



Miracle Mile

Water Quality Assurance Revolving Fund Site
Tucson, Arizona

Community Involvement Plan



Flowing Wells Irrigation District Water Treatment System

February 2020
ADEQ Document No. EQR-20-03

Table of Contents

Community Involvement Plan – Introduction	1
A. WQARF Process	2
B. Designated Spokesperson	iv
C. Information Repository and Website	iv
Chapter 1 – Site Overview	5
Chapter 2 – Community Profile	7
A. Community Involvement Area	7
B. Community Demographics	8
Chapter 3 – Community Issues and Concerns	11
A. Environmental and Health Concerns	11
B. Outreach and Other Concerns	12
C. Response to Community Issues and Concerns	12
Chapter 4 – Community Involvement Action Plan	13
A. Community Involvement Action Summary – Required Activities.....	13
B. Community Involvement Action Summary – Communication Techniques.....	19
C. Other Resources and Contacts	23
Appendices.....	25
Appendix A – Site History	25
Appendix B – Targeted Communities.....	29
Appendix C – Local and State Elected Officials.....	31
Appendix D – Community Advisory Board Members	33
Appendix E – Media Outlets	35
Appendix F – Related Agencies and Contact Information.....	37
Acronyms and Glossary of Terms.....	39

Disclaimer: All telephone numbers, email addresses, and contact names are subject to change after the date of this publication. The statistical data provided in the community demographics section is approximated based on information provided by the 2010 U.S. Census.

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Community Involvement Plan – Introduction

The Arizona Department of Environmental Quality (ADEQ) is committed to involving citizens in the cleanup of contaminated sites in Arizona per the Water Quality Assurance Revolving Fund (WQARF) program. Created under the Environmental Quality Act of 1986 to support hazardous substance cleanup efforts in the state, WQARF is dependent upon legislative appropriations, cost recovery from responsible parties, corporate income taxes, and special fees for its funding.

The WQARF program identifies sites that are in significant need of remediation, and subsequently, adds them to the WQARF Registry. Sites on the WQARF Registry receive primary consideration for the distribution of funds for investigation and cleanup efforts. WQARF sites are assigned a numeric score based on several factors, including: contaminants present, the location of the contaminants, the number of people who may be affected by the contaminants, etc. These scores are used to help determine relative risk at the site; however, scoring does not indicate a direct risk to humans and/or the environment.

The Miracle Mile site, located in northwest area of Tucson in Pima County, Arizona, was placed on the WQARF Registry in September 1998 with a score of 62 out of 120.

Arizona Revised Statutes (A.R.S.) § 49-287.03(B) and § 49-289.03, as well as Arizona Administrative Code (A.A.C.) R18-16-404 specify that a community involvement plan (CIP) be developed for each site on the WQARF Registry. The purpose of the CIP is to provide a process for two-way communication between ADEQ and the public, in order to keep the community informed regarding the progress of the site investigation and remediation. The CIP will accomplish this goal through the implementation of the following steps::

1. Ensure public access to project information in a timely manner;
2. Identify a Community Involvement Area (CIA) and provide opportunities for community members and other stakeholders to participate in the decision-making process associated with the environmental investigation and remediation of the site;
3. Establish a Community Advisory Board (CAB);
4. Designate an ADEQ spokesperson; and
5. Develop a plan for distributing site information to residents within the CIA.

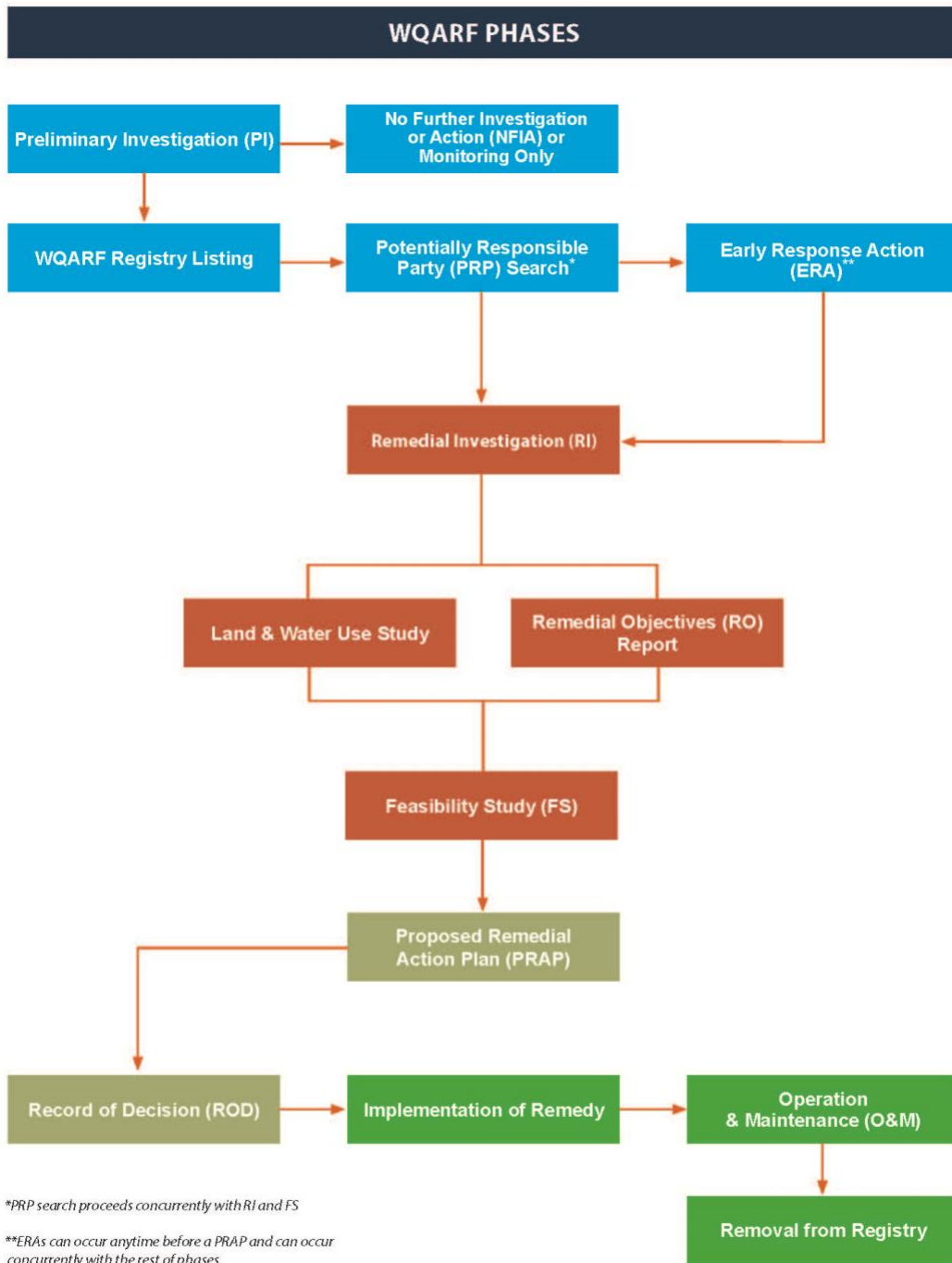
This CIP describes how ADEQ will implement the aforementioned steps for these WQARF sites. ADEQ community involvement staff will review and update this plan on a yearly, or as needed, basis, considering site-specific developments and public health and environmental impacts, as well as taking public comments, CAB input, and community concerns into account.

A. WQARF Process

The goal of the WQARF process is to clean up sites with groundwater and/or soil contamination, as a means to ensure that human health and the environment are protected. The WQARF process uses a step-by-step approach to thoroughly investigate contaminated sites and determine the best remedy for achieving site cleanup. The length of these processes and methods of cleanup for each WQARF site vary per site.

For sites where the contamination has minimal impact to humans, cleanup may be achieved by restricting land and/or water use and allowing the contamination to dissipate naturally. For this method, regular monitoring of the groundwater or soil would occur to ensure that the contamination continues to decrease. For sites where the contamination may impact human health, the cleanup method may involve restricting land and water use, actively treating or filtering the groundwater to remove contamination, digging up any contaminated soil and removing from the area, bioremediation/other in situ methods, or a combination of these actions.

The following WQARF process flow chart depicts each phase in the WQARF process from the initial investigation of a site that is suspected of having contamination, to the implementation of the cleanup method (also known as the remedy), to eventual removal of the site from the WQARF Registry upon satisfactory cleanup. The WQARF process flow chart is color coded for ease of reference and corresponds to the Community Involvement Action Summary table in Chapter 4, where required community involvement activities per given WQARF phase are discussed. Detailed definitions of each WQARF phase can be found in the glossary at the end of this CIP.



B. Designated Spokesperson

A designated spokesperson will inform the public of upcoming events, ensure that the CIP is implemented according to schedule, and act as liaison between ADEQ and the community. Additionally, the spokesperson will determine methods for personal contact, arrange for the availability of a translator at meetings as needed, and coordinate the recording of presentations. For further information regarding the Miracle Mile WQARF site, please contact the designated spokesperson at the following:

**Community Involvement Coordinator
ADEQ**

1110 West Washington Street, 6th Floor
Phoenix, AZ 85007
(602) 771-4410

Or

(800) 234-5677, Ext. 6027714410
Fax: (602) 771-4272

View Community Involvement Contacts Online:

<http://www.azdeq.gov/node/337>

C. Information Repository and Website

An information repository of existing public documents pertaining to the Miracle Mile WQARF site is available for review both online and in person. Documents found in the repository include the WQARF Site Registry Report, CIP, and Final Remedial Investigation (RI) Report, as well as site fact sheets, public notices, and materials from the CAB meetings. Technical documents relating to future milestones in the investigation will be made available to the public as they are completed. Interested parties can review site information by visiting the information repository online or in person as follows:

Online

<https://azdeq.gov/node/1012>

In Person

ADEQ Records Center
1110 West Washington Street
Phoenix, AZ 85007

Or

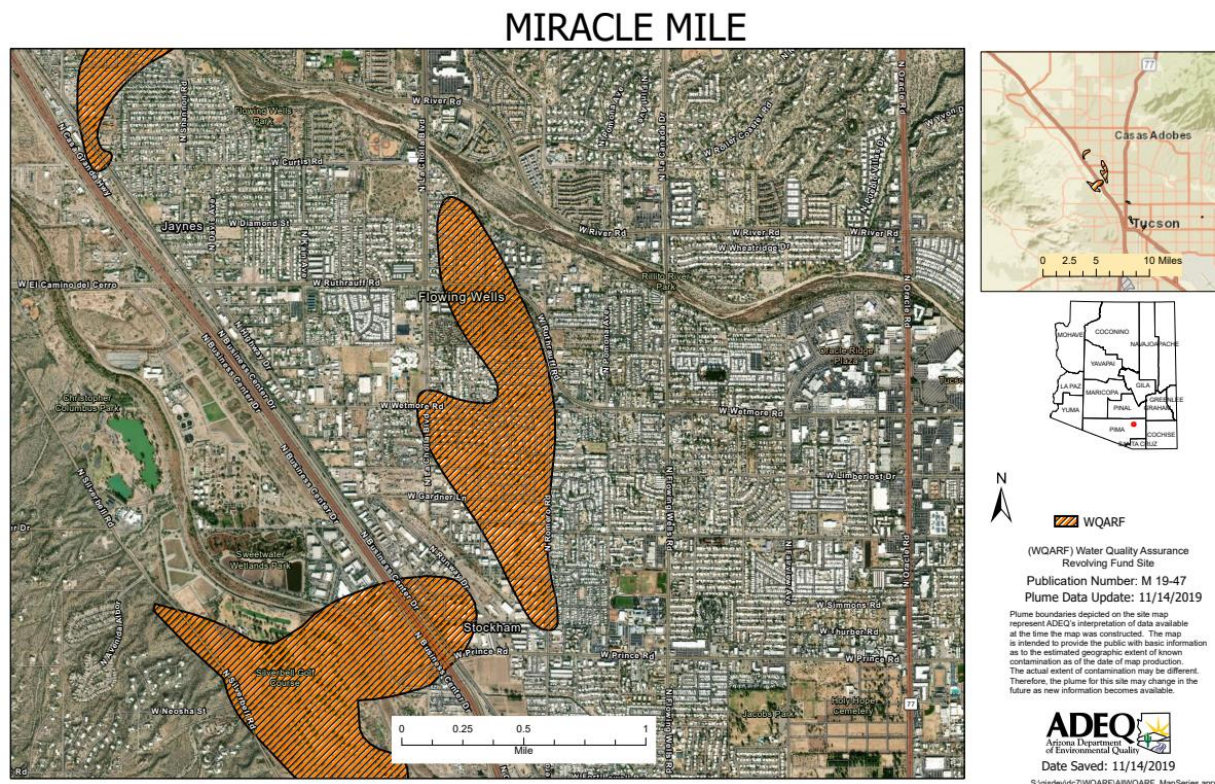
(602) 771-4380; (800) 234-5677, Ext. 6027714380
(Please call to make an appointment.)

To make alternate arrangements to review documents in person at a location nearest you, contact the ADEQ Community Involvement Coordinator.

Chapter 1 – Site Overview

The Miracle Mile WQARF site is located in a mixed residential and commercial area in northwest Tucson, Arizona, and is bounded approximately by Curtis Road to the north, Prince Road to the south, Pomona Road to the east, and La Cholla Boulevard to the west. In September 1998, the Miracle Mile site was placed on the WQARF Registry with an eligibility and evaluation score of 62 out of a possible 120. The major factor leading to the site scores was the presence of contaminants in groundwater at levels exceeding Arizona Aquifer Water Quality Standards (AWQS). Again, scores are used to help determine relative risk at the site and do not necessarily mean that there is a direct risk to humans or the environment.

Miracle Mile WQARF Site – Tucson, Arizona



The contaminants of concern at the site are trichloroethene (TCE) and chromium in groundwater, and hexavalent chromium in soil. Other historical contaminants of potential concern are 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), tetrachloroethene (PCE), and nitrates. These contaminants have not consistently been detected above Arizona AWQS.

In June 2013, the Final Miracle Mile RI Report was issued and the Feasibility Study (FS) was initiated. ADEQ began addressing RI data gaps. A local water provider was operating an ADEQ-funded wellhead treatment system as an early response action (ERA) to remove TCE from early 2007 to mid-2018. This system has been placed on bypass as concentrations of TCE have fallen below regulatory levels.

By 2018, all RI data gaps were addressed; additional boreholes and wells were installed to aid in delineating the lateral extent of the TCE groundwater plume; a soil vapor extraction (SVE) pilot test was conducted; the shallow soil-gas plume was defined; and indoor air samples were collected where soil-gas results indicated. In 2019, ADEQ installed a wellhead treatment system on a small water provider's drinking water well and the FS report was finalized.

For more detailed information about the history of the Miracle Mile WQARF site, please refer to Appendix A (Site History) of this CIP.



Flowing Wells Irrigation District Water Tank

Chapter 2 – Community Profile

A. Community Involvement Area

ADEQ has established a CIA for each site on the WQARF Registry per A.R.S. § 49-289.02(A) and (B). A CIA is established to designate a geographic area to which mass mailings will be delivered. CIA boundaries are determined based on site-specific characteristics such as the affected media (i.e., soil, surface water, or groundwater), exposure routes, proximity to residential areas and public facilities, and level of community interest. The CIA may change as new information is received..

The map below illustrates the 2019 CIA for the Miracle Mile WQARF site.



A. Community Demographics

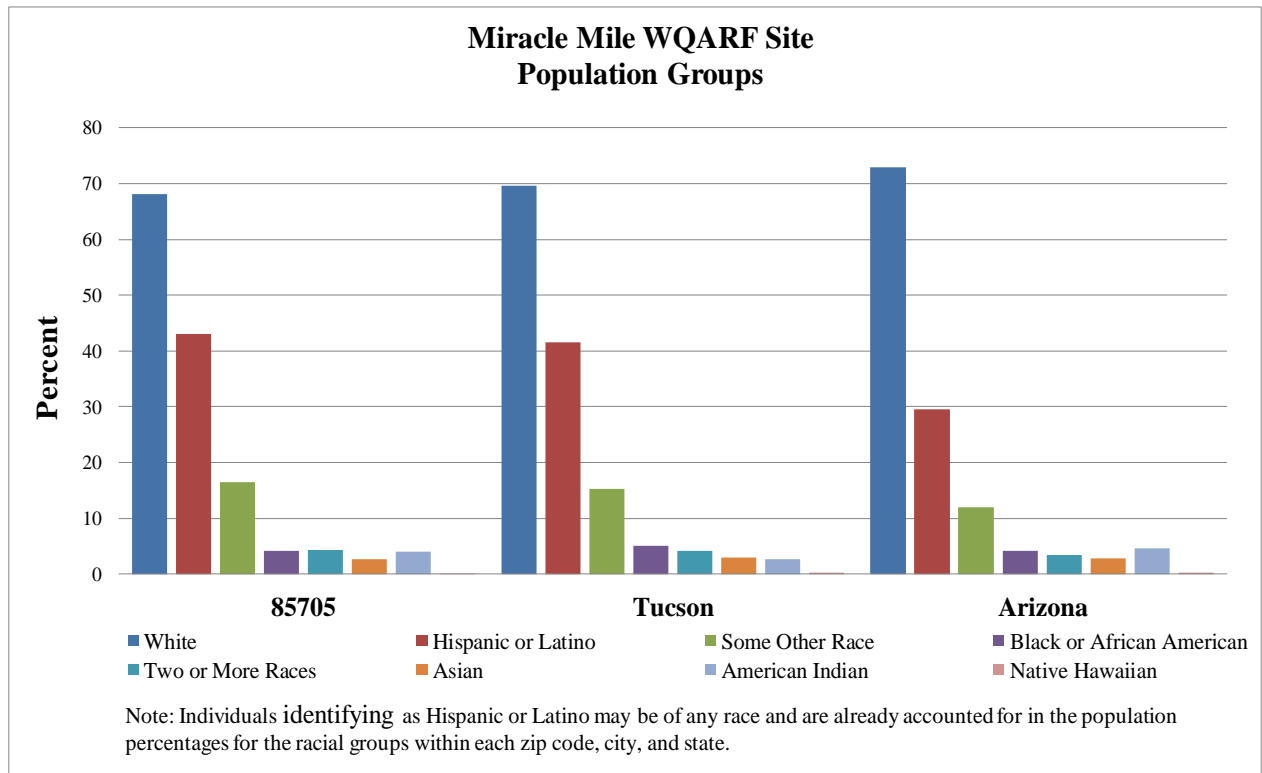
In 2010, the population of Tucson, the second most populous city in Arizona, was 520,116. The CIA boundary for the Miracle Mile WQARF site previously encompassed a single zip code (85705) and was estimated to contain approximately 24,346 households. The CIA has been updated and now encompasses zip codes 85704 and 85714 as well. The Miracle Mile WQARF site is located in both City of Tucson and Pima County boundaries and consists of a mixture of commercial businesses, light industrial businesses, warehouses, and residential neighborhoods.

According to the 2010 U.S. Census data, the total population for the one zip code previously encompassed by the CIA was 57,521, with an average household size of 2.33 persons. Residents of the area consisted of more homeowners (44.3%) than renters (55.7%). The median resident age is 32.8, which is younger than the median age for Arizona resident as a whole (35.9).

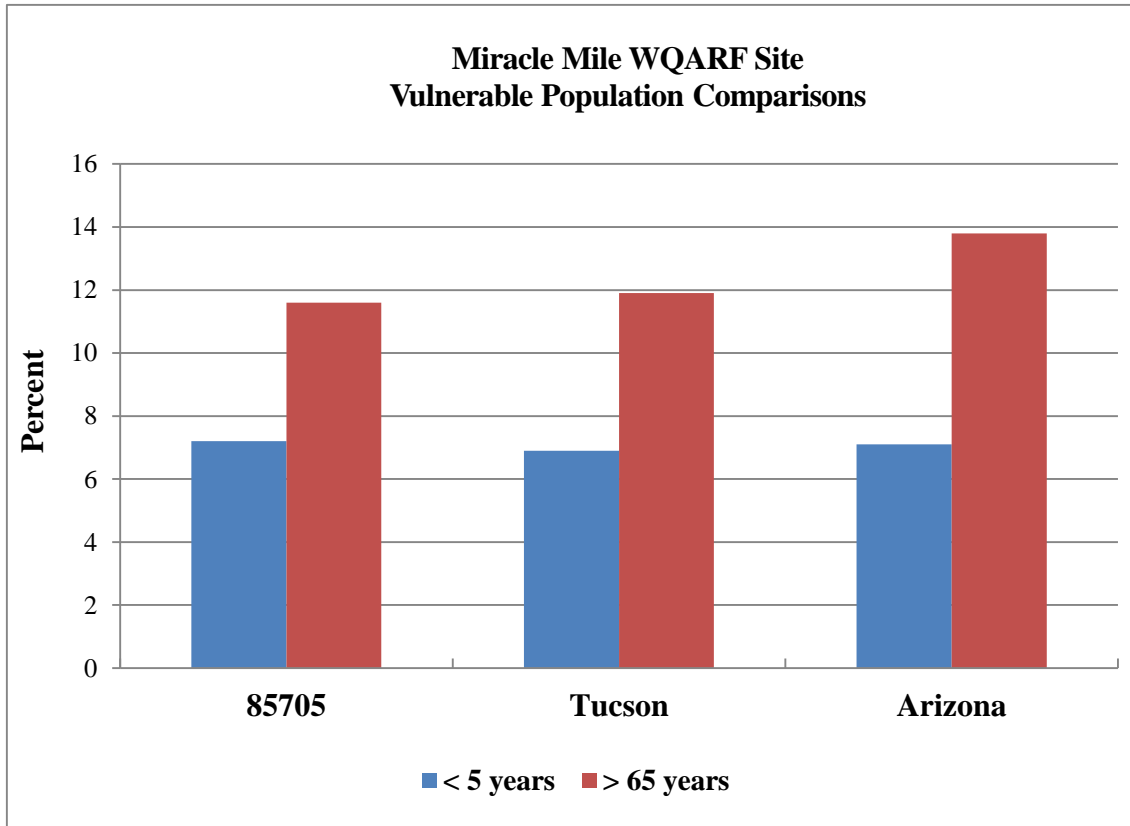
As represented in the following Population Groups graph, the U.S. Census data demonstrates that residents in the Miracle Mile WQARF site CIA identify themselves as approximately 68.2% White; 16.4% Some Other Race; 4.3% Two or More Races; 4.2% Black or African American; 4.0% American Indian or Alaska Native; 2.7% Asian; and 0.2% Native Hawaiian. According to the U.S. Census Bureau, people of Hispanic or Latino descent may be of any race. People identifying themselves as Hispanic or Latino within the Miracle Mile WQARF site CIA comprised 43.0% of the population, which is higher than the 39.6% average Hispanic and Latino population for the state of Arizona. The higher-than-average Hispanic and Latino population may indicate the need for Spanish translation services, which ADEQ will take into consideration along with community feedback and state guidelines.

All percentages provided in the following Population Groups graph and the previous two paragraphs are median averages of the 2010 U.S. Census data for the zip codes within the Miracle Mile WQARF site CIA.

Although U.S. Census data has been chosen as the primary grounds for establishing baseline community demographics, ADEQ is aware of the limitations of using this data. The data is only as accurate as the individuals that provided the information at the time at which the information was collected. ADEQ is aware that some populations may be inadequately represented by U.S. Census data and welcomes additional feedback from the community.



ADEQ also looks at the community as a whole, with an emphasis on the percentage of people who are unusually sensitive to contaminants. These people are those who are under the age of 5 or over the age of 65, as well as those with health issues. The Vulnerable Population Comparisons graph that follows is based on 2010 U.S. Census data and presents the percentages of age-sensitive populations within the Miracle Mile WQARF site CIA.



For further demographic information regarding the CIA, please refer to the listing of neighborhood associations, community schools, and vulnerable population centers in Appendix B, and local and state elected officials in Appendix C.

Chapter 3 – Community Issues and Concerns

In order to better understand the community and its concerns, ADEQ conducted telephone interviews with community and CAB members who have lived or worked in the area surrounding the Miracle Mile WQARF site. The CAB members are listed in Appendix D. The following is a summary of their common concerns involving the environment, health, and agency outreach activities.

A. Environmental and Health Concerns

All of the interviewees knew that the Miracle Mile site is on the WQARF Registry. Most of the interviewees stated that they were familiar with the site contaminants, though only two interviewees specifically identified TCE or chromium as the contaminants. The majority of interviewees first learned of the site from an ADEQ mailing. One interviewee learned of the site from a co-worker, and another interviewee who had worked for a local water company learned of the site from a reporter.

Environmental and health concerns expressed by the interviewees resulted in two common concerns. One concern was that they had not been informed about the latest sampling results, and did not know whether the contamination was increasing or decreasing, where it was moving, and how fast. The other common concern was the length of time it was taking to investigate the site and whether ADEQ was committing sufficient resources to the investigation, given their impression that little had been accomplished for such a long investigation.

Specific questions asked by the interviewees were as follows:

- Is ADEQ seeing higher or lower concentrations of contaminants in the wells?
- How much contamination currently exists?
- What areas of the site still have high levels of contamination?
- How fast is the contamination moving?
- Does ADEQ have the resources (funding) to address contamination and thoroughly investigate potential sources of contamination?
- Are there any advances in remediation technology that could be useful for site cleanup?
- What is the timetable for the site cleanup?

All interviewees noted that the community was either unaware of the WQARF site or had become apathetic toward it, a possible result of the long investigation.

B. Outreach and Other Concerns

Interviewees provided the following feedback and suggestions on current and future outreach pertaining to the Miracle Mile WQARF site:

- Interviewees stated that they received information regarding the WQARF site primarily from U.S. Mail and email notices.
- All interviewees preferred U.S. Mail and email as the methods of communication between ADEQ and community.
- Suggestions for other methods of communication included:
 - Telephone calls, and
 - Newsletters (Metro Water or City Council newsletters).
- One interviewee stated that technical information provided on the WQARF site has become harder to manage because of the amount of data. Another interviewee noted that the community could benefit from a presentation on basic hydrology.
- Interviewees that were aware of ADEQ's online information repository said that it was a good way to post information, but that many people were still not aware of it. Former information repositories in Tucson were noted as good local repositories, but one interviewee was concerned that ADEQ was asking people to review records at the ADEQ Records Center in Phoenix.

Two interviewees who served on the CAB stated that, aside from environmental or health concerns, a site-related concern was attracting community members to the CAB meetings and getting the community involved in the site cleanup process. One CAB member stated that the CAB meetings are for people already interested in the site and willing to make an effort to understand the information being presented. Another interviewee noted that the CAB was skewed to business interests and not the general community. CAB members interviewed noted that there was high turnover on the CAB and the infrequent meetings held for this site was a source of frustration. One CAB member noted that the CAB is supposed to develop community interest and encourage public participation, but that it has been a constant struggle to do that at this site.

C. Response to Community Issues and Concerns

ADEQ uses the information gathered from community interviews, CAB and public meetings, and direct contact to ensure that future outreach activities and materials are able to address community questions and concerns, as well as keep the community informed of WQARF site activities. Additionally, community feedback informs ADEQ outreach practices and allows the communication techniques noted in Chapter 4, Section B to be tailored to the specific needs of the community.

Chapter 4 – Community Involvement Action Plan

In addition to providing the framework for the state to investigate and clean up contaminated sites, the WQARF program also requires ADEQ to involve the community throughout the cleanup process. The following Community Involvement Action Summary table describes the required community involvement activities according to each WQARF phase and illustrates where the Miracle Mile site is in the WQARF process at the time of this writing. This summary is followed by a description of the communications vehicles and techniques available for use. Multiple techniques to communicate with and educate the public may be used throughout the process of remediating the WQARF site.

A. Community Involvement Action Summary – Required Activities

The following Community Involvement Action Summary table describes the required community involvement actions for the Miracle Mile WQARF site and notes what actions have been completed to date.

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Community Involvement Action Summary				
WQARF Phase	Mandated ADEQ Community Involvement Activity (see Chapter 4, B for a detailed description of applied communications techniques described herein)	Statute (A.R.S) and Rule (A.A.C) References	Activity to Date ¹	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, March 1998 Public notice, <i>Arizona Daily Star</i> , March 1998	✓
WQARF Registry Listing	Following the listing of a site on the WQARF Registry, ADEQ will: <ul style="list-style-type: none"> Establish a preliminary Community Involvement Area (see Chapter 2, Section A) within 90 days of site listing on the WQARF Registry. Provide written notice to the community on hazardous substance contamination in the area, the actual and potential risks and routes of exposure, possible health effects, and the opportunity to join the site mailing list. Identify ADEQ personnel to contact for further information. 	A.R.S. § 49-289.02	Notice to community and development of a Community Involvement Area occurred in December 1998*	✓
	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, March 1999	✓
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, a description of known site conditions, and 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 conduct 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 fieldwork 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>	A.A.C. R18-16-404 A.A.C. R18-16-405(D)(2) A.A.C. R18-16-405(E) A.A.C. R18-16-405(G)	Past activities associated with Miracle Mile Interim Remedial Action are currently being researched	

¹ Dates marked with an asterisk are approximate.

Community Involvement Action Summary				
WQARF Phase	Mandated ADEQ Community Involvement Activity (see Chapter 4, B for a detailed description of applied communications techniques described herein)	Statute (A.R.S) and Rule (A.A.C) References	Activity to Date ¹	Complete
Remedial Investigation ²	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. ³ 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. R18-16-403(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, February 2000*	✓
	Establish a selection committee to choose Community Advisory Board members for the site. The selection committee shall consist of the following number of people from each organization: <ul style="list-style-type: none"> ADEQ: 1 Potentially Responsible Party: 1 Local Official : 1 Local Community: 2 	A.R.S. § 49-289.03(D)	Selection committee, August 24, 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)	Community Advisory Board established November 10, 1999	✓
	Publish a combined ⁴ public notice announcing the availability of the Draft Remedial Investigation Report for review and a minimum 30-day public comment period as well as hold a public meeting to solicit Remedial Objectives for the site. The public meeting shall be held not less than 45 calendar days and not more than 90 calendar days after release of the Draft Remedial Investigation report, unless ADEQ sets a different date for good cause. ⁵	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, March 30, 2007 Remedial Objectives public meeting, May 16, 2007	✓

² A potentially responsible party search is conducted concurrently with the Remedial Investigation and Feasibility Study, but does not have mandated community involvement activities.

³ Data collected from land and water use studies will be incorporated into the Remedial Investigation and/or Remedial Objectives report per A.A.C. R18-16-406(D)-(I).

⁴If not combined, separate public notices will be provided for the Draft Remedial Investigation/comment period and the Remedial Objectives solicitation and public meeting.

Community Involvement Action Summary				
WQARF Phase	Mandated ADEQ Community Involvement Activity (see Chapter 4, B for a detailed description of applied communications techniques described herein)	Statute (A.R.S) and Rule (A.A.C) References	Activity to Date ¹	Complete
Remedial Investigation (continued)	Publish a public notice announcing the availability of the Proposed Remedial Objectives Report for a 30-day public comment period.	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)	Proposed Remedial Objectives Report public notice/comment, October 28, 2008	✓
	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.		Final Remedial Investigation Report, June 13, 2013	
Feasibility Study	Provide notice to interested parties announcing the availability of the Feasibility Study Work Plan. <i>Although not mandated, ADEQ also provided public notice upon completion of the Feasibility Study.</i>	A.A.C. R18-16-404(C)(1)(d) A.A.C. R18-16-407(B)	Feasibility Study Work Plan public notice, September 29, 2014 Final Feasibility Study Report and public notice, October 22, 2019	✓
Proposed Remedial Action Plan	Publish a public notice announcing the availability of the Proposed Remedial Action Plan for a 90-day public comment period. Mail the same notice to interested parties. The notice will describe the proposed remedy and its estimated cost and identify where the Proposed Remedial Action Plan, Remedial Investigation, and Feasibility Study Reports may be inspected.	A.R.S. § 49-287.04(B) A.R.S. § 49-289.03(A)(2) A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(e) A.A.C. R18-16-408(A)		
Record of Decision	Publish a public notice announcing the availability of the Record of Decision and Responsiveness Summary for review.	A.R.S. § 49-287.04(G) A.A.C. R18-16-404(C)(1)(f) A.A.C. R18-16-410		
Implementation of Remedy (Remedial Actions)	Publish a public notice announcing a request for ADEQ to approve remedial actions at the site. The notice will provide the opportunity for a 30-day public comment period.	A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(h) A.A.C. R18-16-413		
	Provide notice to the public and interested parties of a request for ADEQ to waive a regulatory requirement (permit) to complete remedial actions.	A.R.S. § 49-290 A.A.C. R18-16-404(C)(1)(l)		
	Provide notice to the public that field work conducted to remove contaminants of concern may result in noise, light, odor, dust or other adverse impacts.	A.A.C. R18-16-404(C)(1)(m)		

Community Involvement Action Summary				
WQARF Phase	Mandated ADEQ Community Involvement Activity (see Chapter 4, B for a detailed description of applied communications techniques described herein)	Statute (A.R.S) and Rule (A.A.C) References	Activity to Date ¹	Complete
Implementation of Remedy (Remedial Actions) (continued)	Provide notice to the public of a request for ADEQ to determine whether each of the Remedial Objectives for a site have been satisfied and will continue to be satisfied. The notice will provide the opportunity for a 30-day public comment period on the request.	A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(n) A.A.C. R18-16-416(B)		
Operation & Maintenance	Publish a public notice announcing the availability of the Operation & Maintenance Plan for review and a 30-day public comment period. Mail the same notice to interested parties.	A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(g) A.A.C. R18-16-411(E)		
Removal from Registry	<i>Although not mandated by Arizona statute or administrative code, ADEQ may publish a public notice upon the removal of the site from the WQARF Registry.</i>	Not applicable		
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)	No prospective purchaser agreement requests have been submitted to date.	
	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)	No settlement agreement requests have been submitted to date.	

B. Community Involvement Action Summary – Communication Techniques

As previously described in the Community Involvement Action Summary table, there are required communications activities for every phase of the WQARF process. This section describes the specific activities and resources ADEQ uses and has available to communicate with, educate, and help the community and stakeholders become actively involved in the Miracle Mile WQARF site.

ADEQ will continue to use the following resources to keep stakeholders informed throughout the process:

1. **CAB** – The CAB has been conducting public meetings about the site with ADEQ’s assistance since November 1999. CAB members advise ADEQ on appropriate means of delivering site information and provide input regarding content. CAB members also serve as an information resource for their community. CAB meetings are held at a location and date mutually agreed upon by the CAB members and an ADEQ representative. Care is taken to ensure that the location is easily accessible by the public. For a list of current CAB members, see Appendix D.
2. **Local Print Media** – ADEQ will publish all public notices in *The Daily Territorial*, which has a search function for public notices (<http://dailyterritorial.com>). For a list of other media outlets, see Appendix E.
3. **U.S. Mail and Email Lists** – ADEQ maintains U.S. Mail and email address lists for the Miracle Mile WQARF site. Mailing list addresses are compiled and updated on an ongoing basis through CIP updates; return mailers from fact sheets; CAB, open house, and public meeting attendance lists; and other individual requests. These distribution lists include CAB members, local elected and appointed officials, neighborhood and homeowner association contacts, and schools and vulnerable population centers representing/located within the site’s CIAs (see Appendices B through D), and other interested parties. Email addresses are gathered through ADEQ website through the subscribe feature. Community members can choose the topics for which to subscribe.
4. **ADEQ Website** – ADEQ’s website provides visitors with three areas of information related to the site and is updated on an ongoing basis:
 - **Calendar Page** – This calendar provides information regarding public meetings (including CAB meetings), notices, and public comment periods (<http://azdeq.gov/notices>).
 - **Site Information Page** – This page provides detailed site information and access to the online information repository for the site, which includes milestone documents (<https://azdeq.gov/node/1012>).
5. **ADEQ Notice Boards** – Notice boards are located in ADEQ’s Phoenix and Tucson offices.

6. **Public Meetings** – Public meetings or open houses, beyond the CAB meetings, may be scheduled and conducted as needed and as determined by ADEQ and the CAB (for example, meetings with neighborhood/homeowners associations, schools, or other community groups).
7. **Site Tours** – Tours of the site can be requested and arranged in conjunction with the property owners and in compliance with current laws and regulations by contacting the ADEQ Community Involvement Coordinator.

The following table of Communication Techniques illustrates how these techniques have, and will be used throughout the WQARF process for the Miracle Mile WQARF site.

Communication Techniques							
Communications Deliverable			Communications Recipients/Methods				
Types	Why	When	CAB Members	Interested Parties List	ADEQ Website	Local Print Media	ADEQ Notice Board
Notice	Provide notice of availability of milestone documents, request comments, and solicit input.	Per mandate (see Community Involvement Action Summary table).	✓	✓	✓ (Site and calendar pages)	✓ (<i>The Daily Territorial</i>)	✓
CAB 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 Summary table).	✓	✓	✓ (Site and calendar 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 pages)	Not applicable	Not applicable
Technical Milestone Document	Provide current technical information about site investigation/remediation activities (e.g., Remedial Investigation, Feasibility Study, etc.).	According to the WQARF Process as documents are developed and become available.	✓	Not applicable	✓ (Online information repository)	Not applicable	Not applicable
Site Fact Sheet/Newsletter	Provide current information about 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.	✓	✓	✓ (Online information repository)	Not applicable	Not applicable
Public Meeting	Provide forum to solicit Remedial Objectives. (Note that this meeting may be conducted in conjunction with a CAB meeting.) Additional public meetings may be used to discuss site activities as determined by level of community interest.	As required/if requested.	✓	✓	✓ (Site and calendar pages)	✓ (<i>The Daily Territorial</i>)	✓
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 Community Involvement Coordinator.				

⁵ Communications deliverables may be translated into Spanish if deemed necessary or requested.

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C. Other Resources and Contacts

In addition to the designated spokesperson and information repository identified at the beginning of this CIP, the appendices included in this CIP provide additional resources and contact information for the public to use as desired.

- **Appendix A** provides a history of major activities by year at the Miracle Mile WQARF site.
- **Appendix B** provides a list of targeted communities in the Miracle Mile WQARF site CIA. These include neighborhood associations registered with the City of Tucson Neighborhood Association, as well as community schools and vulnerable population centers that fall within the CIA.
- **Appendix C** provides a table of local and state elected officials, by ward or district, who represent communities within the CIA. Note that some wards or districts may encompass more of the CIA than others.
- **Appendix D** provides a table of current Miracle Mile WQARF site CAB members.
- **Appendix E** provides a list of media outlets in the area. All future public notices for the Miracle Mile WQARF site can be found by searching *The Daily Territorial* publication (<http://dailyterritorial.com>).
- **Appendix F** provides a list of other related state and local agencies that may be of interest to the public.

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Appendix A – Site History

The following presents a site history in chronological format for the Arizona Department of Environmental Quality (ADEQ) Miracle Mile Water Quality Assurance Revolving Fund (WQARF) site.

1983 In the fall, the drinking water supply well at the Tra-Tel RV Park, located southwest of the current Miracle Mile WQARF site, was found to be contaminated with tetrachloroethene (PCE). ADEQ began investigating the site by researching facilities in the area that may have been the source of contamination. ADEQ also distributed questionnaires concerning the use of hazardous substances to knowledgeable parties.

1986 In June, trichloroethene (TCE) contamination was found in an industrial well located northeast of the Tra-Tel RV Park.

1988 Soil and groundwater sampling was conducted. ADEQ also performed facility inspections and reissued questionnaires to knowledgeable parties. Research was completed to determine historical land use activities and property ownership.

1990-2004 ADEQ installed 32 groundwater monitor wells to investigate groundwater conditions and contamination in the perched and regional aquifers as part of the Remedial Investigation at the site.

1998 In September, the Miracle Mile site was placed on the WQARF Registry with an eligibility and evaluation score of 62 out of a possible 120.

The Flowing Wells Irrigation District (FWID) requested that ADEQ conduct an Interim Remedial Action (IRA) to address the loss of available water from one of its wells due to contamination.

1999 The City of Tucson began operating a groundwater pump and treat system. Since that time, approximately 396 million gallons of groundwater have been treated and approximately 31 pounds of volatile organic compounds (VOCs) have been removed.

2001 In February, FWID and ADEQ signed an agreement under which FWID would implement the IRA requested in 1998 and ADEQ would reimburse the capital costs. The IRA system of additional pumps and tanks, used with a deepened water well went online in December.



Monitor Well Installation

In March, after completion of a water supply study to evaluate alternate water supplies, FWID constructed surface water storage facilities and re-equipped one of its water supply wells.

- 2001-2004 Passive soil gas surveys and soil borings were completed to obtain soil gas and soil samples, respectively, to investigate potential soil contamination.
- 2002 ADEQ abandoned an inactive industrial production well to prevent potential cross-contamination between the contaminated perched aquifer and the underlying regional aquifer.
- 2002-2004 Spring Joint Specialists performed a Phase I site assessment, conducted subsurface soil testing, and removed underground storage tanks and some hexavalent chromium-contaminated soil at its property located within the Miracle Mile WQARF site. The company also installed three perched groundwater monitor wells.
- 2007 FWID began operation of a joint arsenic and VOC treatment system using granular activated carbon (GAC) to treat water supplied by two of its wells prior to distribution to customers. From start-up through 2013, the system has treated approximately 1.5 billion gallons of water and removed approximately 7.5 pounds of TCE.
- The Draft Remedial Investigation (RI) Report summarizing site characterization activities was completed and released for public comment. A public meeting soliciting input on proposed Remedial Objectives (RO) was also held.
- 2008 The granular activated carbon in the FWID arsenic and VOC treatment system was changed out in October. Also, the proposed RO report was issued for 30 days of public comment.
- 2009 ADEQ continued work to finalize the RI and RO reports and their associated responsiveness summaries.
- 2010 In October, the FWID granular activated carbon water treatment system was shut down because the untreated TCE levels had been well below the drinking water standard for an extended period of time. However, subsequent sampling data from one well showed slightly higher TCE concentrations, so ADEQ and FWID decided that the system would be brought back on line. Sitewide groundwater monitoring was conducted in October and November.
- 2011 In April and May, three shallow-intermediate groundwater monitoring well pairs were installed downgradient of the assumed “toe” of the groundwater plume: one to the northeast, one to the north, and one to the northwest. In December 2011, TCE increased to above standard in the well installed to the northwest.

In the fall of 2011, ADEQ began updating and revising the RI report to include site data and information produced since the Draft RI Report was issued in 2007.

- 2012 In March, ADEQ issued the Final RI Report.
- 2013 In the spring, four groundwater monitor wells were installed for vertical and lateral delineation of the plume and for assessment of a potential source property within the site.
- 2014 In May, site-wide groundwater sampling was performed.
- In September, ADEQ's Monitoring Assistance Program sampled the Villa Capri well. TCE and the other VOCs analyzed were non-detect.
- 2015 RI data gaps were evaluated. Site-wide groundwater monitoring was performed in March. GAC was changed out and the GAC vessels were serviced at the FWID Water Treatment Plant No. 75 at the end of 2015 and beginning of 2016.
- 2016 Additional boreholes and monitoring wells were installed, which aided in delineating the lateral extent of the TCE groundwater plume. Site-wide groundwater sampling and a Soil Vapor Extraction (SVE) pilot test were conducted..
- 2017-2018 ADEQ defined the extent of the shallow soil gas contamination. Site-wide groundwater sampling was conducted.
- 2019 A new treatment system was installed on a nearby small water provider drinking water well. The FWID Water Treatment Plant No. 75 was placed on by-pass due to TCE concentration being below standard. Site-wide groundwater sampling was conducted. ADEQ finalized the FS report in October.

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Appendix B – Targeted Communities

A. Neighborhood Associations

The following presents the only registered neighborhood association and its respective point of contact in the Miracle Mile Water Quality Assurance Revolving Fund Registry (WQARF) site Community Involvement Area (CIA):¹

FLOWING WELLS NEIGHBORHOOD ASSOCIATION
Fred Bass

(520) 293-6841
onthelbluetoo@gmail.com

B. Community Schools

The Miracle Mile WQARF site CIA includes the Tucson Unified School District. The following presents the community schools in the Miracle Mile WQARF site CIA:

CENTENNIAL ELEMENTARY SCHOOL
2200 West Wetmore Road, Tucson, AZ 85705

(520) 696-8200

FLOWING WELLS JUNIOR HIGH SCHOOL
4545 North La Cholla Boulevard, Tucson, AZ 85705

(520) 696-8550

HOMER DAVIS ELEMENTARY SCHOOL
4250 North Romero Road, Tucson, AZ 85705

(520) 696-8250

INSCAPE ALTERNATIVE CENTER
1949 West Gardner Street, Tucson, AZ 85705

(520) 690-2380

TUCSON UNIFIED SCHOOL DISTRICT MAIN OFFICE
1010 East Tenth Street, Tucson, AZ 85719

(520) 225-6000

C. Vulnerable Population Centers

The following presents a list of vulnerable population centers, including places such as child care and assisted living facilities, in the Miracle Mile WQARF site CIA:

COZY CASA DAY CARE
4535 North Jay Avenue, Tucson, AZ 85705

(520) 293-7663

EARLY LEARNING CENTER

¹ The City of Tucson Neighborhood Associations website does not provide address information for the neighborhood association president; however, Mr. Bass is also co-chair of the Community Advisory Board and his contact information is listed in Appendix D.

4605 North La Cholla Boulevard, Tucson, AZ 85705 (520) 696-8909

HOMER DAVIS HEAD START

4258 North Romero Road, Tucson, AZ 85705 (520) 696-0303

YOUTH ENRICHMENT SERVICES – CENTENNIAL

2200 West Wenhore Road, Tucson, AZ 85705 (520) 887-2600

YOUTH ENRICHMENT SERVICES – HOMER DAVIS

4250 North Romero Road, Tucson, AZ 85705 (520) 696-8250

Appendix C – Local and State Elected Officials

As of the publication of this Community Involvement Plan (CIP), the Community Involvement Area (CIA) for the Miracle Mile Water Quality Assurance Revolving Fund Registry (WQARF) site falls under Tucson Ward 3; Pima County Supervisorial District 3; and Arizona Legislature Districts 3 and 9.

CITY Officials	COUNTY Supervisors	STATE Representatives	STATE Senators
City Hall 255 West Alameda 10 th Floor Tucson, AZ 85701 (520) 791-4213	Pima County 130 West Congress St. 11 th Floor Tucson, AZ 85701 (520) 724-9999	Arizona State Senate Capitol Complex 1700 West Washington St. Phoenix, AZ 85007 (602) 926-3559	Arizona House of Representatives Capitol Complex 1700 West Washington St. Phoenix, AZ 85007 (602) 926-4221
Mayor City of Tucson Jonathan Rothschild (520) 791-4204 mayor1@tucsonaz.gov	County Supervisor District 3 Sharon Bronson (520) 724-8051 district3@pima.gov	Arizona House of Representatives Capitol Complex 1700 W. Washington St. Phoenix, AZ 85007 (602) 926-4221	Senator District 3 Sally Ann Gonzales Room #314 (602) 926-3278 sgonzales@azleg.gov
Interim City Manager City of Tucson Michael Ortega (520) 791-4204 citymanager@tucsonaz.gov		Representative District 3 Andres Cano Room #332 (602) 926-3027 acano@azleg.gov	
Tucson City Council Member Ward 3 Paul Durham (520) 791-4711 ward3@tucsonaz.gov		Representative District 3 Alma Hernandez Room #122 (602) 926-3136 ahernandez@azleg.gov	

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Appendix D – Community Advisory Board Members

The following table presents a list of the Miracle Mile Water Quality Assurance Revolving Fund (WQARF) Registry site Community Advisory Board (CAB) members as of November 2019.

<div>Miracle Mile WQARF Site CAB Co-Chairs</div>		
<div>Fred Bass (520) 407-3767 fred.bass@pima.gov</div>	<div>Jan Randolph (520) 887-4138 jrandolphjones@gmail.com</div>	
<div>CAB Members</div>		
<div>Gary Abrams (520) 887-1727 gary@abrams.com</div>	<div>David Crockett (520) 887-4192 dcrockett@fwid.org</div>	<div>Alison Jones (520) 622-3222 ajones@clearcreekassociates.com</div>
	<div>Henry Madrid (520) 907-2767 hmmadrid@aol.com</div>	

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Appendix E – Media Outlets

The following list presents Tucson media outlets that may be used by the public and Community Advisory Board (CAB) members to promote information on the Miracle Mile Water Quality Assurance Revolving Fund Registry (WQARF) site. *The Daily Territorial* is the external media outlet that the Arizona Department of Environmental Quality (ADEQ) will use to publish all public notices related to the site.

NEWSPAPERS AND MAGAZINES

ARIZONA DAILY STAR (520) 573-4142
4850 South Park Avenue, Tucson, AZ 85714

ARIZONA DAILY WILDCAT (520) 621-7579
615 North Park Avenue, Room 101, Tucson, AZ 85721

BIZ TUCSON (520) 299-1005
4729 East Sunrise Drive, Suite 505, Tucson, AZ 85718

THE DAILY TERRITORIAL (520) 294-1200
3280 East Hemisphere Loop, Suite 180, Tucson, AZ 85706

DESERT TIMES (520) 797-4384
7225 North Mona Lisa Road, Suite 125, Tucson AZ 85741

THE EXPLORER NEWSPAPER (520) 797-4384
7225 North Mona Lisa Road, Suite 125, Tucson AZ 85741

INSIDE TUCSON BUSINESS (520) 797-4384
7225 North Mona Lisa Road, Suite 125, Tucson AZ 85741

TUCSON CITIZEN² No phone number

TUCSON WEEKLY (520) 294-1200
3280 East Hemisphere Loop, Suite 180, Tucson, AZ 85706

RADIO

ARIZONA NEWS RADIO NETWORK (480) 483-8415
(KJLL – Tucson News Network)
14605 North Airport Drive, Suite 370, Scottsdale, AZ 85260

ARIZONA PUBLIC MEDIA (520) 621-5805
(KUAT, KUAZ [National Public Radio])
P.O. Box 210067, Tucson, AZ 85721

² The *Tucson Citizen* ended its print edition in 2009, then became an online compendium for blogs until February 2014. The *Tucson Citizen* website (www.tucsoncitizen.com) remains an archive as a community resource.

RADIO (continued)

CLEAR CHANNEL COMMUNICATIONS (520) 618-2100
(KMIY, KRQQ, KYWD, KOHT, KNST, KTZR, KXEW)
1200 North Wilmot Road, Tucson, AZ 85712

CUMULUS MEDIA (520) 887-1000
(KCUB, KHYT, KIIM, KSZR, KTUC)
575 West Roger Road, Tucson, AZ 85705

FOUNDATIONS FOR CREATIVE BROADCASTING (520) 623-1000
(KXCI)
220 South 4th Avenue, Tucson, AZ 85701

GOOD NEWS RADIO BROADCASTING (520) 790-2440
(KCEE, KVOI, KGMS, KLTU, KNXN)
3222 South Richey Avenue, Tucson, AZ 85713

JOURNAL BROADCAST GROUP (520) 722-5486
(KFNN KQTH, KTGTV, KMXZ)
7280 East Rosewood Street, Tucson, AZ 8571

LOTUS COMMUNICATIONS (520) 407-4500
(KTKT, KLPX, KFMA, KCMT)
3871 North Commerce Drive, Tucson, AZ 8570

TELEVISION MEDIA

KFTU-CA Channel 25/46 (Univision) (520) 204-1270
2301 North Forbes Boulevard, Suite 103, Tucson, AZ 85745

KGUN Channel 9 (ABC) (520) 722-5486
7280 East Rosewood Street, Tucson, AZ 85710

KHRR Channel 40 (Telemundo) (520) 396-2617
5151 East Broadway Boulevard, Tucson, AZ 85711

KMSB Channel 11 (FOX) (520) 744-1313
7831 North Business Park Drive, Tucson, AZ 85743

KOLD Channel 13 (CBS) (520) 744-1313
7831 North Business Park Drive, Tucson, AZ 85743

KUAS Channel 6/27 (PBS) (520) 621-5805
P.O. Box 210067, Tucson, AZ 85721

KVOA Channel 4 (NBC) (520) 792-2270
P.O. Box 5188, Tucson, AZ 85703

Appendix F – Related Agencies and Contact Information

The following list presents additional resources that may be used by the public and Community Advisory Board (CAB) members to address concerns or questions related to the Miracle Mile Water Quality Assurance Revolving Fund (WQARF) Registry site.

State of Arizona

Arizona Department of Agriculture

1688 West Adams Street
Phoenix, AZ 85007
Phone: (602) 542-4373

Arizona Department of Health Services

150 North 18th Avenue
Phoenix, AZ 85007
Phone: (602) 542-1025

Arizona Department of Water Resources Groundwater Permitting and Wells Section

3550 North Central Avenue
Phoenix, AZ 85012
Phone: (602) 771-8527

City of Tucson

Housing and Community Development Department

Santa Rita Building
310 North Commerce Park Loop
Tucson, AZ 85745
Phone: (520) 791-4171

Recycling Program/Solid Waste

Price Service Park
4004 South Park Avenue, Building 1
Tucson, AZ 85714
Phone: (520) 791-3171

Tucson Water Department

3100 West Alameda Street
Tucson, AZ 85701
Phone: (520) 791-4331

Other

Agency for Toxic Substances and Disease Registry

Western Branch – Region 9

75 Hawthorne Street, Suite 100, M/S:HHS-1

San Francisco, CA 94105

Phone: (800) 232-4636

Consumer Information Line: (800) 223-0618

Real Estate Seller Disclosures

Arizona Department of Real Estate

2910 North 44th Street, Suite 110

Phoenix, AZ 85018

Phone: (602) 771-7799

<http://www.aaronline.com/wp-content/uploads/2013/01/seller-property-disclosure-statement.pdf>

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 Standard (AWQS): State of Arizona maximum levels for contaminants that apply to groundwater in aquifers designated for drinking water use. For example, the AWQS for tetrachloroethene (PCE) is 5 micrograms per liter.

Arizona Administrative Code (A.A.C.): The A.A.C. is where 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 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 Water Quality Assurance Revolving Fund (WQARF) Registry site. By statute, ADEQ is required to form a CAB for each WQARF site where ADEQ is initiating a Remedial Investigation (RI). ADEQ seeks the CAB's input in the decision-making process and works with them from the onset of the RI and Feasibility Study (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 the U.S. Environmental Protection Agency (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 to 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.

Facility: Usually includes a place, site, or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise came to be located.

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), known as an RI/FS.

Flowing Wells Irrigation District (FWID): The Flowing Wells Irrigation District is a municipal water provider serving drinking water on the north side of metropolitan Tucson. The District has served the domestic and fire protection needs of Tucson since 1922.

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 site. Information on certain WQARF and Superfund sites may be available at ADEQ offices and libraries throughout the state.

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

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

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

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

Potentially Responsible Party (PRP): Those parties (individuals or corporations) 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 FS 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 ROD is based on information and technical analysis generated during the RI/FS, and on consideration of comments received during the public comment period for the PRAP.

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 Objectives (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 a 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 arranger of hazardous waste) that is responsible for the contamination problems at a Superfund/WQARF site. Whenever possible, responsible parties are required to clean up hazardous waste sites they have contaminated.

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

Soil Vapor (Soil Gas): Gaseous elements and compounds that occur in the small spaces between soil particles. Such gases can move through or leave the soil or rock, depending on changes in pressure.

Superfund: The program operated under the legislative authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act that funds and carries out EPA 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, Tetrachloroethylene, Perchloroethene, or Perchloroethylene (PCE): A clear, colorless liquid with a chloroform or sweet odor and a low boiling point. A solvent used for: dry cleaning; degreasing and drying metals and other solids; dissolving waxes, greases, oils, fats, and gums; and in other industrial applications. PCE is a potential occupational carcinogen. Evaporation of PCE increases as temperature increases.

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

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 of Arizona Superfund. WQARF is the program and funding that is used to address hazardous substance releases within the state that are not covered by other specific programs.