Vulture Mill
Water Quality Assurance Revolving Fund (WQARF) Site
Community Involvement Plan

November 2022

ADEQ Document No. EQR-22-23

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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 Vulture Mill 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 remedy of the site.

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

ADEQ Spokesperson Contact Information

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

Community Involvement Coordinator ADEQ

1110 West Washington Street, 6th Floor, Phoenix AZ 85007
602-316-4270
Or
1-800-234-5677
Fax: 602-771-4272
Email: Marks.Tereza @azdeq.gov

View Community Involvement Contacts Online: azdeq.gov/WQARF

Site Information Repository

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

Online:

azdeq.gov/vulture-mill

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 Vulture Mill WQARF Site is located in Wickenburg, Arizona. The Site is located approximately one mile northwest of the center of the town of Wickenburg, ¼ mile east of North Tegner (Highways 89 and 93), and ¼ mile west of the Hassayampa River. The site was placed on the WQARF Registry in April 1998, with an eligibility and evaluation (E&E) score of 65 out of a possible 120. The major factor leading to the score was the presence of lead and arsenic. Total metals were found in groundwater at levels exceeding Arizona Aquifer Water Quality Standards (AWQS). Arsenic, lead, and mercury were found in soil exceeding residential and, in some cases non-residential, soil remediation levels (SRLs).

The Vulture Mill served as an ore depository and milling site for the Vulture Mine from 1863 to 1870. Tailings in excess of 200,000 tons accumulated at the mill from the ores hauled from the mine. The treatment at this early time was most likely by crushing, gravity concentration, and amalgamation. In the amalgamation process, mercury was added to combine with the gold ore. This gold ore/mercury amalgamate then underwent a process called "retort" to drive off the mercury as a vapor and extract gold from the ore.

In the 1890s, a new process was developed that used cyanide to extract gold from ore. Until the early 1900s, the Vulture Mill tailing piles were retreated using this process and stockpiled once again. Milling operations were established from 1958 to 1959 by Metal Concentrator Sales Co. and by Mesa Minerals, Inc. from 1959 to 1962. Since the 1860s, human activities and wind and water erosion have transported tailings material down the slopes to the adjacent pasture land and floodplain.

Beginning in the late 1980s, a portion of the property was leased for a hog farm; no hogs are now raised at the site. Currently this area is within the Vulture Mill WQARF site and is composed of cattle pasture land and open space used for equipment storage.

The site began to be investigated by ADEQ in 1992 in response to health risk concerns raised by a former property owner whose livestock grazed in the area of the tailings deposits. Early investigations indicated that heavy metal contamination exceeding established health-based guidance levels (HBGLs) existed at the site. These findings combined with later soil and groundwater sampling indicated the need for an in-depth environmental investigation.

The Remedial Investigation/Feasibility Study (RI/FS) began in December 1997 to evaluate the nature and extent of the current and potential future effects of the heavy metal contamination detected at the site and to identify and evaluate an appropriate remedial action, if necessary, to lessen the effects. The Final RI/FS was completed in August 1998.

Results of the groundwater investigation revealed that concentrations of arsenic, barium, beryllium, chromium, lead, nickel, and thallium were found at varying levels, depending on the method of analysis used. In filtered samples, concentrations were below laboratory detection limits and always below the AWQS.

Soil and tailings at the site were found to be contaminated with arsenic, lead, and mercury. The average concentration of lead in the tailings was 5,000 parts per million (ppm) with the highest concentrations reported to be approximately 14,000 ppm. The residential SRL for lead is 400 ppm.

A human health risk assessment (HHRA) for the tailings/soils was completed in June 1999. The report documented that the Site at that time presented an unacceptable risk, especially to children who are most at risk for adverse health effects when exposed to lead at high concentrations.

The Proposed Remedial Action Plan (PRAP) was made available for public comment in October 1998. The PRAP evaluated five alternatives for the site.

The Record of Decision (ROD) which outlines the method of cleanup for the site was signed on September 2, 1999. The final remedy for soil included excavating, consolidating, and covering the tailings and/or affected soil with a layer of clean, imported soil. Revegetation, installation of an irrigation system, and drainage and sediment controls were also part of this remedy. The final remedy also included a one-year monitoring program for lead and other metals and designated a control area where notification to potential new well owners would occur.

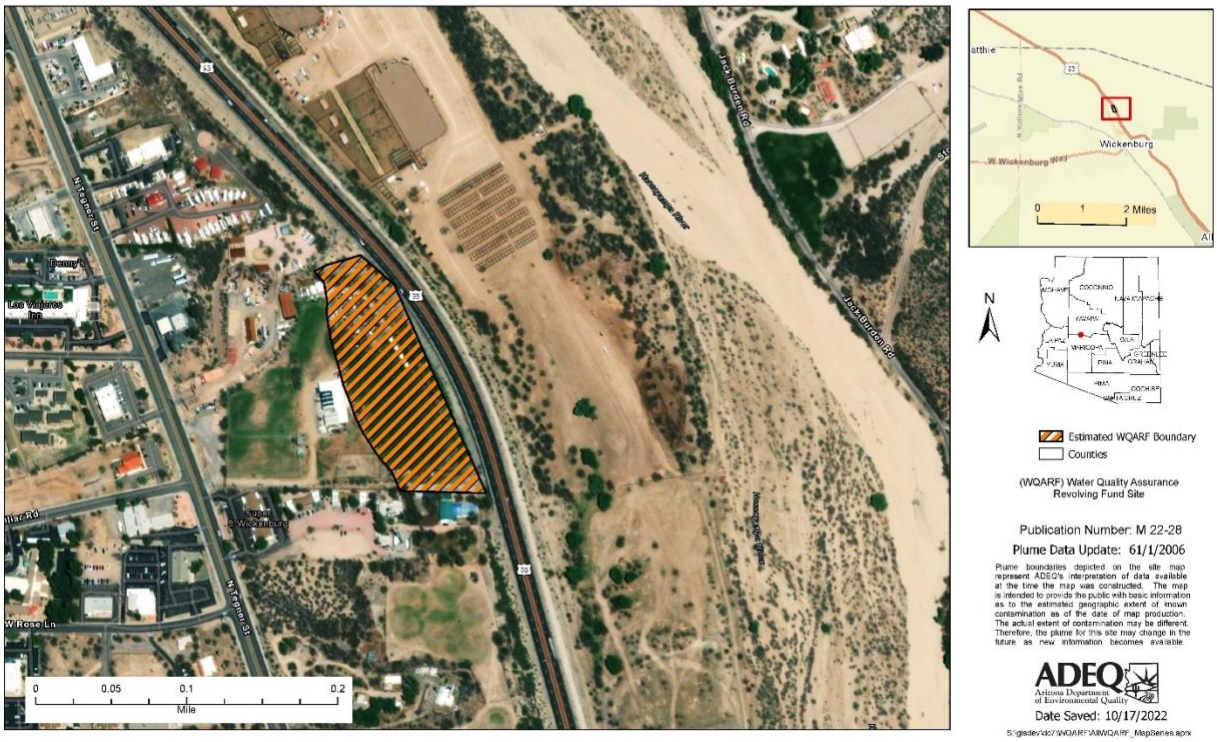
The 100% design of the final remedy was submitted to ADEQ for review in December, 2000. Subsequently, property owners asked for additional soil sampling. Results of this sampling refined the lateral and vertical extent of the affected soils and were used to redefine the limits of future excavation.

In the summer of 2005, grass was planted over the soil. The area is currently used as a pasture and is inspected semi-annually.

The following map shows the site boundary.

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

Vulture Mill



Community Profile

Community Involvement Area (CIA)

The CIA of the Vulture Mill WQARF Site 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 2021 CIA for the Vulture Mill WQARF Site.

Community Demographics

Demographics help ADEQ plan and implement tailored community involvement activities. The following page displays key demographic information for the CIA of the Vulture Mill WQARF Site.

The Vulture Mill WQARF Site is located in Wickenburg, AZ. The current estimated population of Wickenburg is 7,708 people[1].

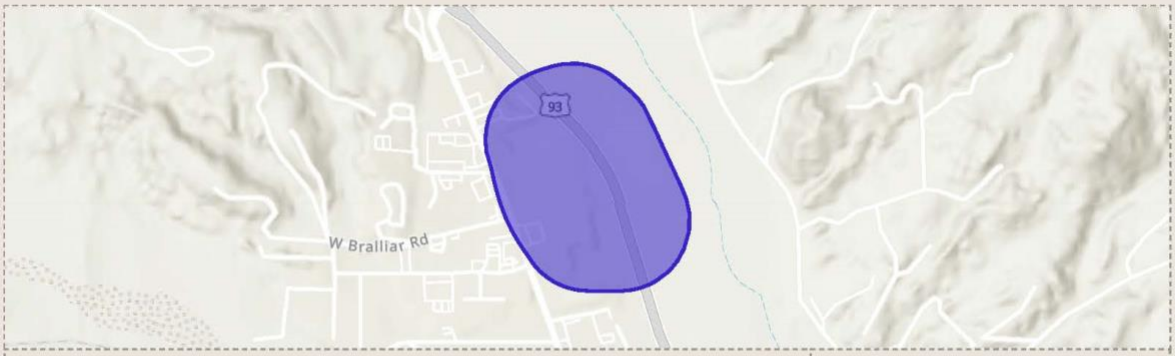
The CIA contains a mix of residential, commercial, agricultural, and industrial areas within one zip code 85390. An estimated 53 people live in 5 households within the CIA. Among CIA residents above age five, 100% speak English as their only language.

ADEQ looks at the community as a whole with an emphasis on the proportion of residents under age five and above age 65. These populations are considered more vulnerable to the potential health effects associated with exposure to environmental contamination. In the CIA, approximately 4% of the population is under age five, while 32% is above age 65.

Appendix C presents a list of neighborhood associations, community schools, and vulnerable population centers. Appendix D presents a list of elected officials.

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

Community Involvement Area
VULTURE MILL



Population and Households

53
Total Population

7.1
Average Household Size

$66,362
Median Household Income

5
2020 Total Households

29%
Renter Occupied Housing Units

71%
Owner Occupied Housing Units

Vulnerable Aged Population

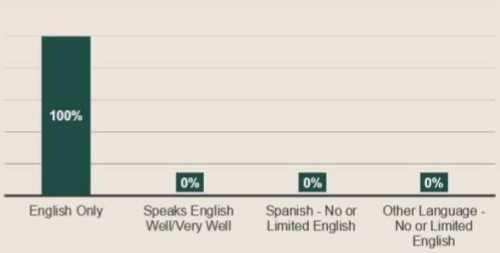
4%
Age 0-4

32%
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

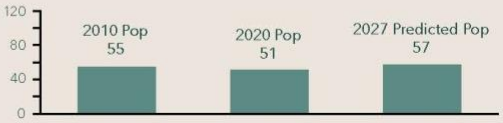
91%
Internet Access at Home

50%
Own Any Tablet

86%
HH Owns a Computer

86%
Smartphone

Population



Community Issues and Concerns

To better understand the community and its concerns, ADEQ conducted interviews during the late 1990s and early 2000s with community and former CAB members who live or work near the Vulture Mill WQARF Site. The following sections summarize common concerns related to the Site, prior to the issuance of the ROD, along with suggestions for ADEQ outreach activities. ADEQ will use this community feedback to ensure that any future outreach addresses community concerns and to determine effective communication methods.

Community Interview Summary

At the time of the interviews, only one interviewee was not familiar with the Vulture Mill WQARF Site. Most interviewees noted that the community lacked interest in the Site.

Environmental and health concerns

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

- The project was not necessary because the tailings have been in place for decades with no health concerns reported.
- If the Site was dangerous, it would have been cleaned up long ago.
- The project was not a beneficial use of tax dollars.
- There is large mistrust of government.
- Remediation needed to be completed at affected properties, not just the WQARF Site, and, because this has not happened, it will affect property values.
- There was concern whether funding will continue in order to clean up the site.
- One long-time resident, who was not familiar with the Site, was concerned about the effect on the environment, as well as the health of local residents.
- It was suggested that lead blood testing continue to monitor the health of those near the Site.
- There was concern for the cumulative effect of the highway bypass construction.
- A recently identified leaking underground storage tank (UST) was perceived as more important for cleanup.
- Native riparian vegetation could be lost if mitigation was implemented.
- The community should have been notified prior to on-site work beginning.

Almost all of the interviewees were satisfied with the cleanup plan at the Site.

Outreach Recommendations

Interviewees thought ADEQ provided sufficient project information and continued updates should be provided, even though interest is low. Interviewees suggested the following community outreach and involvement strategies to ADEQ:

Sharing site information:

- A majority of those interviewed recommended the use of periodic newsletters to relay project information. These should be mailed directly to residents instead of inserting them in the Wickenburg Sun, as had been done previously. Newsletters can be distributed when pertinent updates occur.
- More frequent updates should be distributed through media releases and/or CAB updates.
- It was suggested that articles be published in the Wickenburg Sun. However, ADEQ cannot control the accuracy of information printed in the newspaper.
- The mailing list should be broadened and updated annually to reflect changes in governmental representatives, area school contacts, property owners, etc.
- Open house/public meetings should be held at key milestones to provide another method of updating the community and soliciting public input. These may be held in conjunction with CAB meetings. Such meetings should be held at the Wickenburg Community Center and on Tuesday evenings, as this would draw the largest audience.
- Meeting announcements should be published in the Wickenburg Sun. Public notices should also be posted in various locations around Wickenburg, including the Town Hall lobby, the post office, the library, and grocery stores.

Community Involvement Action Plan

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

Community Involvement Action Summary - Required Activities

The following table describes the required community involvement actions for the Vulture Mill WQARF Site and notes which actions have been completed to date.

Community Involvement Action Summary				
WQARF Phase	**ADEQ Community Involvement Activity**	**Statute (A.R.S.) and Rule (A.A.C) References**	**Activity to Date**	**Complete**
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)	April 1998- Site added to the registry	✓
WQARF Registry Listing	Following the listing of a site on the WQARF Registry, ADEQ will: ● Establish a preliminary community involvement area (see Chapter 2, Section A) within 90 days of site listing on the WQARF Registry. ● Provide written notice to the community on hazardous substance contamination in the area, the actual and potential risks and routes of exposure, possible health effects, and the opportunity to join the site mailing list. ● Identify ADEQ personnel to contact for further information.	A.R.S. § 49-289.02	December 1997- Hazardous Substance Contamination Notice	✓
	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)	January 1998- CIP completed	✓

Community Involvement Action Summary				
WQARF Phase	**ADEQ Community Involvement Activity**	**Statute (A.R.S.) and Rule (A.A.C) References**	**Activity to Date**	**Complete**
Early Response Action	A work plan shall be prepared for each Early Response Action that will include a description of work to be done, known site conditions, a plan for conducting the work; a description of community involvement activities for the Early Response Action under R18- 16-404; and a schedule. Community involvement activities may include development of a community involvement plan under A.A.C. R18-16-404(C) or community involvement activities appropriate to the scope and schedule of the work performed such as a general public notice to those who may be impacted by field work as indicated in A.A.C. R18-16-404(D)(2). If immediate action is necessary to address a current risk to public health or the environment, to protect a source of water, or to provide a supply of water, the work plan and written rationale may be prepared and the community involvement activities may be conducted after commencement of the Early Response Action.	A.A.C. R18-16-404 A.A.C. R18-16-405(D)(2) A.A.C. R-18-16-405(E) A.A.C. R18-16-405(G)		
Remedial Investigation	Provide notice to interested parties announcing the availability of the Remedial Investigation Scope of Work or Work Plan, Fact Sheet, and Community Involvement Plan outline for review and a 30-day public comment period. Provide notice indicating that any person by written agreement with ADEQ may develop and implement a work plan for the Remedial Investigation and Feasibility Study and solicit information regarding the current and future land and water uses at the site. These notices shall also provide an opportunity to request a public meeting.	A.R.S. § 49-287.03(B) A.R.S. § 49-287.03(C) A.A.C. R18-16-301(C) A.A.C. R18-16-403(F) A.A.C. R18-16-403(G) A.A.C. R18-16-404(C)(1)(a) A.A.C. R18-16-406(B) A.A.C. R18-16-406(D)	March 1998- Notification of interested parties regarding the availability of the RI work plan	✓

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

Community Involvement Action Summary				
WQARF Phase	**ADEQ Community Involvement Activity**	**Statute (A.R.S.) and Rule (A.A.C) References**	**Activity to Date**	**Complete**
Remedial Investigation (continued)	Establish a selection committee to choose Community Advisory Board members for the site. The selection committee shall consist of the following number of people from each organization: ● ADEQ: 1 ● Potentially Responsible Party: 1 ● Local Official: 1 ● Local Community: 2	A.R.S. § 49-289.03(D)	June 1998- Selection Committee established	✓
	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)	June 1998- CAB established	✓
	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)	June 1998- Notice to the public of the opportunity to comment on the draft RI report Rules were not in place when the Vulture Mill WQARF Site was going through the RI/FS process for notice to the public of the opportunity to comment on the remedial objectives proposed.	✓

Community Involvement Action Summary				
WQARF Phase	**ADEQ Community Involvement Activity**	**Statute (A.R.S.) and Rule (A.A.C) References**	**Activity to Date**	**Complete**
Remedial Investigation (continued)	Publish a public notice announcing the availability of the Proposed Remedial Objectives Report for a 30-day public comment period. Publish a public notice of the availability of the Final Remedial Investigation Report, which shall contain the results of site characterization and the final Remedial Objectives Report. The final Remedial Investigation report shall be accompanied by responsiveness summaries regarding comments, issues and concerns raised in the community involvement process and, if the report is prepared by a person other than ADEQ, copies of the comments received.	A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(c) A.A.C. R18-16-406(I)(5) A.A.C. R18-16-406(J)	Rules were not in place when the Vulture Mill WQARF Site was going through the RI/FS process; therefore, a notice was not published.	
Feasibility Study	Provide notice to interested parties announcing the availability of the Feasibility Study Work Plan Although not mandated, ADEQ will also provide public notice upon completion of the Feasibility Study.	A.A.C. R18-16-404(C)(1)(d) A.A.C. R18-16-407(B)	Rules were not in place when the Vulture Mill WQARF Site was going through the RI/FS process; therefore, a notice was not published.	
Proposed Remedial Action Plan	Publish a public notice announcing the availability of the Proposed Remedial Action Plan for a 90-day public comment period. (If not combined, separate public notices will be provided for the Draft Remedial Investigation/comment period and the Remedial Objectives solicitation and public meeting.) Mail the same notice(s) to interested parties. The notice(s) will describe the proposed remedy and its estimated cost, and identify where the Proposed Remedial Action Plan, Remedial Investigation, and Feasibility Study Reports may be inspected.	A.R.S. § 49-287.04(B) A.R.S. § 49-289.03(A)(2) A.A.C. R18-16-301(C) A.A.C.R18-16-404(C)(1)(e) A.A.C. R18-16-408(A)	September 1998-Public notice and notification of the availability of the PRAP and opportunity to comment on the plan.	✓
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	July 1999- Public notice of the availability of the ROD and Responsiveness Summary.	✓

Community Involvement Action Summary				
WQARF Phase	**ADEQ Community Involvement Activity**	**Statute (A.R.S.) and Rule (A.A.C) References**	**Activity to Date**	**Complete**
Implementation of Remedy (Remedial Actions)	Publish a public notice announcing a request for ADEQ to approve remedial actions at the site. The notice will provide the opportunity for a 30-day public comment period.	A.A.C. R18-16-301(C) A.A.C. R18-16-404(C)(1)(h) A.A.C. R18-16-413	April 2000- Public Open House Announcement May 4, 2000- Public Open House	✓
	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)		
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)		
	Publish a public notice announcing the intention of ADEQ to enter into a settlement agreement with a responsible party.	A.R.S. § 49-289.03(A)(4) A.A.C. R18-16-301(C)		

	The notice will provide the opportunity for a 30-day public comment period.			

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 Vulture Mill WQARF Site.

ADEQ uses the following community involvement techniques:

1. CAB: The CAB, with assistance from ADEQ, conducted public meetings about the Vulture Mill WQARF Site from 1998 to 2005. The CAB advised ADEQ on sharing Site information and provided input on content. CAB members served as an information resource for their community. Per Arizona Revised Statutes § 49-289.03, CAB meetings were open to the public and held at easily accessible locations. CAB meetings were held to receive site briefings, progress reports and other pertinent information in response to site activities or a request from a community advisory board member or a city, town or county in which the site is located.

2. Local Print Media: ADEQ will publish all WQARF milestone public notices in the Wickenburg Sun. The Arizona Newspaper Association maintains a database of all public notices published in major Arizona newspapers (arizonapublicnotices.com). Appendix F contains a list of other media outlets.

3. U.S. Mail and Email Lists: ADEQ created U.S. Mail and email address lists to share updates on the Vulture Mill WQARF Site. Anyone can join the site mailing list by contacting the ADEQ Community Involvement Coordinator or registering on GovDelivery (public.govdelivery.com/accounts/AZDEQ/subscriber/new).

4. ADEQ Website: ADEQ's website provides visitors with three areas of information related to the Site and is updated regularly:

    - Notices Page: contains WQARF site public notices and announces comment periods (azdeq.gov/notices).

    - Events Page: includes information on WQARF site public meetings, including CAB meetings (azdeq.gov/events).

    - Site Information Page: provides detailed site information and links to the site information repository (azdeq.gov/vulture-mill).

5. ADEQ Notice Board: Notices are displayed on boards located in ADEQ's Phoenix and Tucson offices.

6. Public Meetings: In addition to CAB meetings, ADEQ may schedule public meetings or open houses as needed or requested. Examples include meetings with neighborhood/homeowner's associations, schools, or other community groups.

7. Site Tours: The public may request site tours through the ADEQ Community Involvement Coordinator. Tours will be arranged in conjunction with the property owners and in compliance with current regulations.

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

The following table of Communication Techniques illustrates how these techniques have and will be used throughout the WQARF process for the Vulture Mill WQARF Site.

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

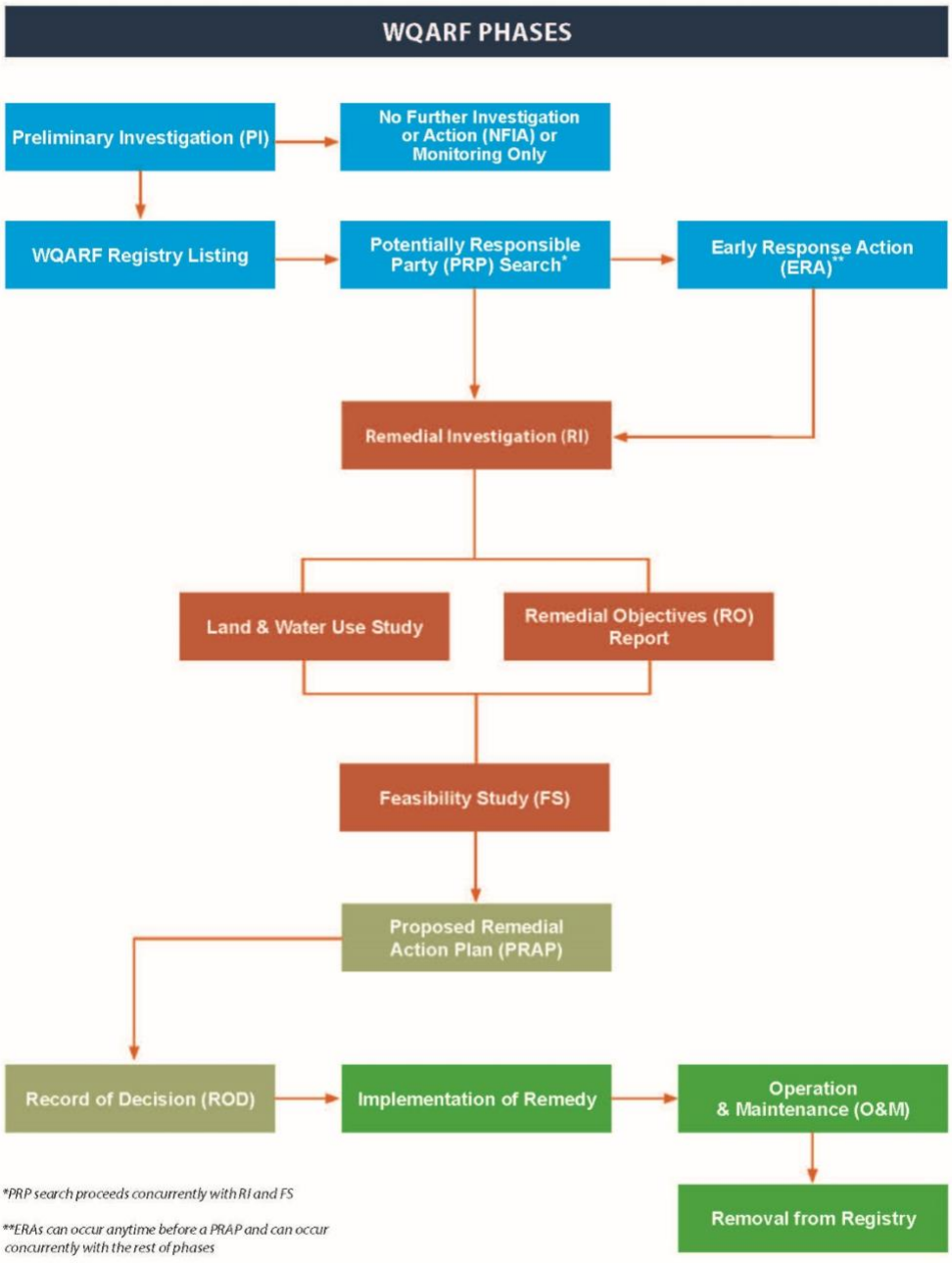
APPENDICES

The following appendices provide additional resources to support community involvement for the Vulture Mill WQARF Site:

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

Appendix A

WQARF Process Chart



Appendix B
Site History

1863 – 1962 Milling and stockpiling of gold ore from the Vulture Mine took place from 1863 until the early 1900s. The stockpiled tailings were processed briefly from 1957 to 1962. The original milling process consisted of crushing and flotation. The concentrates were stockpiled at the Vulture Mill and processed using cyanide in the early 1890s.

1997 – 1998 Beginning in 1997, the Arizona Department of Environmental Quality (ADEQ) conducted a RI/FS to determine the nature and extent of current and future effects of the contamination on the groundwater. The Site was placed on the WQARF Registry in April of 1998 with an eligibility and evaluation score of 65 out of a possible 120. Results of these investigations are summarized in the July 10, 1998 RI report and the August 14, 1998 FS report.

ADEQ characterized the nature and extent of current and potential future effects of contamination in soil. The results are summarized in the October 5, 1998 Tailings Characterization Report. Also, in October 1998, the PRAP was prepared to evaluate the groundwater and soil remedial cleanup alternatives to address the potential human health risk posed by the metals in the soil at the site. The selected alternative was excavation, consolidation, and capping of the tailings on the site.

1999 A HHRA, dated June 25, 1999, was performed to evaluate the no action alternative and soil cover alternatives. The HHRA concluded that the no action alternative may result in significant risk to future on-site residents. The report also concluded that this significant risk will be eliminated if the soil cover alternative is implemented provided the soil cover is maintained and remains in place.

In September, ADEQ issued a ROD that formally adopted remedial alternatives for groundwater and soil at the site. The selected groundwater remedy consists of groundwater monitoring and institutional controls for installing new wells within the control area defined in the ROD. The selected soil remedy consists of excavation, consolidation, and placement of a soil cover and associated stormwater controls.

2000 In December, a final Remedy Design Submittal (100%) was prepared.

2001- 2002 At the request of local property owners, additional soil sampling was conducted between March and July 2001 to further define the vertical and horizontal extent of the contamination. During the course of the investigation, laboratory results indicated that the limits of impacted soil were considerably further south than had been

originally estimated. The tailings were found on an additional three properties. The results of the supplemental soil sampling are summarized in the October 2002 Soil Characterization Report.

Based upon the new data, the December 2000 plans and specifications to implement the soil remedy were modified and sent out to bid in May 2002. In December 2002, the construction contractor mobilized to the Site.

2005	Grass was planted during the summer on the soil cover
2007	Repairs were made to the slope irrigation system and additional grass was hydroseeded on the slope. Groundwater monitoring of wells in the vicinity did not detect lead or arsenic at concentrations above drinking water standards.
2008 – 2021	Site inspections were conducted semi-annually.
2022	Repairs were made to the irrigation system.

Appendix C
Targeted Communities

Neighborhood Associations

Loose Horse RV Park 928-684-5271
1125 N Tegner St, Wickenburg, AZ 85390
loosehorse-rv-park.business.site

Appendix D

Elected Officials

As of the publication of this community involvement plan, the community involvement area for the Vulture Mill WQARF Site falls under the Wickenburg Town Council, County District 4, and Arizona Legislature District 4.

Wickenburg Town Council	Maricopa Board of Supervisors	Arizona State Representatives	Arizona State Senator
155 N. Tegner, Suite A Wickenburg, AZ 85390 www.ci.wickenburg.az.us/1401/Town-Council	301 W Jefferson St 10th Floor Phoenix, AZ 85003 maricopa.gov/224/Board-of-Supervisors	1700 W. Washington St Phoenix, AZ 85007 azleg.gov/memberroster/	1700 W. Washington St Phoenix, AZ 85007 azleg.gov/memberroster
Mayor Rui Pereira	**District 4 Supervisor** Clint Hickman 602-506-7642 district4@mail.maricopa.gov	**District 4 Representative** Brian Fernandez Room 331 602-926-3098 bfernandez@azleg.gov	**District 4 Senator** Lisa Otondo Room 315 602-926-3002 lotondo@azleg.gov
Vice Mayor Kristi Henson		**District 4 Representative** Joel John Room 306 602-926-3276 jjohn@azleg.gov	
Councilmember Chris Band			
Councilmember Kristy Bedoian			
Councilmember BG Bratcher			
Councilmember Rebecca Rovey			
Councilmember David Stander			

Appendix E

Community Advisory Board

The Vulture Mill WQARF Site Community Advisory Board was established in June 1998 and disbanded in 2005.

Appendix F
Media Outlets

The community may use any media outlets to share information on the Vulture Mill WQARF Site. ADEQ will publish all site-related public notices in the *Wickenburg Sun.* All future public notices for the Vulture Mill WQARF Site can be found by searching arizonapublicnotices.com.

Newspapers and Magazine

Wickenburg Sun 928-684-5454
180 N Washington Street, Wickenburg, AZ 85390
wickenburgsun.com

Wickenburg Magazine No Phone Listed
TheGreenTeam@GreenEarthPublications.com
wickenburgmagazine.com

Radio

KSWG 602-622-3695
801 W. Wickenburg Way, Wickenburg, AZ 85390
arizonarealcountry.com

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 Vulture Mill WQARF Site.

State of Arizona

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

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

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

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

Wickenburg Public Services 928-684-5451
155 N Tegner St., Ste A, Wickenburg, AZ 85390 wickenburgaz.org/1421/Public-Services

Appendix H
Prospective Purchaser Agreements

No parties have requested or received prospective purchaser agreements from the Arizona Department of Environmental Quality for properties in or around the Vulture Mill WQARF Site.

Appendix I

Consent Orders and Settlements

As of the date of this CIP, there are no parties that have entered into consent decree settlements with the ADEQ for properties in or around the Vulture Mill WQARF Site.

Acronyms and Glossary of Terms

Amalgamation: a process of extracting metals (as native gold and silver) from their ores by the addition of small quantities of mercury to the stamping or grinding unit so that the resulting amalgam is caught on mercury-coated copper plates from which it is then scraped, the precious metals in it being recovered by distilling off the mercury.

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.

Health Based Guidance Levels (HBGLs): Concentrations of contaminants in drinking water that are protective of public health during long-term exposure.

Human Health Risk Assessment (HHRA): A process to determine if contaminants detected at a site are of concern to human health and the environment.

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

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.

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.

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.