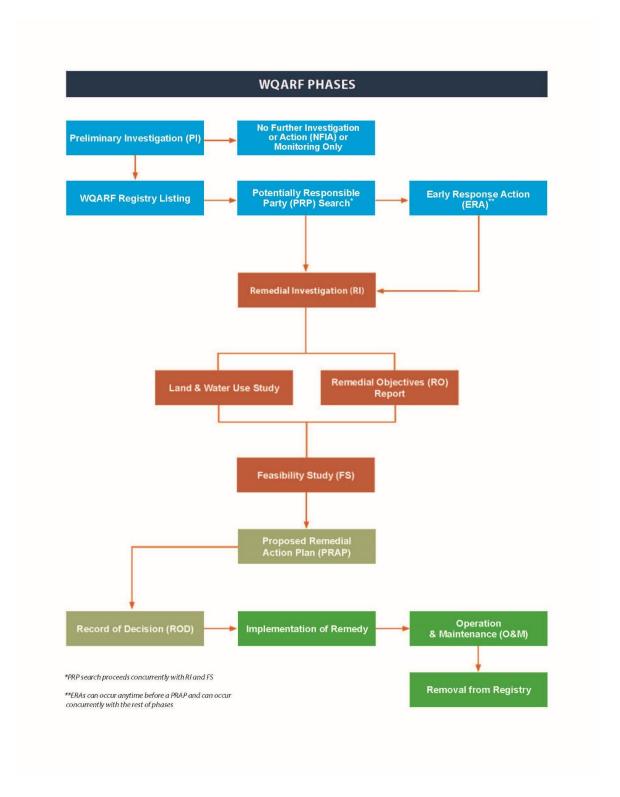
	Communication Techniques						
	Communications Deliverable			Communications Recipients/Methods			
Туре	Why	When	CAB Interested ADEQ Website Local Print Media Members Parties List				ADEQ Notice Board
Public Meeting to solicit Remedial Objectives	Provide forum to solicit Remedial Objectives. (Note that this meeting may be conducted in conjunction with a CAB meeting.)	After release of Draft Remedial Investigation Report.	*	>	<b>✓</b> (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).	~	*	<b>✓</b> (online 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 56<sup>th</sup> Street and Earll Drive WQARF site:

- Appendix A: WQARF process flowchart
- Appendix B: History of major activities at the 56<sup>th</sup> Street and Earll Drive WQARF site.
- Appendix C: Targeted communities in the 56<sup>th</sup> Street and Earll Drive WQARF site CIA.
- Appendix D: Elected officials representing communities within the CIA.
- Appendix E: Current 56<sup>th</sup> Street and Earll Drive WQARF site CAB members.
- 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 56<sup>th</sup> Street and Earll Drive WQARF site.
- Appendix I: Consent decree settlements related to the 56<sup>th</sup> Street and Earll Drive WQARF site.

## Appendix A WQARF Process Chart



## Appendix B Site History

The following presents the site history in chronological order for the ADEQ's 56th Street & Earll Drive WQARF site.

1951-1982

Motorola, Inc. (Motorola) operated an industrial facility located at the northwest corner of 56th Street & Earll Drive in Phoenix, Arizona, for research, development, and small-scale manufacturing operations. In the 1950s and 1960s, the facility was used for manufacturing semiconductors and was later used for manufacturing and assembling electronics equipment, systems, and components. In 1982 the facility was converted for use as office space. During the operation of the facility, solvents and metals were released to the environment.

1983

Motorola began investigating its 56th Street facility. Soil, soil gas, and groundwater investigations were conducted in stages and included the installation of 39 groundwater monitoring wells. An off-site soil gas investigation identified five potential source areas for volatile organic compounds.



**Montioring Well Installation** 

1989

The 56th Street & Earll Drive site was originally investigated as part of the Motorola 52nd Street Superfund Site. However, groundwater data indicated that there were two separate and distinct areas of contamination. Therefore, the 56th Street & Earll Drive WQARF site was disassociated from the larger Motorola 52nd Street Superfund site.

1993-1996

Motorola conducted several Early Response Actions (ERAs) during this 3-year period, including abandoning dry wells, conducting pilot scale bioremediation tests, installing a soil vapor extraction system, and excavating contaminated soil.

1997

Following soil excavation activities and an on-site confirmation soil gas investigation, ADEQ granted Motorola a No Further Action determination for site soils.

The 56th Street & Earll Drive site was placed on the WQARF Registry on June 2, 2004, because of the presence of tetrachloroethene (PCE) and trichloroethene (TCE) in groundwater at levels that exceeded the Arizona Aquifer Water Quality Standard of 5.0 micrograms per liter ( $\mu$ /L) for these compounds. The eligibility and evaluation score for placement on the WQARF Registry was 40 out of 120.

Freescale Semiconductor, Inc. (Freescale), a successor company to Motorola, installed additional monitoring wells during the third quarter to the west and southwest of the contaminant plume to further delineate the extent of groundwater contamination. Following installation and sampling of these wells, an ERA evaluation was conducted.

Freescale agreed to implement an ERA evaluation to examine the potential impact of contamination on a downgradient Salt River Project well. The maximum PCE and TCE levels found in the downgradient well were 46 µg/L and 770 µg/L, respectively.

2007 Freescale implemented the use of granular activated carbon to remove contaminants from the groundwater prior to discharge to the Grand Canal.

2008

2009

Freescale negotiated access rights with landowners adjacent to the Grand Canal for a planned groundwater extractionand-treatment system.

Freescale prepared a work plan describing the installation and development of two groundwater



Carbon Vessels for Groundwater
Treatment

extraction wells and two groundwater monitoring wells on the north side of the Grand Canal. The four wells comprised the first phase of the ERA to contain and control groundwater contamination in the area.

Freescale entered into a Consent Order with ADEQ on April 22, 2011, to design and implement the groundwater containment-and-control ERA. Freescale collected groundwater samples and water level data from 41 monitoring wells in April and October 2012. Freescale provided monthly reports to ADEQ on the progress of the ERA.

Freescale completed construction of the groundwater extraction-and-treatment system and began operating it in November.

- Freescale submitted a Site Operation and Maintenance Plan for the ERA, which ADEQ approved in October after a 30-day public comment period. Freescale agreed to conduct operation and maintenance of the groundwater extraction-and-treatment system based on a pending agreement with ADEQ.
- 2015 Consent Orders for the operation and maintenance of the groundwater treatment system and the Remedial Investigation (RI) and Feasibility Study (FS) reports were negotiated between ADEQ and Freescale. Freescale continued to operate and maintain the groundwater pump-and-treat system.
- Freescale Semiconductor became NXP USA Inc. (NXP) and remains the working party at the site. The Draft RI was made available for public comment in 2018. A public meeting was held to receive comments on the RI and to solicit remedial objectives. The RI Report, Remedial Objectives Report and FS Workplan were finalized in November 2018.
- NXP continued to operate and maintain the groundwater pump-and-treat system as the ERA. Groundwater samples and water level data were collected by NXP in April and October each year. NXP completed a residential indoor air investigation and a soil gas investigation near the former source area to fulfill data gaps as part of the FS. Indoor air results from homes that elected to participate in the investigation, as well as soil gas results, are included in the FS. The FS was finalized in March 2022.

## Appendix C <u>Targeted Communities</u>

## **Neighborhood Associations**

Arcadia Corners Neighborhood Association	602-881-8264
Laura Stover, 4039 East Pinchot Avenue, Phoenix, AZ 85018	arcadiacorners@live.com
Arcadia Osborn Neighborhood Association	480-278-1868
Janelle Lowey, 4920 East Osborn Road, Phoenix, AZ 85018	Lowey.janelle@gmail.com
Brunson-Lee Neighborhood Association Partnership	602-686-7267
Mary Moore, 30 W Wiletta Street, Phoenix, AZ 85003	Sunshine2u@outlook.com
Greater Orangedale Neighborhood Association	602-321-1243
Christina Eichelkraut	greaterorangedalephx@gmail.com
2606 North 44 <sup>th</sup> Street #103, Phoenix, AZ 85005	
Papago Vista Neighborhood Association	602-549-0967
Michael Rodgers, 3612 East Palm Lane, Phoenix, AZ 85008	papagovistana@yahoo.com
Pierce Unified Neighborhood Association	602-999-7668
Ginnie Ann Sumner, 4739 East Lewis Avenue, Phoenix, AZ	Gasumner524@gmail.com
Rancho Ventura Neighborhood Association	602-524-2401
4247 East Windsor Avenue, Phoenix, AZ 85008	Dash 85293@yahoo.com

## Schools

Balsz School District	602-629-6400
4825 East Roosevelt Street, Phoenix, AZ 85008	
Creighton School District	602-381-6000
2702 East Flower Street, Phoenix, AZ 85016	
Gateway School	602-381-4665
1100 North 35 <sup>th</sup> Street, Phoenix, AZ 85008	
Griffith Elementary School	602-629-6700
4505 East Palm Lane, Phoenix, AZ 85008	
Papago School	602-381-6100
2013 North 36 <sup>th</sup> Street, Phoenix, AZ 85008	
St. Theresa Catholic School	602-840-0010
5001 East Thomas Road, Phoenix, AZ 85018	
Vulnerable Population Centers	
Vulnerable Population Centers	
Vulnerable Population Centers  Angel Care Home Assisted Living	602-475-0135
	602-475-0135
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008	
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility	602-475-0135 602-840-5940
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008	
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility	
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility 2815 North 48 <sup>th</sup> Street, Phoenix, AZ 85008	602-840-5940
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility 2815 North 48 <sup>th</sup> Street, Phoenix, AZ 85008  The Crossroads, Inc Arcadia 5116 East Thomas Road, Phoenix, AZ 85018	602-840-5940 602-263-5242
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility 2815 North 48 <sup>th</sup> Street, Phoenix, AZ 85008  The Crossroads, Inc Arcadia 5116 East Thomas Road, Phoenix, AZ 85018  Housley's Care Center	602-840-5940
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility 2815 North 48 <sup>th</sup> Street, Phoenix, AZ 85008  The Crossroads, Inc Arcadia 5116 East Thomas Road, Phoenix, AZ 85018	602-840-5940 602-263-5242
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility 2815 North 48 <sup>th</sup> Street, Phoenix, AZ 85008  The Crossroads, Inc Arcadia 5116 East Thomas Road, Phoenix, AZ 85018  Housley's Care Center 2942 East Roosevelt Street, Phoenix, AZ 85008	602-840-5940 602-263-5242
Angel Care Home Assisted Living 2231 North 38 <sup>th</sup> Street, Phoenix, AZ 85008  Country Manor Assisted Living Facility 2815 North 48 <sup>th</sup> Street, Phoenix, AZ 85008  The Crossroads, Inc Arcadia 5116 East Thomas Road, Phoenix, AZ 85018  Housley's Care Center	602-263-5242 602-275-9267

Magical Star Preschool	602-267-1539
2232 North 36 <sup>th</sup> Street, Phoenix, AZ 85008	
New Creations Day Care and Learning Center	602-273-7949
2094 East Roosevelt Street, Phoenix, AZ 85008	
Phoenix Christian Day Care	602-273-0889
2030 North 36 <sup>th</sup> Street, Phoenix, AZ 85008	
St. Theresa Little Flower Preschool	602-840-0010
5001 East Thomas Road, Phoenix, AZ 85018	002 0 10 0010
Southwest Head Start at Gateway	602-266-5976
1100 North 35 <sup>th</sup> Street, Phoenix, AZ 85008	
Southwest Head Start at Papago School 2013 North 36 <sup>th</sup> Street, Phoenix, AZ 85008	602-468-3431

## Appendix D Elected Officials

As of the publication of this community involvement plan, the community involvement area for the 56<sup>th</sup> Street and Earll Drive WQARF Site falls under Phoenix City Council Districts 6 and 8; Maricopa County Supervisorial Districts 1, 2, 3, and 5; and Arizona Legislature Districts 24, 27, and 28.

Phoenix City Council	Maricopa Board of	Arizona State Legislature	Arizona State Legislature
	Supervisors	Representatives	Senators
200 W Jefferson St	301 W Jefferson St 10th Floor	1700 W. Washington St	1700 W. Washington St
Phoenix, AZ 85003	Phoenix, AZ 85003	Phoenix, AZ 85007	Phoenix, AZ 85007
phoenix.gov/mayorcouncil		azleg.gov/memberroster	azleg.gov/memberroster
Mayor	District 1 Supervisor	District 24 Representative	District 24 Senator
Kate Gallego	Jack Sellers	Jennifer Longdon	Lela Alston
602-262-7111	602-506-1776	602-926-3264	602-926-5829
mayor.gallego@phoenix.gov	district1@maricopa.gov	jlongdon@azleg.gov	lalston@azleg.gov
Vice Mayor	District 2 Supervisor	District 24 Representative	District 27 Representative
Laura Pastor	Thomas Galvin	Amish Shah	Rebecca Rios
602-262-7447	602-506-7431	602-926-3280	602-926-3073
council.district.4@phoenix.gov	district2@maricopa.gov	ashah@azleg.gov	rrios@azleg.gov
District 6 Councilmember	District 3 Supervisor	District 27 Representative	District 28 Representative
Sal DiCiccio	Bill Gates	Reginald Bolding Jr.	Christine Marsh
602-262-7491	602-506-7562	602-296-3132	602-926-3184
council.district.6@phoenix.gov	district3@maricopa.gov	rbolding@azleg.gov	cmarsh@azleg.gov
District 8 Councilmember	District 5 Supervisor	District 27 Representative	
Carlos Garcia	Steve Gallardo	Marcelino Quiñonez	
602-262-7493	602-506-7092	602-926-3285	
council.district.8@phoenix.gov	district5@maricopa.gov	mquinonez@azleg.gov	
		District 28 Representative	
		Kelli Butler	
		602-926-5156	
		kbutler@azleg.gov	
		District 28 Representative	
		Sarah Liguori	
		602-926-3300	
		sliguori@azleg.gov	

## Appendix E <u>Community Advisory Board</u>

56<sup>th</sup> Street and Earll Drive WQARF site Community Advisory Board (CAB) was established in 2006. There are currently less than the statutorily-required minimum five CAB members, so CAB meetings are not currently taking place. A full history of the 56<sup>th</sup> Street and Earll Drive WQARF site CAB can be found online here: <a href="mailto:azdeq.gov/node/4645">azdeq.gov/node/4645</a>.

## Appendix F <u>Media Outlets</u>

The community may use any media outlets to share information on the 56<sup>th</sup> Street and Earll Drive WQARF site. ADEQ will publish all site-related public notices in the *Arizona Business Gazette*. All future public notices for the 56<sup>th</sup> Street and Earll Drive WQARF site can be found by searching arizonapublicnotices.com.

#### **Newspapers and Magazine**

The Arcadia News 602-840-6379 3850 East Indian School Road, Phoenix, AZ 85018 arcadianews.com The Arizona Business Gazette 602-444-8000 200 East Van Buren, Phoenix, AZ 85004 arizonapublicnotices.com The Arizona Republic 602-444-8000 200 East Van Buren, Phoenix, AZ 85004 azcentral.com **East Valley Tribune** 602-898-6500 1620 West Fountainhead Parkway, Suite 219, Tempe, AZ 85282 .eastvalleytribune.com La Voz 602-444-8606 azcentral.com/lavoz 200 East Van Buren, Phoenix, AZ 85004 **North Central News** 602-277-2742 1645 East Missouri Avenue, Suite 450, Phoenix, AZ 85016 northcentralnews.net

#### Radio

Bonneville International 602-274-6200
Corporation (KTAR-AM/KTAR-FM, KMVP)

Maricopa County Community 480-731-8000
College District (KJZZ) kjzz.org

iHeartmedia602-374-6000(KESZ, KMXP, KZZP, KNIX, KYOT,kfyi.iheart.comKFYI-AM, KGME-AM,

K229DB/KOY-AM)

Entercom Communications Corp. 602-452-1000 (KMLE, KOOL, KALV) entercom.com/markets/phoenix

Hubbard Radio Phoenix602-629-8660(K224CJ/KAZG-AM, KDKB, KDUS-<br/>AM, KSLX, KUPD)corporate.hubbardradio.com/markets/phoenix

Univision Radio License 602-651-7200
Corporation univision.com/radio/arizona-kqmr-fm
(KHOT, KHOV, KOMR, KQMR)

#### **Television**

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

**KNXV Channel 15 (ABC)** 602-651-7200 515 North 44th Street, Phoenix, AZ 85008 <u>abc15.com</u>

**KPHO Channel 5 (CBS)** 602-264-1000

5555 North 7<sup>th</sup> Avenue, Phoenix, AZ 85013 <u>azfamily.com</u>

**KPNX Channel 12 (NBC)** 602-444-1212

200 East Van Buren Street, Phoenix, AZ 85004

KSAZ Channel 10 (FOX) 602-257-1234

511 West Adams Street, Phoenix, AZ 85003 <u>fox10phoenix.com</u>

**KTAZ Channel 39 (Telemundo)**602-648-3900
4625 South 33rd Place, Phoenix, AZ 85040
telemundoarizona.com

KTVW Channel 33 (Univision) 602-243-3333

6006 South 30th Street, Phoenix, AZ 85042

univision.com/local/arizonaktvw

## Appendix G <u>Local and State Agencies</u>

The following list presents additional agencies that may be used by the public to address concerns related to the 56<sup>th</sup> Street and Earll Drive WQARF Site.

#### 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

1110 W Washington St, Phoenix AZ 85007

new.azwater.gov/permitting-wells

### City of Phoenix

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

Water Services Department 602-262-6251
305 West Washington Street, #200, Phoenix AZ 85003 phoenix.gov/waterservices

#### Other

Agency for Toxic Substances and Disease Registry – Region 9800-232-463675 Hawthorne St, Ste 9410 M/S:HHS-1, San Francisco, CA 94105atsdr.cdc.gov

**Arizona Association of Realtors:** Real Estate Seller Disclosures 602-248-7787 255 E Osborn Rd #200, Phoenix, AZ 85012

<u>aaronline.com/wp-content/uploads/2017/10/Residential-Sellers-Property-Disclosure-Statement-SPDS\_REV\_010ct2017.pdf</u>

Salt River Project (water customer service) 602-263-3333 1500 N Mill Ave, Tempe AZ 85281 srpnet.com/contactus/default.aspx

## Appendix H Prospective Purchaser Agreements

One party has requested and received a prospective purchaser agreement from the Arizona Department of Environmental Quality for properties in or around the 56<sup>th</sup> Street and Earll Drive WQARF site.

Purchaser Name	Property Location	Public Notice Date	Effective Date
Great Hearts Academies	3102 North 56th Street, Phoenix, Arizona 85018	01/24/2013	02/25/2013
	Parcel #128-26-058		

## Appendix I Consent Orders and Settlements

As of the date of this CIP, there is one party that has entered into a consent decree settlement with ADEQ for properties in or around the 56<sup>th</sup> Street and Earll Drive WQARF site.

Party Name	Date Consent Decree Signed by Judge	Public Notice Date
Freescale Semiconductor, Inc.	04/22/2011	04/22/2011

## 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 ( $\mu$ 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.

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

**Groundwater:** Water 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.

**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.

**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.

**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.

**Total Petroleum Hydrocarbons (TPH)**: Total petroleum hydrocarbons refer to a measure of concentration or total mass of petroleum hydrocarbon constituents present in a given amount of air, soil or water.

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

**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.