



Broadway-Pantano  
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 Broadway-Pantano 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. Please refer to the glossary for definitions of each WQARF phase.

## ***ADEQ Spokesperson Contact Information***

The ADEQ designated spokesperson, the Community Involvement Coordinator, will act as liaison between ADEQ and the community near the Broadway-Pantano WQARF Site. The Community Involvement Coordinator will provide notice of public meetings, plan Community Advisory Board meetings, and ensure that CIP requirements are followed. Contact information for the Community Involvement Coordinator 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](mailto:Marks.Tereza@azdeq.gov)

View Community Involvement Contacts Online: [azdeq.gov/WQARF](http://azdeq.gov/WQARF)

## ***Site Information Repository***

The Broadway-Pantano 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 Broadway-Pantano Site information repository is available online and in person:

**Online:**

[azdeq.gov/broadway-pantano](http://azdeq.gov/broadway-pantano)

**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 Broadway-Pantano WQARF Site is located in Tucson, Arizona. The Site consists of the closed Broadway North Landfill and the closed Broadway South Landfill, and associated groundwater plumes bounded by Speedway Boulevard to the north, Broadway Boulevard to the south, Pantano Wash to the east, and Wilmont Road to the west. The Site was placed on the WQARF Registry in 1998, with an E&E score of 48 out of a possible 120. The major factor leading to the score was the presence of tetrachloroethene (PCE) and trichloroethene (TCE) in groundwater at levels exceeding Arizona Aquifer Water Quality Standards (AWQS).

The Site soil contaminants of concern include arsenic, cadmium, and lead. In 2006, ADEQ separated the groundwater part of the Remedial Investigation (RI) from the landfill part of the RI (to expedite the groundwater cleanup at the Site) and the landfill and groundwater components became separate operable units of the Broadway-Pantano WQARF Site.

In December 2012, the Final Groundwater Operable Unit RI Report was made available to the public (after being released to CAB members and other interested parties, it was finalized in June 2012). In November 2013, ADEQ completed and issued the Draft Landfill Operable Unit RI Report for public comment. In March 2014, ADEQ completed and issued the Proposed Landfill Operable Unit Remedial Objectives Report for public comment. These two draft landfill operable unit reports were finalized in 2014.

The Proposed Remedial Action Plan was finalized in June 2019.

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.



(WQARF) Water Quality Assurance  
Revolving Fund Site

Publication Number: M 22-48  
Plume Data Update: 7/1/2022

Plume boundaries depicted on the site map represent ADEC'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.



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# **Community Profile**

## ***Community Involvement Area (CIA)***

The Broadway-Pantano 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 on the following page illustrates the 2022 CIA for the Broadway-Pantano WQARF Site.

## ***Community Demographics***

Demographics help ADEQ plan and implement tailored community involvement activities. The following page displays key demographic information for the Broadway-Pantano WQARF Site CIA. The Broadway-Pantano WQARF Site CIA is located in Tucson, Arizona. The current estimated population of Tucson is 545,230 people<sup>1</sup>.

The CIA contains a mix of residential, commercial, and industrial areas within one zip code (85710). An estimated 2730 people live in 1105 households within the CIA. Among CIA residents above age five, less than 5% speak Spanish as their primary language at home, with varying levels of English proficiency. More than 40% of residents identified English as their only language. The remaining residents are bilingual or identified as speaking a language other than English or Spanish. Given the low proportion of Spanish speakers, ADEQ will provide interpretation and translation services only when 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 four percent of the population is under age five, while 34 percent is above age 65. See Appendix C for a list of neighborhood associations, community schools, and vulnerable population centers. For elected officials in the CIA, see Appendix D.

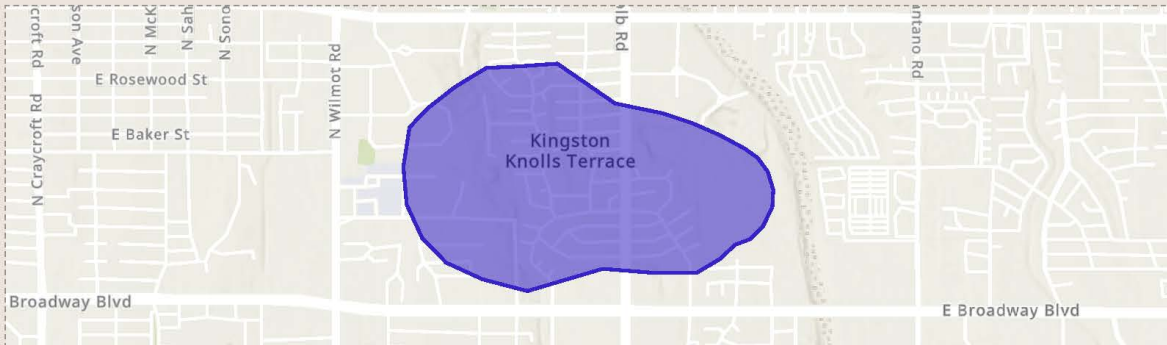
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<sup>1</sup> Source: Arizona Demographics Interactive Map Viewer: <https://geo.azmag.gov/maps/azdemographics/>





## Community Involvement Area BROADWAY-PANTANO



### Population and Households

**2,730**  
Total Population

**2.3**  
Average Household Size

**\$58,979**  
Median Household Income

**1,105**  
2020 Total Households

**49%**  
Renter Occupied Housing Units

**51%**  
Owner Occupied Housing Units

### Vulnerable Aged Population

**4%**  
Age 0-4

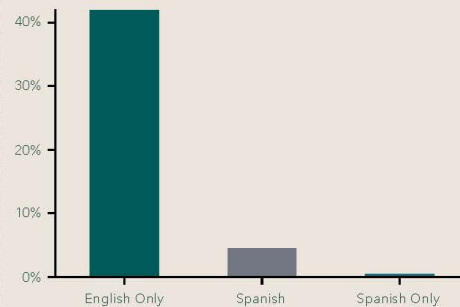
**34%**  
Age 65+

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

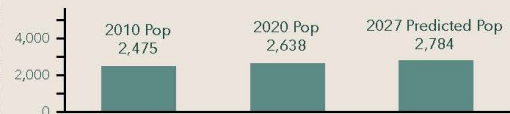
**92%** Internet Access at Home

**53%** Own Any Tablet

**76%** HH Owns a Computer

**88%** Smartphone

### Population



## **Community Issues and Concerns**

To better understand the community and its concerns ADEQ conducted interviews with community and Community Advisory Board (CAB) members who live or work near the Broadway-Pantano WQARF Site. As an update, ADEQ conducted an online survey in 2021 to assess current concerns about the Site. The following sections summarize common concerns related to the Broadway-Pantano WQARF 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***

Most interviewees were familiar with the Broadway-Pantano WQARF Site; although, one survey responder had never heard of it. Most were also familiar with the contamination and remedial action activities being conducted at the Site and believe that the groundwater contamination is a direct result of previous landfill activities. Some of the interviewees mentioned the dross contamination at the Site. During initial interviews, approximately one third of the interviewees first heard about contamination at the Site in the mid-to-late 1980s; the remaining interviewees learned about the Site in the late 1990s.

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

Environmental and health concerns expressed by the interviewees spanned a variety of topics. During initial interviews, at least half were concerned about a lack of security at the Site and the ongoing “wildcat” dumping. Some interviewees noted that the fence surrounding the Site was not completely secure and that the public continued to access the property and use it for dumping. All of the community and CAB members interviewed were concerned about the groundwater plume and migration of contaminated gases. The interviewees noted that because remedial activities had at one point been shut down for several years due to funding issues, they were uncertain about the status of remedial activities at the Site.

In original interviews, the community and CAB members expressed concern relating to the future of the Site, possible health issues related to the Site, and the condition of the overall water supply for the City of Tucson. One interviewee commented that the “aquifer” closed because of the groundwater contamination was the same aquifer that the City of Tucson Water Department had planned to use for the next 20 years. Concern was expressed about having a replacement water supply.

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

- Is the City of Tucson water supply protected from the groundwater plume?
- Has the groundwater plume been stopped or has its direction been reversed?
- What is the status of the migration of contaminated gases? Is the state tracking the movement of the gases like they are the groundwater?

- Has there been a rebound in the levels of contaminated gases since the vapor extraction system was shut down?
- What is the current status update of the dross area on the Site?
- What is the status of the cleanup and how will it affect neighborhood wells?
- A comment was made that ADEQ is not informing the community about its actions and rationale.

### **Outreach Recommendations**

In 2021, only one person responded to questions involving outreach by ADEQ. This person felt that ADEQ had not done a good job in reaching out to the community. In previous surveys, interviewees and respondents suggested the following community outreach and involvement strategies to ADEQ:

#### *Sharing Site information:*

- Other respondents stated that the current electronic, U.S. mail, public meetings, and informal community meetings in place by ADEQ were the best methods to share Broadway-Pantano WQARF Site updates.
- One respondent stated that although an email address had been provided at a community meeting, ADEQ did not send email updates to them. This person was only able to find out about events through forwarded emails.
- Suggestions for other methods of communications included: flyers to neighborhood associations, articles in newspapers, social media (Facebook and Twitter), television announcements, and newsletters (Metro Water or City Council newsletters).
- Some interviewees noted Site information can be technical and recommended using simpler language and more graphics for clearer communication.
- ADEQ has put the Site information repository online, as recommended by one interviewee.
- In addition, some interviewees suggested increasing lobbying efforts at the state level to provide more funding to clean up the Site.

## **Community Involvement Action Plan**

The Broadway-Pantano Community Involvement Action Summary table below describes the required community involvement activities for each WQARF phase and notes the dates of the 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					
WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Groundwater Operable Unit	Landfill Operable Unit
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, April 20, 1998  Public notice/comment, <i>Arizona Daily Star</i> , May 12-15, 1998	✓	✓
WQARF Registry Listing	Following the listing of a site on the WQARF Registry, ADEQ will: <ul style="list-style-type: none"> <li>Establish a preliminary community involvement area (see Chapter 2, Section A) within 90 days of Site listing on the WQARF Registry.</li> <li>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.</li> <li>Identify ADEQ personnel to contact for further information.</li> </ul>	A.R.S. § 49-289.02	Notice to the community and development of a community involvement area, October 1999	✓	✓
	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 Community Involvement Plan drafted 1998 Community Involvement Plan updated 2000, 2002, 2014, 2018, 2019, 2020 and 2022.	✓	✓

Community Involvement Action Summary					
WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Groundwater Operable Unit	Landfill Operable Unit
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>	In June 2000, the City of Tucson and Pima County installed a soil vapor extraction system at the Broadway North Landfill as part of an Early Response Action	✓	✓
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> <p>-Landfill Operable Unit, April/ May 1998</p> <p>-Groundwater Operable Unit April/May 2007</p>	✓	✓

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	Groundwater Operable Unit	Landfill Operable Unit
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"> <li>• ADEQ: 1</li> <li>• Potentially Responsible Party: 1</li> <li>• Local Official: 1</li> <li>• Local Community: 2</li> </ul>	A.R.S. § 49-289.03(D)	Selection committee established, November 1999	✓	✓
	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, November 18, 1999	✓	✓
	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 Report public notice/comment:  -Groundwater Operable Unit, April 4, 2007  -Landfill Operable Unit, November 29, 2013  Public meeting:  -Groundwater Operable Unit, May 23, 2007  -Landfill Operable Unit, February 20, 2014	✓	✓

Community Involvement Action Summary					
WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Groundwater Operable Unit	Landfill Operable Unit
<b>Remedial Investigation (continued)</b>	<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/comment:  -Groundwater Operable Unit, November 25, 2008  -Landfill Operable Unit, March 5, 2014  Final Remedial Investigation Report public notice:  -Groundwater Operable Unit, December 13, 2012  -Landfill Operable Unit, February 27, 2015</p>	✓	✓
<b>Feasibility Study</b>	<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><i>*On April 9, 2007, a Feasibility Study Work Plan public notice was published for the Groundwater Operable Unit.</i>  Feasibility Study public notice, August 14, 2017</p>	✓	
<b>Proposed Remedial Action Plan</b>	<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, June 10, 2019</p>	✓	
<b>Record of Decision</b>	<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>			



Community Involvement Action Summary					
WQARF Phase	ADEQ Community Involvement Activity	Statute (A.R.S.) and Rule (A.A.C) References	Activity to Date	Groundwater Operable Unit	Landfill Operable Unit
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)	Operation & Maintenance Plan, April 22, 2019	✓	
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)	Eleven prospective purchaser agreement notices were published from August 1999 through June 2009 (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)	Twenty-two consent decree settlement notices were published from January 2000 through April 2020 (see Appendix I).	✓	✓

## ***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 Broadway-Pantano WQARF Site.

ADEQ uses the following community involvement techniques:

1. CAB: The CAB, with assistance from ADEQ, has been conducting public meetings about the Broadway-Pantano WQARF Site since 1999. 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 or 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. For a list of current CAB members, see Appendix E.
2. Local Print Media: ADEQ will publish all WQARF milestone public notices in *The Daily Territorial*. The Arizona Newspaper Association maintains a database of all public notices published in major Arizona newspapers ([arizonapublicnotices.com](http://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 Broadway-Pantano 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](http://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](http://azdeq.gov/notices)).
  - Events Page: includes information on WQARF site public meetings, including CAB meetings ([azdeq.gov/events](http://azdeq.gov/events)).
  - Site Information Page: provides detailed site information and links to the site information repository ([azdeq.gov/broadway-pantano](http://azdeq.gov/broadway-pantano)).
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, ASL interpretation, CART captioning services, or disability accommodations through the ADEQ Title VI Nondiscrimination Coordinator (602-771-2288 or [Drago.Leonard@azdeq.gov](mailto: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 Broadway-Pantano WQARF Site.

Communication Techniques							
Communication Deliverable			Communication Recipients/Methods				
Type	Why	When	CAB Members	Interested Parties List	ADEQ Web Site	Local Print Media	ADEQ Notice Board
Notice	Provide notice of availability of milestone documents, request comments, and solicit input.	Per mandate (See Community Involvement Action table).	✓	✓	✓ (Site and calendar pages)	✓ (The Daily Territorial)	✓
CAB or Public Meeting Notice/Agenda	Provide two-way communication about the status of site activities. The notice announces the meeting and provides the agenda.	Variable schedule based on level of site activity as scheduled by CAB and ADEQ, with the exception of the required public meeting for the solicitation of remedial objectives (see Community Involvement Action table).	✓	✓	✓ (site, calendar, and CAB history pages)	Not Applicable	✓
Technical Presentation	Provide current information about site activity or related topics.	At CAB meetings or at specially requested public meetings.	✓	Not Applicable	✓ (site 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.	✓	✓	✓ (information repository)	Not Applicable	Not Applicable

## Communication Techniques

Communications Deliverable			Communications Recipients/Methods				
Type	Why	When	CAB Members	Interested Parties List	ADEQ Website	Local Print Media	ADEQ Notice Board
<b>Public Meeting to solicit Remedial Objectives</b>	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>(The Daily Territorial)</i>	✓
<b>Public notice announcing a prospective purchaser agreement</b>	Provide notice of availability and request comments.	Per mandate (see Community Involvement Action table).	✓	✓	✓ <i>(online information repository)</i>	✓ (Newspaper of general circulation in Pima County)	Not Applicable
<b>Public notice announcing settlement agreement with a responsible party.</b>	Provide notice of availability and request comments.	Per mandate (see Community Involvement Action table).	✓	✓	✓ <i>(online information repository)</i>	✓ (Newspaper of general circulation in Pima County)	Not Applicable
<b>Site Tour</b>	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.				

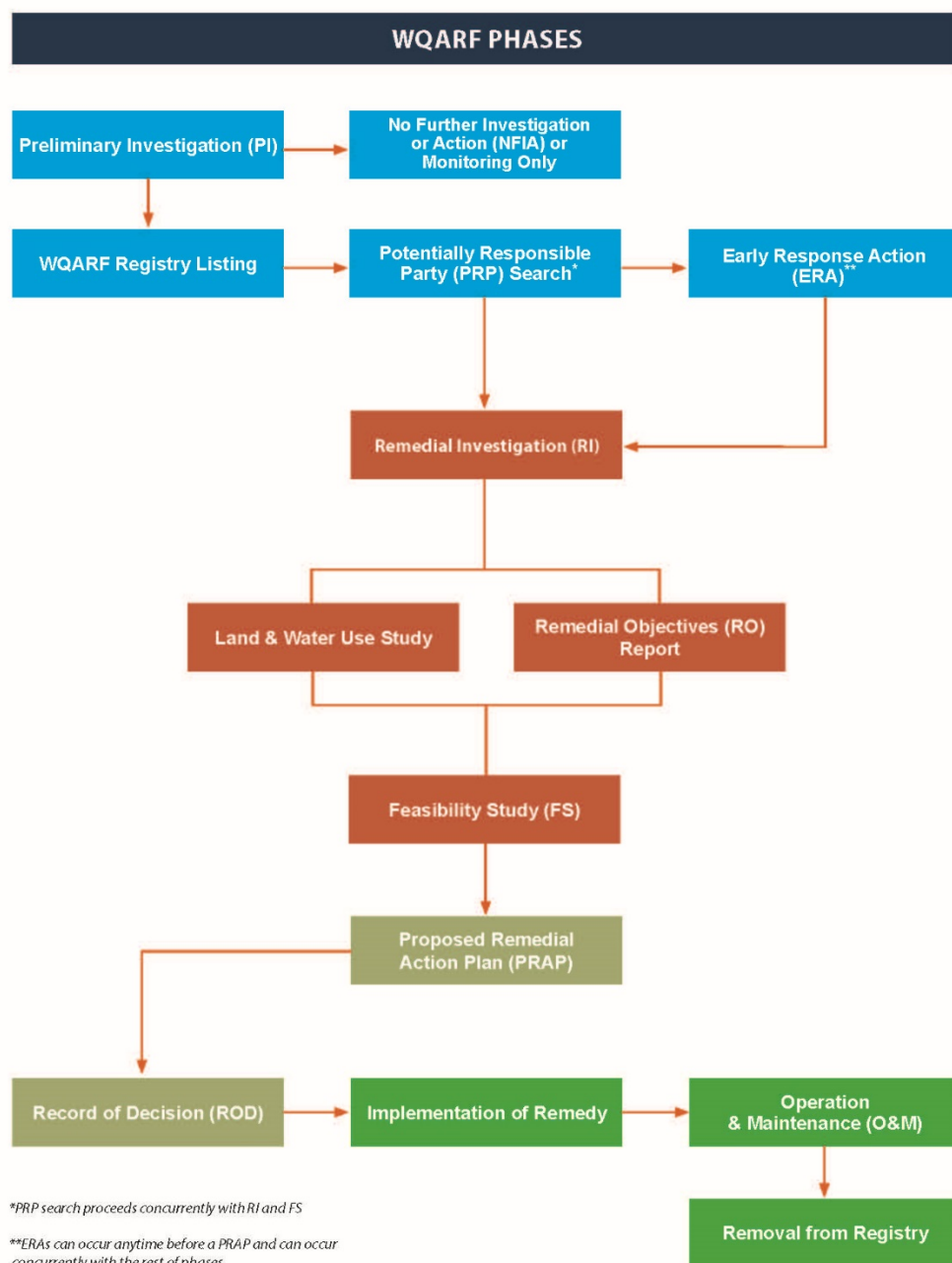
# **APPENDICES**

The following appendices provide additional resources to support community involvement for the Broadway-Pantano WQARF Site:

- Appendix A: WQARF process flowchart
- Appendix B: History of major activities at the Broadway-Pantano WQARF Site.
- Appendix C: Targeted communities in the Broadway-Pantano WQARF Site CIA.
- Appendix D: Elected officials representing communities within the CIA.
- Appendix E: Current Broadway-Pantano 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 Broadway-Pantano WQARF Site.
- Appendix I: Consent decree settlements related to the Broadway-Pantano WQARF Site.

# Appendix A

## WQARF Process Chart



## ***Appendix B***

### **Site History**

- 1953 – 1962      Broadway South Landfill was in operation. From 1953 to 1956, the landfill was operated by Pima County, and, from 1956 to 1958, the landfill was operated by Sanitary District #1 of Pima County. In 1958, Pima County and the Sanitary District No. 1 of Pima County agreed to share interest in the landfill until it closed in 1962.
- 1959 – 1973      Broadway North Landfill was in operation. In 1959, formal landfilling operations began on a portion of the Broadway North Landfill under Sanitary District No. 1 of Pima County and lasted until 1968, when the district was dissolved. The Pima County Department of Sanitation took over operation of this portion of the landfill, which was closed and capped in approximately 1973. The City of Tucson also operated on a portion of the Broadway North Landfill from approximately 1965 to 1971.
- 1987-1991      The City of Tucson shut down multiple municipal water supply wells located at both the Broadway North and South Landfills because they were found to contain tetrachloroethene (PCE) at levels exceeding the recommended federal drinking water standard.
- 1990 – 1991      The City of Tucson installed groundwater monitor wells to delineate the extent of groundwater contamination.
- 1993      The City of Tucson, Pima County, and property owners formed a project management team to conduct a Remedial Investigation/Feasibility Study (RI/FS) of the Site, with oversight provided by ADEQ.
- 1995      ADEQ conducted a Preliminary Assessment/Site Inspection at the WQARF Site, and at both the Broadway South Landfill and Broadway North Landfill. The study confirmed the presence of volatile organic compounds (VOCs) in groundwater downgradient (west) of the Broadway North Landfill and in soil gas at the Site. Based on the detection of VOCs in soil gas from the center of the Broadway South Landfill and the detection of PCE in some City of Tucson wells, ADEQ concluded that a release of PCE occurred at the Site.
- 1998      The Broadway-Pantano Site was placed on the WQARF Registry with an eligibility and evaluation score of 48 out of a possible total of 120. In March, the City of Tucson and Pima County issued an RI report for the Landfill Operable Unit (consisting of the Broadway North Landfill and the unsaturated zone beneath it), which confirmed that the Broadway North Landfill is a major source of the groundwater contamination at the Site. However, the report did not have a complete assessment of the shallow soil gas so



additional investigation was needed. ADEQ installed three groundwater monitor wells. Contamination was found to extend approximately 2 miles to the west from the Broadway North Landfill. The City of Tucson installed four additional groundwater monitor wells to aid in determining the lateral and vertical delineation of the contaminant plume.

- 2000 In June, the City of Tucson and Pima County implemented an Early Response Action (ERA) by installing a soil vapor extraction system (SVE) at the Broadway North Landfill to prevent, to the extent practicable, further release of landfill contaminants to the groundwater. Also, in 2000, the City of Tucson installed the first groundwater monitor well at the Broadway South Landfill and the groundwater samples collected from this well found to contain PCE above the Arizona Aquifer Water Quality Standards (AWQS). In December, Home Depot completed a report investigating an area located on and immediately south of the Broadway North Landfill. The report noted that dross (metal waste) was buried in that area. Home Depot covered the dross Site with soil and fenced off the area.
- 2001 In June, ADEQ and the City of Tucson executed a work-share agreement under which the City of Tucson would manage the construction of the Western Containment System with ADEQ oversight and funding. At this point, ADEQ took over the investigation and remediation of the Site, including the operation of the SVE system. ADEQ also installed four groundwater monitor wells to determine if another ERA was needed for two City of Tucson water supply wells south of the Broadway North Landfill contaminant plume.
- 2002 In June, the City of Tucson issued a Groundwater Operable Unit RI report documenting groundwater investigations through 2000; however, additional investigation was needed to complete the RI. In September, the SVE system was turned off to conduct rebound testing. Results indicated that the SVE system could be turned off. At the time, it had removed more than 1,200 pounds of PCE. Soil gas testing from December 2002 to March 2013 continued to show extremely low levels of PCE, indicating that the SVE system could remain off.
- 2002 In November, ADEQ completed an investigation to determine whether the Broadway South Landfill was contributing to groundwater contamination at the Site. The investigation showed that the Broadway South Landfill was not contributing to the Site plume at the time, but ADEQ continued to monitor the groundwater. ADEQ also installed eight groundwater monitor wells to be used for performance monitoring of the Western Containment System.

- 2003 In March, ADEQ and the City of Tucson began operating the Western Containment System at the western edge of the Broadway-Pantano WQARF Site groundwater contaminant plume. The system was designed to prevent, to the extent practicable, further migration of the groundwater contaminant plume within the City of Tucson's Central well field.
- 2004 In November, groundwater monitoring results indicated that the Broadway South Landfill plume might be comingling with the Broadway North Landfill plume.
- 2005 Groundwater sampling events confirm that the Broadway South Landfill plume had merged with the Broadway North Landfill plume. Therefore, the Broadway South Landfill became part of the Broadway-Pantano WQARF Site and ADEQ expanded its RI to include characterization of the Broadway South Landfill.
- 2006 In the spring, two groundwater monitor wells were installed in the northeast part of the Broadway South Landfill to further delineate the groundwater contamination. It appeared that the only groundwater contaminant of concern was PCE and the only exceedances of the AWQS for PCE were in the northern part of the Broadway South Landfill. That summer, ADEQ decided to separate the groundwater part of the RI from the landfill part of the RI to expedite the groundwater cleanup at the Site. The landfill and groundwater components became separate operable units of the Broadway-Pantano WQARF Site.
- 2007 From November to December, ADEQ completed installation of three groundwater monitor wells 0.25 mile downgradient from the Broadway North Landfill. Each well was screened at a different depth below the water table to help delineate the vertical extent of contamination and to allow for other groundwater testing needed for the groundwater FS. The Draft Groundwater Operable Unit RI Report was issued for public comment, and the Groundwater Operable Unit Remedial Objectives (RO) public input meeting was held.
- 2008 In March, ADEQ initiated a groundwater modeling study in preparation for the future groundwater FS. In November, the Proposed Groundwater Operable Unit RI Report was issued for public comment.
- 2009 In January, the City of Tucson completed the installation of three groundwater monitor wells west/northwest of the Western Containment System wells to delineate the downgradient edge of the PCE plume, and began quarterly sampling of key groundwater monitor wells near and downgradient of the Western Containment System. ADEQ executed prospective purchaser agreements for nine Broadway North Landfill parcels. As a public benefit under the prospective purchaser agreements, the property owner agreed to prepare and record a declaration of environmental use restriction and

associated engineering control plan for the maintenance of the landfill cover and methane gas mitigation system for each parcel.

- 2010 In June, ADEQ completed the groundwater modeling study. The results of this study were used in the future groundwater FS. In July, ADEQ finalized the human health risk assessment for the potential shallow soil gas pathway from the Broadway North Landfill to adjacent residences. The human health risk assessment determined that the potential risk was below the level requiring remediation. The City of Tucson continued quarterly sampling of select wells and found that a small portion of the groundwater plume extends to Craycroft Road.
- 2011 In the fall, ADEQ began updating and revising the Draft Groundwater Operable Unit RI Report to include Site data and information produced since the draft report was issued in 2007.
- 2012 In June, ADEQ finalized the Groundwater Operable Unit RI Report. The final report included, as appendices, the Water Use Study, the Final Groundwater Operable Unit RO Report, and ADEQ's responses to public comments. The report was made available to the public in December. In October, the Western Containment System was discontinued because incoming PCE concentrations were consistently lower than the AWQS. From March 2003 to October 2012, the system treated 3.2 billion gallons of water and removed 55.4 pounds of PCE from groundwater. Maintenance of the Western Containment System continued so that it could readily be brought back on line if site conditions changed.
- 2013 In the spring, ADEQ completed the Landfill Operable Unit RI field work. A Draft Landfill Operable Unit RI Report was issued for public comment in November.
- 2014 In March, ADEQ completed and issued for public comment the Landfill Operable Unit Proposed RO Report.
- 2017 In June, the FS was finalized, and in August, a notice of availability was released.
- 2019 A soil remediation system was installed at the Broadway South Landfill in April. An Operation & Maintenance Plan for groundwater treatment was released for a 30-day public comment period on April 22, 2019, and the Proposed Remedial Action Plan was made available and opened for a 90-day public comment period on June 10, 2019.
- 2020 The In-Situ Chemical Oxidation groundwater treatment system at the Broadway North Landfill and the SVE system at the Broadway South Landfill continued operation in 2019 and 2020. The Record of Decision is currently being drafted.

2021            Rebound testing indicated that the SVE system objectives had been achieved. In June, the operation of the SVE system was discontinued. Removal of the system and demolition of supporting infrastructure began in October and was completed in February 2022.

## ***Appendix C***

### ***Targeted Communities***

#### ***Neighborhood Associations***

**Broadway Northeast Neighborhood Association** 520-886-7622  
Gerry T. Snell

**El Gheko Neighborhood Association** No phone provided  
Rebecca Dominguez; [newelgheko@gmail.com](mailto:newelgheko@gmail.com)  
[www.neighborhoodlink.com/El\\_Gheko](http://www.neighborhoodlink.com/El_Gheko)

**Harold Bell Wright Estates Neighborhood Association** No phone provided  
John Utz; [porourke6@cox.net](mailto:porourke6@cox.net)

#### ***Schools***

**Hudlow Elementary School** 520-731-4800  
502 North Caribe Avenue, Tucson, AZ 85710  
[hudlowes.tusd1.org](http://hudlowes.tusd1.org)

**Tucson Unified School District Main Office** 520-225-6000  
1010 East Tenth Street, Tucson, AZ 85719  
[central.tusd1.org](http://central.tusd1.org)

#### ***Vulnerable Population Centers***

**The Bradford Home** 520-822-8416  
710 North Mann Avenue, Tucson, AZ 85710  
[www.thebradfordhomeaz.com](http://www.thebradfordhomeaz.com)

**Broadway Proper Retirement Community** 520-296-3238  
400 South Broadway Place, Tucson, AZ 85710  
[stellarliving.com/communities/broadway-proper](http://stellarliving.com/communities/broadway-proper)

**Lovecare Co.** 520-296-6522  
7022 East Edgemont Street, Tucson, AZ 85710

**Tucson Unified School District #1- Hudlow Title I PACE**

520-731-4800

502 North Caribe Avenue, Tucson, AZ 85710

[childcarecenter.us/provider\\_detail/tusd\\_1\\_hudlow\\_title\\_i\\_pace\\_tucson\\_az](http://childcarecenter.us/provider_detail/tusd_1_hudlow_title_i_pace_tucson_az)

**Villa Campana Rehabilitation Hospital LLC**

520-296-6100

6651 East Carondelet Drive, Tucson, AZ 85710

[www.havenhealthaz.com/locations/saguaro-valley/?utm\\_source=google&utm\\_medium=organic&utm\\_campaign=GMB&utm\\_term=Haven%20Health%20Saguaro%20Valley](http://www.havenhealthaz.com/locations/saguaro-valley/?utm_source=google&utm_medium=organic&utm_campaign=GMB&utm_term=Haven%20Health%20Saguaro%20Valley)

## ***Appendix D***

### **Elected Officials**

As of the publication of this community involvement plan, the community involvement area for the Broadway-Pantano WQARF Site falls under Tucson Ward 6, Pima County Districts 2 and 4 and Arizona Legislature District 10.

<b>Tucson City Council</b>	<b>Pima County Board of Supervisors</b>	<b>Arizona State Senators</b>	<b>Arizona State Representatives</b>
255 West Alameda Street, 10 <sup>th</sup> Floor Tucson, AZ 85701 520-791-4213 <a href="http://www.tucsonaz.gov/city-government">www.tucsonaz.gov/city-government</a>	33 North Stone Avenue, 11 <sup>th</sup> Floor Tucson, AZ 85701 <a href="http://webcms.pima.gov/government/board_of_supervisors">webcms.pima.gov/government/board_of_supervisors</a>	1700 W. Washington St Phoenix, AZ 85007 <a href="http://azleg.gov/memberroster">azleg.gov/memberroster</a>	1700 W. Washington St Phoenix, AZ 85007 <a href="http://azleg.gov/memberroster">azleg.gov/memberroster</a>
<b>Mayor</b> Regina Romero 520-791-4201 <a href="mailto:Mayor.Romero@tucsonaz.gov">Mayor.Romero@tucsonaz.gov</a>	<b>District 2 Councilmember</b> Matt Heinz 520-724-2702 <a href="mailto:Distict2@pima.gov">Distict2@pima.gov</a>	<b>District 10 Senator</b> Stephanie Stahl Hamilton Room 313 602-926-3279 <a href="mailto:sstahlhamilton@azleg.gov">sstahlhamilton@azleg.gov</a>	<b>District 10 Representative</b> Morgan Abraham Room 323 602-296-5178 <a href="mailto:mabraham@azleg.gov">mabraham@azleg.gov</a>
<b>Ward 6 Councilmember</b> Steve Kozachik 520-791-4601 <a href="mailto:Ward6@tucsonaz.gov">Ward6@tucsonaz.gov</a>	<b>District 4 Councilmember</b> Steve Christy 520-724-8094 <a href="mailto:District4@pima.gov">District4@pima.gov</a>		<b>District 10 Representative</b> Domingo DeGrazia Room 322 602-926-3153 <a href="mailto:Ddegrazia@azleg.gov">Ddegrazia@azleg.gov</a>
<b>City Manager</b> Michael Ortega 520-791-4204 <a href="mailto:citymanager@tucsonaz.gov">citymanager@tucsonaz.gov</a>			

## ***Appendix E***

### ***Community Advisory Board***

The Broadway-Pantano WQARF Site Community Advisory Board (CAB) was established in November, 1999. The CAB for the Broadway-Pantano WQARF Site is currently inactive. According to Arizona Revised Statutes § 49-289.03, the minimum number of people required to establish a CAB is five individuals. At this time, there are less than five members on the Board. The CAB may be reinstated if more applications are received.



## ***Appendix F***

### **Media Outlets**

The community may use any media outlets to share information on the Broadway-Pantano WQARF Site. ADEQ will publish all Site-related public notices in *The Daily Territorial*. All future public notices for the Broadway-Pantano WQARF Site can be found by searching [arizonapublicnotices.com](http://arizonapublicnotices.com).

#### ***Newspapers and Magazine***

**Arizona Daily Star** 520-573-4292  
PO Box 26887, Tucson, AZ 85726  
[tucson.com](http://tucson.com)

**The Arizona Daily Wildcat** 520-621-3425  
888 North Euclid Avenue, Room 131, Tucson, AZ 85721  
[www.wildcat.arizona.edu](http://www.wildcat.arizona.edu)

**BizTucson** 520-299-1005  
4729 East Sunrise Drive, Suite 505, Tucson, AZ 85718  
[biztucson.com](http://biztucson.com)

**The Daily Territorial** 520-299-1200  
100 North Stone Avenue, Suite 300, Tucson, AZ 85701  
[about.dailyterritorial.com](http://about.dailyterritorial.com)

**Desert Times, Explorer Newspaper, Inside Tucson Business and Tucson Weekly** 520-797-4384  
7225 North Mona Lisa Road, Suite 125, Tucson, AZ 85741  
[www.tucsonlocalmedia.com/deserttimes](http://www.tucsonlocalmedia.com/deserttimes)

**Tucson Citizen<sup>9</sup>** No Phone Number  
[tucsoncitizen.com](http://tucsoncitizen.com)

**Desert Leaf** 520-881-5188  
3978 East Fort Lowell Road, Tucson, AZ 85712  
[www.desertleaf.com](http://www.desertleaf.com)

<sup>9</sup>The *Tucson Citizen* ended its print edition in 2009, then became an online compendium for blogs until February 2014. The *Tucson Citizen* remains an archive as a community resource.

**The Arizona Business Gazette and The Arizona Republic**

200 East Van Buren Street, Phoenix, AZ 85004

[www.azcentral.com/business](http://www.azcentral.com/business)

602-444-8000

## **Radio**

<b>Arizona Public Media (KUAT, KUAZ)</b> PO Box 2100067, Tucson AZ 85721 <a href="http://www.azpm.org">www.azpm.org</a>	520-621-1480
<b>Cumulus Media (KCUB, KHYT, KSZR, KTUC)</b> 575 West Roger Road, Tucson, AZ 85705 <a href="http://www.cumulusmedia.com">www.cumulusmedia.com</a>	520-887-1000
<b>KXCI Community Radio (KXCI)</b> 220 South 4 <sup>th</sup> Avenue, Tucson, AZ 85701 <a href="http://kxci.org">kxci.org</a>	520-209-1965
<b>Cochise Broadcasting (KNXN)</b> 7604 North LaCholla Boulevard, Tucson, AZ 85741	520-209-1965
<b>Family Life Radio (KQTH)</b> PO Box 35300, Tucson, AZ 85740 <a href="http://www.myflr.org">www.myflr.org</a>	800-776-1070
<b>Lotus Communications Corp (KTKT, KLPX, KFMA, KCMT, KMXZ, KFFN, KPLX)</b> 3871 North Commerce Drive, Tucson AZ 85705 <a href="http://www.lotuscorp.com">www.lotuscorp.com</a>	520-407-4500
<b>iHeartMedia Inc. (KIIM, KMIY, KNST, KOHT, KRQQ, KTZR, KYMD, KXEW)</b> 3202 North Oracle Road, Tucson, AZ 85705 <a href="http://www.iheart.com">www.iheart.com</a>	520-326-1200
<b>Bustos Media (KVOI)</b> 3222 South Richey Avenue, Tucson, AZ 85713 <a href="http://bustosmedia.com">bustosmedia.com</a>	520-790-2440

## ***Television***

<b>KFTU-CA Channel 25 (Univision)</b> 2301 North Forbes Boulevard, Suite 103, Tucson, AZ 85745 <a href="http://www.univision.com/temas/tucson">www.univision.com/temas/tucson</a>	520-204-1270
<b>KGUN Channel 9 (ABC)</b> 7280 East Rosewood Street, Tucson, AZ 85710 <a href="http://www.kgun9.com">www.kgun9.com</a>	520-722-5486
<b>KHRR Channel 40 (Telemundo)</b> 283 North Stone Avenue, Suite 101, Tucson, AZ 85701 <a href="http://www.telemundoarizona.com">www.telemundoarizona.com</a>	520-396-2618
<b>KMSB Channel 11 (Fox)</b> 7831 North Business Park Drive, Tucson, AZ 85743	520-770-1123
<b>KOLD Channel 13 (CBS)</b> 7831 North Business Park Drive, Tucson, AZ 85743 <a href="http://www.kold.com">www.kold.com</a>	520-744-1313
<b>KVOA Channel 4 (NBC)</b> PO Box 5188, Tucson, AZ 85703 <a href="http://www.kvoa.com">www.kvoa.com</a>	520-792-2270
<b>KUDF-LP Channel 14 (Azteca America Tucson)</b> 2919 East Broadway Boulevard, Tucson, AZ 85716 <a href="http://aztecaamericatucson.com">aztecaamericatucson.com</a>	520-881-0334
<b>KTTU Channel 18</b> 7831 North Business Park Drive, Tucson, AZ 85743	520-770-5434
<b>KUAT/KUAS (PBS)</b> University of Arizona, PO Box 210067, Tucson, AZ 85721 <a href="http://tv.azpm.org">tv.azpm.org</a>	520-621-5828
<b>KUVE (Univision 52)</b> 2301 North Forbes Boulevard, Tucson, AZ 85745 <a href="http://www.univision.com/temas/tucson">www.univision.com/temas/tucson</a>	520-204-1270

**KWBA (The CW)**

520-722-5486

7280 East Rosewood Street, Tucson, AZ 85710

**Tucson 12 (TV12)**

520-791-2582

124 East Broadway Boulevard, Tucson, AZ 85701

[www.tucsonaz.gov/info/tv12](http://www.tucsonaz.gov/info/tv12)

## ***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 Broadway-Pantano WQARF Site.

#### ***State of Arizona***

**Department of Health Services:** Environmental Health 602-542-1025  
150 N 18th Ave Phoenix, AZ 85007 [azdhs.gov/environmentalhealth](http://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](http://new.azwater.gov/permitting-wells)

#### ***City of Tucson***

**Housing and Community Development Department** 520-791-4171  
310 North Commerce Park Loop, Tucson, AZ 85745 [www.tucsonaz.gov/housing-and-community-development](http://www.tucsonaz.gov/housing-and-community-development)

**Environmental Services** 520-791-4155  
Price Service Center, 4004 South Park Ave, Bldg 1, Tucson, AZ 85714 [www.tucsonaz.gov/environmental-services](http://www.tucsonaz.gov/environmental-services)

**Tucson Water Department** 520-791-3242  
310 West Alameda Street, Tucson AZ 85701 [www.tucsonaz.gov/water](http://www.tucsonaz.gov/water)

#### ***Other***

**Agency for Toxic Substances and Disease Registry – Region 9** 800-232-4636  
75 Hawthorne St, Ste 9410 M/S:HHS-1, San Francisco, CA 94105 [atsdr.cdc.gov](http://atsdr.cdc.gov)

**Arizona Association of Realtors:** Real Estate 602-248-7787  
Seller Disclosures  
255 E Osborn Rd #200, Phoenix, AZ 85012  
[aaronline.com/wp-content/uploads/2017/10/Residential-Sellers-Property-Disclosure-Statement-SPDS\\_REV\\_01Oct2017.pdf](http://aaronline.com/wp-content/uploads/2017/10/Residential-Sellers-Property-Disclosure-Statement-SPDS_REV_01Oct2017.pdf)

**Pima County Health Department**

3950 South Country Club Rd, Ste 100, Tucson,  
AZ 85714

520-724-7770

[webcms.pima.gov/government/health\\_department](https://webcms.pima.gov/government/health_department)

**Tucson Association of Realtors:** Real Estate

Seller Disclosures

2445 North Tucson Blvd, Tucson, AZ 85716

520-327-4218

[www.tucsonrealtors.org](https://www.tucsonrealtors.org)

## ***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 Broadway-Pantano WQARF Site.

<b>Purchaser Name</b>	<b>Parcel(s) Number</b>	<b>Public Notice Date</b>	<b>Effective Date</b>
Home Depot USA, Inc.	133-23-110C	3/23/2002	7/3/2002
Home Depot USA, Inc.	133-23-110C 133-23-156 133-23-157	8/30/1999	12/8/1999
HSL Gateway Center Block 10, LLC	133-23-1570	6/19/2009	7/16/2009
HSL Gateway Center Block 5B, LLC	133-23-1510	6/19/2009	7/16/2009
HSL Gateway Center Block 6A, LLC	133-23-1520	6/19/2009	7/16/2009
HSL Gateway Center Block 6B, LLC	133-23-1530	6/19/2009	7/16/2009
HSL Gateway Center Block 7, LLC	133-23-1540	6/19/2009	7/16/2009
HSL Gateway Center Block 8, LLC	133-23-1550	6/19/2009	7/16/2009
HSL Gateway Center Block 9, LLC	133-23-1560	6/19/2009	7/16/2009
HSL Gateway Center Common Area, LLC	133-23-1580 133-23-1590	6/19/2009	7/16/2009
SI Hotel Properties, LLC	133-23-1500	12/17/2008	2/24/2009



# ***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 Broadway-Pantano WQARF Site as of August 2022.

<b>Party Name</b>	<b>Date Consent Decree Signed by Judge</b>	<b>Public Notice Date</b>
ABB, Inc., Combustion Engineering, Inc., and Textron, Inc.	2/21/2012	11/18/2010
Baldor Electric Company	2/21/2012	11/23/2010
Don Mackey Oldsmobile-Cadillac, Inc.	2/21/2012	11/20/2010
Dunn - Edwards Corporation	2/21/2012	11/22/2010
Durodyne, Inc.	2/21/2012	11/23/2010
Fersha Corporation	2/21/2012	11/20/2010
Fluor Enterprises, Inc.	2/21/2012	11/24/2010
General Dynamics Corporation	2/21/2012	12/2/2010
Holmes Tuttle Ford, Inc.	7/13/2016	12/2/2010
Pima County	8/30/2002	10/30/2000
Pima County Community College District	2/21/2012	11/20/2010
R.E. Darling Co., Inc.	2/3/2011	11/29/2010
Rollings Corporation	2/21/2012	11/21/2010
Rowe Enterprises, Inc.	2/21/2012	11/24/2010
Sterling Real Estate Investment, L.L.C.	3/6/2000	1/25/2000
Texas Instruments Incorporated	2/21/2012	11/19/2010
The Ashton Company, Inc.	2/21/2012	11/22/2010
The Goodyear Tire & Rubber Company and Lockheed Martin Corporation	2/21/2012	11/16-17/10
Tucson Dodge, Inc.	2/21/2012	11/24/2010
Tucson Foundry & Manufacturing, Inc., and Industrial Pipe Fittings, LLC	2/21/2012	11/19/2010
University of Arizona (administrative settlement signed by ADEQ Waste Programs Division Director)	4/10/2020	4/27/20
Warner Propeller and Governor Co., L.L.C.	2/21/2012	11/23/2010

## **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 (µg/L).

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

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

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

**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.

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

**In-Situ Chemical Oxidation:** A technique used in groundwater remediation to lower the concentration of targeted contaminants by introducing chemical oxidizers directly into the groundwater.

**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 reasonable foreseeable uses of land and waters of the state; and obtains and evaluates any information necessary for identification and comparison of alternative remedial actions.

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

**Remediation:** 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 (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.

**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.