

**Water Quality Assurance
Revolving Fund**

**Annual Report
Fiscal Year 2013**

September 2013

ADEQ Publication #:

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This annual report has been prepared pursuant to HB 2001, Section 30 of Laws 2013, Chapter 1 making appropriations for the different departments of the state, for state institutions and for public schools; providing for certain reporting requirements. HB 2001 requires that a report on the Water Quality Assurance Revolving Fund (WQARF) along with specific site budgets for FY 2013 be submitted to the Joint Legislative Budget Committee (JLBC) members and to the Director of the JLBC on or before September 1, 2013. The FY 2014 WQARF site budgets and FY 2013 WQARF program budget can be found in Appendix 1.

WQARF PROGRAM OVERVIEW

Program Description

Through the WQARF Program, the Arizona Department of Environmental Quality (ADEQ) identifies, assesses, and cleans up soil and groundwater that is contaminated with hazardous substances. The program conducts these efforts state-wide using state funds and also oversees privately funded cleanup efforts. Responsible parties are identified, notified, and then legal and technical evidence is gathered for recovery of ADEQ's costs and enforcement of cleanup requirements.

WQARF was created under the Environmental Quality Act of 1986 to support cleanup efforts in the state. The program underwent significant revisions as a result of what is known as the WQARF Reform Legislation of 1997 (Laws 1997, Chapter 287). The major provisions of the WQARF Reform Legislation are as follows:

Proportionate Liability - Liability for the costs of the cleanup of contaminated sites is proportionate, rather than joint (as it is in the Federal regulations). Cleanup costs are proportionately allocated among responsible parties using a process defined in statute. Identification of responsible parties and the allocation of cleanup costs are the responsibilities of ADEQ. A non-judicial allocation hearing process is available for the resolution of disputes regarding ADEQ's allocations.

Program Funding - The adoption of a proportionate liability system increased the need for adequate and dedicated program funding. To ensure that WQARF program funding is sufficient to administer the program and to pay allocated, uncollectible orphan shares, the WQARF reform legislation provided for an annual \$18 million expenditure. The fund is

dependent upon the direct transfer of funds from legislative appropriations, corporate income tax, cost recovery, and special fees.

Site Prioritization – Sites are to be prioritized with a greater emphasis on risk to human health. The statute provides a process to score sites according to actual and potential exposure to hazardous substances. This score and other factors are considered when prioritizing the expenditure of WQARF funds.

Cleanup Methods and Goals – WQARF reform provided for increased flexibility in the selection of groundwater cleanup methods and levels. ADEQ has adopted remedy selection rules that incorporate analysis of a range of cleanup options, from remediation of the contamination to no action. Significantly, the statute clarifies that the cleanup need not always result in the achievement of drinking water standards within the aquifer.

Community Involvement – Enhanced community involvement is required at all stages of the cleanup process. The statute establishes a process to encourage active community involvement, including provisions for notices, community involvement plans, and the formation of a community advisory board for each site.

Settlements – Prompt settlements as an alternative to litigation are encouraged. ADEQ is authorized to offer a 25 percent discount to responsible parties who settle after the department provides notice to them of their proportionate share of liability.

In addition to the costs of administering the program and conducting remedial actions, A.R.S. § 49-282(E) authorizes WQARF funding for other uses. Descriptions of the following uses/programs and their accomplishments are discussed later in the report:

- Emergency Response Program
- Water Quality Assessment and Monitoring
- State matching monies to meet other obligations prescribed by § 104 of CERCLA
- Well Inspections and Approval Program at the Arizona Department of Water Resources
- Risk Assessment Program at the Arizona Department of Health Services

Program Process Overview

Typically, upon addition of a site to the WQARF Registry, numerous investigative, planning, community involvement, risk assessment and legal steps must be executed before cleanup can begin. Exceptions to this sequence of steps are made when early response actions are taken to protect human health or the environment. The WQARF Remedy Selection Process is outlined in Appendix 2.

Once in the WQARF program, sites undergo a remedial investigation/feasibility study (RI/FS). An RI/FS is a two-phase investigation conducted by ADEQ or interested parties to investigate the scope of contamination and determine the alternatives for remediation. During the RI/FS, extensive technical information is collected, that may include soil and groundwater sampling and analysis of both the site property and adjoining areas that may also be contaminated. The objective of the RI/FS is to gather sufficient data to evaluate and select the most appropriate cleanup alternative for the site. Concurrently, ADEQ is required at most sites to conduct an extensive search to identify potentially responsible parties (PRPs).

During and following the RI/FS, legal negotiations may be undertaken in response to a party's request to settle liability early and to gain access to private properties for investigation or cleanup implementation. Community involvement is emphasized during investigations, prior to development of the proposed remedial action plan (PRAP), and at other times as appropriate depending on site specific issues. These community involvement efforts may include the formation of community advisory boards (CABs) to assist in relaying information and concerns between the public, ADEQ, and interested parties. The Arizona Department of Health Services (ADHS) may also provide input to the remedial investigation through evaluation of potential risks to human health.

Once the FS is completed and cleanup alternatives are identified, a PRAP is developed and is made available for public comment. A record of decision (ROD) documenting the selected cleanup alternative is finalized, followed by a liability allocation process in which past and future remediation costs are distributed among responsible parties.

After the ROD is finalized, extensive remedial system design development and review must be undertaken. Several years may be needed to finalize a design, construct the remedy, and start the actual cleanup. After the remedial system is constructed, operation and maintenance may be conducted as appropriate to the remedy.

Because formal investigation and remediation can take many years, ADEQ developed a process to address contamination that requires immediate action. The early response action process can be used at any time prior to the implementation of a final remedy. Early response actions may be taken to address any of the following conditions:

- To mitigate an immediate threat to public health or the environment;
- To clean up a source of contamination;
- To prevent migration of contamination to uncontaminated areas; or
- To provide drinking water to residents whose drinking water supply has been contaminated.

MAJOR ISSUES & ACCOMPLISHMENTS

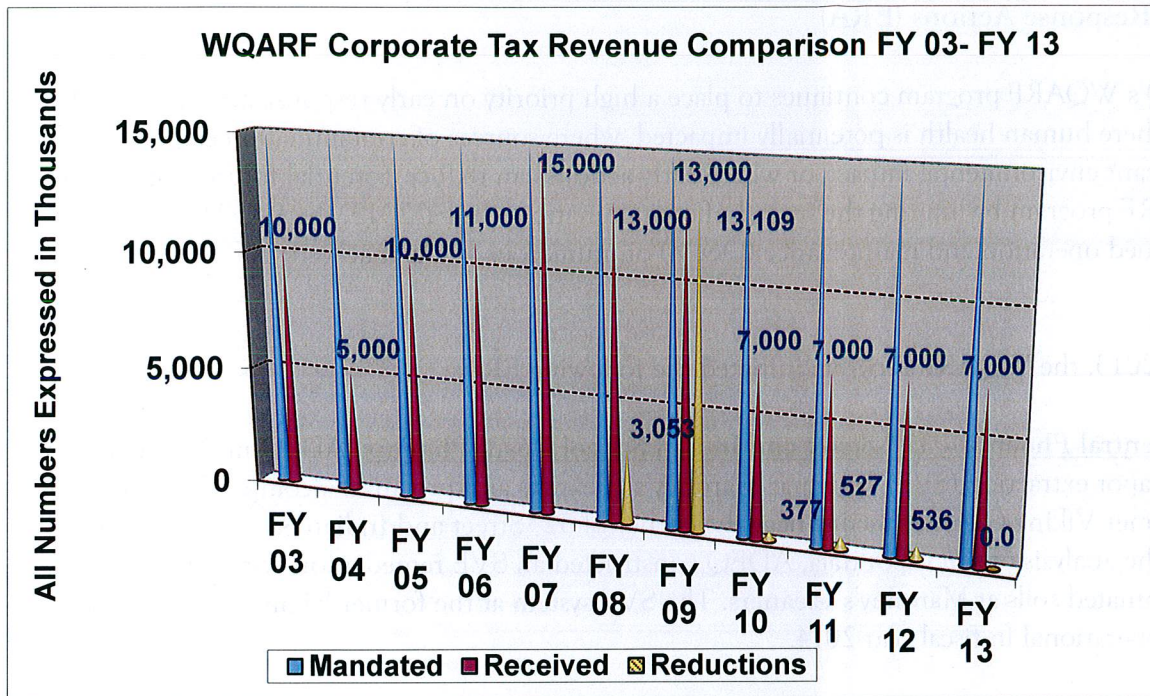
WQARF FUNDING

As described earlier in the report, ADEQ's ability to fully administer and implement the WQARF program depends on \$18 million per year in dedicated funding. A.R.S. § 49-282(B) specifies that \$15 million of that \$18 million is received from Corporate Income Tax revenue. However, due to budget shortfalls, the WQARF Program received \$60 million less in Corporate Income Tax revenue for fiscal years 2003 through 2013 and funding was further reduced by legislative fund transfers in the amount of \$17.6 million. The only time during the last 10 fiscal years that the program received full Corporate Income Tax funding was in FY 2007.

During the last four fiscal years the WQARF program's fund balance has been reduced by \$33.4 million through reductions in Corporate Income Tax transfers and legislative fund transfers. During FY 2013 the Corporate Income Tax transfer was reduced by \$8 million.

The \$33.4 million reduction over the last four fiscal years has significantly delayed characterization and cleanup at WQARF sites. Although in FY 2013, ADEQ was able to fund 12 sites where treatment systems were actively operating or being maintained, all other WQARF process activities were limited (e.g., groundwater monitoring, feasibility studies, design and construction of remediation systems, etc).

The chart below depicts Corporate Income Tax funding of the WQARF program during the past ten fiscal years and also accounts for the additional reduction in program funding that resulted from the legislative fund transfers.



ACCOMPLISHMENTS

The following is a summary of major FY 2013 WQARF accomplishments. WQARF program revenue and expenditures for FY2013 can be found in Appendix 3. A complete description of FY 2013 activities can be found in Appendix 4.

Removal from Registry

In FY 2013 ADEQ was able to remove its first site from the WQARF Registry. The East Washington Fluff site was first added to the Registry in 1997. This site, a former automobile disposal yard, dismantled vehicles by removing their interiors, draining their fluids and shredding the metal. Hazardous byproducts of this process included heavy metals (lead) and poly chlorinated biphenyls (PCBs). The WQARF program had previously removed much of the contaminated material leaving the remainder under an engineered cap to limit human exposure. A Declaration of Environmental Use Restriction (DEUR) was placed on the property which placed responsibility for monitoring the engineered cap to the new property owner. The shift in monitoring responsibility allowed this site to be removed from the WQARF program.

Early Response Actions (ERA)

ADEQ's WQARF program continues to place a high priority on early response actions (ERAs) at sites where human health is potentially impacted, where sources of contamination can cause significant environmental impact, or where early actions can reduce potential future costs to the WQARF program by limiting the spread of contamination. In FY 2013, the WQARF program continued operation and maintenance (O&M) on numerous ERAs that were initiated in prior years.

In FY 2013, the WQARF Program initiated the following ERAs:

East Central Phoenix – 32nd Street and Indian School Road, Phoenix: ADEQ made operational a soil vapor extraction (SVE) system at Maroney's Cleaners and procured a comparable system for the former Viking Cleaners facility near the corner of 32st Street and Indian School Road. Based upon the analysis of soil vapor data, ADEQ constructed an SVE remediation system to address contaminated soils at Maroney's Cleaners. The SVE system at the former Viking Cleaners will be made operational in fiscal year 2014.

7th Avenue and Bethany School Road, Phoenix: ADEQ initiated an innovative technology pilot test to address increasing contaminant levels in groundwater. The pilot test, which is continuing into fiscal year 2014, is examining the use of organic substrates that will enhance the natural removal of chlorine molecules from volatile organic compounds. This process, if successful, will remove the hazards from groundwater.

Tyson Wash, Quartzite: A groundwater remedy and continued monitoring had been selected to address contamination. Groundwater tests showed that contaminants were not decreasing as anticipated and were escaping the groundwater pumping area. Rather than expand the extraction well field, ADEQ initiated an ERA, a pilot test using In-Situ Chemical Oxidation (ISCO) to breakdown the contaminants. The pilot test conducted in fiscal year 2013 dramatically reduced the groundwater contaminate level. Monitoring will continue in the coming fiscal year, but it is anticipated that the reduction will bring the site back on schedule for closure in the next several years.

Preliminary Investigation Remedial Actions (PI)

7th Avenue and Missouri Road (not on WQARF registry), Phoenix: ADEQ installed four new monitor wells to characterize the groundwater contamination plume. PCE concentrations ranged from non-detect to 850 micrograms per liter ($\mu\text{g/L}$). A neighboring Salt River Project well registered a PCE concentration of 67.9 $\mu\text{g/L}$. Petroleum hydrocarbons and trihalomethanes were also detected in some of the samples. This site is currently undergoing evaluation for placement

on the WQARF Registry.

Interim Remedial Actions (IRA)

IRAs are taken at a registry site to protect water supply wells, provide alternative water supplies, replace wells, or for water treatment. ADEQ has been working with the Flowing Wells Irrigation District (FWID) and the Metropolitan Domestic Water Improvement District to implement interim remedial actions (IRAs) at the Miracle Mile and Shannon Road/El Camino del Cerro WQARF sites, respectively.

Miracle Mile: ADEQ entered into a cooperative agreement with FWID to provide wellhead treatment for the removal of VOCs at two FWID production wells. The treatment system was jointly designed and constructed by ADEQ and FWID and incorporated into FWID's arsenic treatment system. The 900 gallon per minute (gpm) system was put into operation in January 2007 and treated approximately 65 million gallons of water and removed 1 pound of VOCs in FY 2013. The treated water is distributed for drinking water use by FWID customers.

Shannon Road/El Camino del Cerro: Through a cooperative agreement with the Metropolitan Domestic Water Irrigation District, ADEQ has been funding the wellhead treatment and operation and maintenance costs associated with a system designed to treat VOC contaminated groundwater. Approximately 135 million gallons of water were treated and approximately 28 pounds of VOCs removed by this system in FY 2013. The treated water is distributed for drinking water use by the Metropolitan Domestic Water Irrigation District customers.

Operation & Maintenance (O&M)

ADEQ continues to conduct or fund operation and maintenance (O&M) activities of the following groundwater pump and treat, soil cap maintenance, and soil vapor extraction systems in FY 2013:

- Broadway and Pantano (groundwater pump and treat)
- Central Avenue and Camelback Road (groundwater pump and treat and SVE system)
- Cooper and Commerce Avenue (groundwater pump & treat, SVE and air sparge)
- Klondyke Tailings (upper tailings cap protection)
- Miracle Mile (Flowing Wells wellhead treatment)
- Shannon Road/El Camino del Cerro (Metro Water wellhead treatment)
- Tyson Wash (groundwater pump and treat)
- Vulture Mill (soil cap maintenance)
- Ted's Truck Stop, Main Street and Kofa [groundwater pump and treat (dual-phase extraction), ozone air sparge/SVE]
- West Central Phoenix - North Plume/F&B Manufacturing Co. (SVE)

- Mountain View Estates former NPL site (soil cap maintenance)

Remedial Investigations (RI)

ADEQ completed remedial investigation at the following sites in FY 2013:

- Broadway Pantano
- Miracle Mile
- South Mesa
- West Van Buren

Feasibility Studies (FS)

ADEQ completed Feasibility Study reports for the following sites:

- 7th & Bethany Home Road
- West Central Phoenix - North Plume
- West Central Phoenix - West Grand Avenue

Proposed Remedial Action Plan (PRAP)

ADEQ completed Proposed Remedial Action Plans for the following sites:

- East Washington Fluff
- West Central Phoenix - West Osborn Complex (shallow & lower aquifer units)

Record of Decision (ROD)

ADEQ completed the Record of Decision at the following site:

- East Washington Fluff

Parties conducting work with ADEQ oversight

The following parties are conducting site investigations and remedial activities at WQARF sites with ADEQ project manager oversight. The work is being paid for by the parties and ADEQ costs are recoverable.

- West Van Buren WQARF site work is being conducted by Air Liquide America Specialty Gases LLC under an Amended Consent Order.
- West Van Buren WQARF site work is being conducted by Prudential Overall Supply under an Amended Consent Order.
- West Van Buren WQARF site work is being conducted by Roosevelt Irrigation District under a working agreement.

- West Van Buren WQARF site work is being conducted by the West Van Buren Working Group under a working agreement.
- 56th Street and Earll WQARF site work is being conducted by Freescale Semiconductor, Inc. under a Consent Order.
- West Central Phoenix - East Grand Avenue WQARF site work is being conducted by Univar under a working agreement.
- Pinal Creek WQARF site work is being conducted by Freeport McMoRan Inc. as successors of interest under a Consent Decree.
- Pinal Creek WQARF site work is being conducted by the Pinal Creek Working Group under a Consent Decree.
- Pinal Creek WQARF site work is being conducted by BHP under a Consent Decree.
- Los Reales Landfill WQARF site work is being conducted by the City of Tucson under a Remedial Action Plan.
- Silverbell Landfill WQARF site work is being conducted by the City of Tucson under a Remedial Action Plan.
- Park-Euclid WQARF site work is being conducted by the Park-Euclid Group under a working agreement.

ACTIVITIES AND ACCOMPLISHMENTS AT WQARF SITES

Summaries are provided below of activities and accomplishments for WQARF funded sites on the WQARF Registry. The revenues and expenditures for the WQARF Program can be found in Appendix 3. Updates on the WQARF Registry Sites can be found in Appendix 4, which provides the site registry score, location, boundaries, and a brief description of investigation status or remedial action.

Remediation

- Millions of gallons of groundwater treated:

178.0	Broadway-Pantano
19.3	Central and Camelback
43.2	Cooper and Commerce
53.0	Los Reales Landfill
65.0	Miracle Mile
37.7	Nogales
0.1	Park Euclid
54.7	Payson PCE
1,772.0	Pinal Creek
134.0	Shannon Rd/El Camino del Cerro
0.7	Ted's Truck Stop
<u>1.0</u>	Tyson Wash
2,358.7	FY 2013 Total

- Pounds of volatile organic compounds removed from the environment:

1	Broadway -Pantano
2,053	Central and Camelback
118	Cooper and Commerce
13	East Central Phoenix- 32 nd Street & Indian School
4	Los Reales Landfill
1	Miracle Mile
1	Nogales
1	Payson PCE
795	Park-Euclid
28	Shannon Road/El Camino del Cerro
4	Ted's Truck Stop
1	Tyson Wash
4,257	West Van Buren
6	West Central Phoenix - East Grand Avenue
<u>299</u>	West Central Phoenix - North Plume
7,582	FY 2013 Total

- Pounds of metals removed from the environment:

<u>1,565,408</u>	Pinal Creek
1,565,408	FY 2013 Total

- Tons of contaminated soils removed from the environment:

<u>293</u>	20 th & Factor
293	FY2013 Total

Groundwater Wells Installed

2	Central and Camelback
4	Miracle Mile
9	Pinal Creek
2	Shannon Road
6	Silver Bell LF
1	Tyson Wash
2	7 th & Arizona
9	7 th & Bethany Home Road
4	7 th & Missouri
<u>3</u>	Nogales Grand Avenue
42	FY 2013 Total

Soil Vapor Wells Installed

3	West Central Phoenix - North Plume
1	7 th & Arizona
<u>2</u>	7 th & Bethany Home Road
6	FY 2013 Total

Groundwater Samples Collected

2,925 FY 2013 Total

Soil/Soil Gas Samples Collected

470 FY 2013 Total

Community Involvement Activities

In fiscal year 2013 ADEQ, as part of the WQARF program, held the following Public Meetings:

- 2 Broadway Pantano
- 1 Central & Camelback
- 3 Cooper & Commerce
- 2 East Central Phoenix Sites
- 1 Miracle Mile
- 2 Park Euclid
- 1 South Mesa
- 1 7th and Bethany Home Road
- 1 20th and Factor
- 4 Western Avenue
- 1 West Van Buren
- 19 FY 2013 Total

Legal Activities

Fiscal year 2013 ADEQ executed the following legal actions in support of the WQARF program:

- Legal Notices:

7th and Arizona: In FY 2013, ADEQ sent out 49-287.03 Notice that initiated the Remedial Investigation/Feasibility Study process to all parties who “may be liable”.

20th and Factor: In FY 2013, ADEQ sent out 49-287.03 Notice that initiated the Remedial Investigation/Feasibility Study process to all parties who, “may be liable” and the initiation of the Community Advisory Board.

Shannon Road: In FY 2013, ADEQ sent out 49-287.04 Notice to the list of preliminary responsible parties of the opportunity to provide comment to allocation and the Proposed Remedial Action Plan.

- Prospective Purchaser Agreements Applications Received:
 - 5 Received
 - 3 Approved

- Access Agreements Completed
 - 40 licenses and easements

- Deposition of witnesses
 - 2 for Broadway Pantano

- Potentially Responsible Parties Reports
 - 11 reports completed

FY 2013 Cost Recovery Activity

Description	# of Packages	Dollar Amount	Total Dollar Amount
Packages at the beginning of the year:	0		\$ 0
New Packages:	41		\$ 538,885.40
19 th Avenue Landfill	1	\$ 5,368.19	
Air Liquide	2	\$ 2,032.38	
Asarco-Hayden	4	\$ 12,559.31	
RID	3	\$ 14,852.27	
Honeywell	3	\$ 53,105.65	
D-Velco	1	\$ 35,000.00	
Motorola 52 nd Street	8	\$199,826.71	
North Indian Bend Wash	1	\$ 33,259.23	
PGA-South	6	\$106,941.13	
Pinal Creek	10	\$ 61,986.77	
Prudential	2	\$ 1,311.02	
United Industrial	1	\$ 4,109.57	
United Industrial - Over		(\$ 1,478.83)	
West Van Buren Work Group	1	\$ 10,000.00	
Honeywell - Transfer NSF		\$ 12.00	
Payments Received	43		\$ 538,885.40
Balance at end of year	0		\$ 0

ACTIVITIES AND ACCOMPLISHMENTS AT FEDERAL SITES

Pursuant to A.R.S. § 49-282(E)(1), WQARF can be used to provide state matching funds or to meet other obligations as prescribed by § 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). WQARF funds are also used for oversight activities at state-lead CERCLA sites which are reimbursed by the responsible parties. Summaries are provided below of activities and accomplishments at federal sites supported by ADEQ.

Remediation

- Millions of gallons of groundwater treated:

48	Apache Powder
2	Hassayampa Landfill
116	Motorola 52 nd St. - OU1
1,169	Motorola 52 nd St. - OU2
3,673	North Indian Bend Wash
1,291	Phoenix-Goodyear Airport - North
268	Phoenix-Goodyear Airport - South
1,635	TIAA/Air National Guard Tucson
<u>668</u>	US Air Force Plant 44, Tucson
8,870	FY 2013 Total

- Pounds of volatile organic compounds removed from the environment:

12,172	Hassayampa Landfill
894	Motorola 52 nd Street/OU1
478	Motorola 52 nd Street/OU2
2,674	North Indian Bend Wash
896	Phoenix-Goodyear Airport/North
57	Phoenix-Goodyear Airport - South
280	TIAA/Arizona Air National Guard Tucson
<u>110</u>	US Air Force Plant 44, Tucson
17,561	FY 2013 Total

- Pounds of other hazardous substances removed from the environment:

225	Honeywell 34 th Street
12	Phoenix Goodyear Airport North
5,000	Yuma Proving Grounds
1	Asarco Hayden
<u>25,447</u>	Apache Powder
30,685	FY 2013 Total

Community Involvement Activities at Federal Sites

- Fact Sheets and Public Notices:

1	Honeywell 34 th Street
1	South Indian Bend Wash
1	North Indian Bend Wash
1	Phoenix Goodyear Airport North

- 1 Phoenix Goodyear Airport South
- 5 **FY 2013 Total**

- Public Meetings:

- 4 Arizona Air National Guard
- 4 US Air Force Plant 44, Tucson
- 4 Honeywell 34th Street
- 4 Motorola 52nd Street
- 6 Phoenix Goodyear Airport North and South
- 4 Tucson Airport Area Projects
- 26 **FY 2013 Total**

EMERGENCY RESPONSE PROGRAM

Pursuant to A.R.S. 49-282(E) (8), WQARF monies may be used for all reasonable cost incurred for remedial actions taken in response to a release or threat of a release of a hazardous substance or pollutant that presents an emergency to the public health or the environment.

FY 2013 Activities and Accomplishments

The Emergency Response Unit (ERU) was notified of 160 reported incidents and handled more than 250 calls/complaints received on the "Spill Report Line". During the fiscal year the ERU took part in several drills and exercises around the state. The ERU also provided several outside agencies with both on-scene and technical assistance involving incidents around the state.

Significant Emergency Response Activities include:

Waste Fuel Recovery Project: This year the ERU partnered with the Underground Storage Tank Section on a project designed to identify abandoned underground storage tanks that may still contain fuel and pose a threat to the environment due to age and tank failure. This project allows the ERU to gain access the tanks and undertake defueling actions that mitigates the threat of a possible release. So far the ERU has taken actions on 4 sites and we hope to complete as many as 50 more during the course of the next year.

Unattended Drums of Mercury Contaminated Waste: The ERU responded to a report of eight 55 gallon drums that were abandoned/unattended behind a shopping center located in north Phoenix. During the response action, it was determined that the drums contained mercury contaminated waste. Thru the efforts of the ERU and the Hazardous Waste Inspections and Compliance Unit (HWICU), several potential responsible parties were identified but no one was willing to take responsibility for the materials. Over the course of 3 weeks the HWICU staff

attempted to identify the true responsible party and generator of the waste but these efforts failed. The unattended mercury waste continued to be a threat to area residents and businesses including a food service operations and it was getting clear that none of the potential responsible parties were going to take ownership of the waste. For that reason ERU was given the authority to use WQARF monies to remove and dispose of the drums of waste. Approximately \$10,000 dollars were spent on this removal action.

Wildfire Season of 2013: The summer of 2013 will be known as the deadliest wildfire season in Arizona history. The Yarnell Hill Fire began on June 28th as a small lightning caused fire in a remote area near the Town of Yarnell. In the beginning, the small fire generated little cause for concern but over the course of the next couple of days, monsoon related weather caused the fire to grow at an alarming rate and move toward the town. Wildland fire fighters from several federal, state and local agencies were dispatched to the area and efforts were made to contain the fire and to prevent it from spreading into the Town of Yarnell and the community of Peoples Valley. On June 30th, 19 members of the Granite Mountain Hotshot Team were killed when a monsoon storm cause the fire to change direction and overrun their position. The fire then moved into the Town of Yarnell destroying more that 100 homes and nearly twice that many outbuildings and related structures. Home and structure were also destroyed and damaged in the community of Peoples Valley. The ERU was then tasked by the Arizona Division of Emergency Management to respond to the area with a team of hazmat specialists to conduct hazardous materials risk assessments in and around the communities that were impacted by the fire. This deployment was completed on July 6th, 2013.

At this time the ERU continues to work with federal, state, county and local agencies on wildfire related issues around the state.

A.R.S. 49-282-(E) (11) also provides for the reimbursement to political subdivisions for the costs incurred in response to a release or a threat of a release of a hazardous substance or pollutant that presents an immediate and substantial endangerment to public health or the environment. In FY 2013 the Roosevelt Irrigation District (RID) applied for and was reimbursed, through this provision, \$250,000.00 for costs incurred in response to a release of a hazardous substance. RID wells are within the West Van Buren WQARF site boundaries.

WATER QUALITY ASSESSMENT AND MANAGEMENT PROGRAM

Pursuant to A.R.S. § 49-282(E)(3), WQARF funds are used for the costs of monitoring, assessing, identifying, locating, and evaluating the degradation, destruction, loss of or threat to the waters of the state resulting from a release of a hazardous substance to the environment. Pursuant to A.R.S. § 49-282(E)(6), WQARF monies are also used for the costs of the water quality monitoring program described in A.R.S. § 49-225. A description of Water Quality Assessment and Management Program FY 2013 activities and accomplishments can be found in Appendix 5.

WELL INSPECTION AND APPROVAL PROGRAM

Pursuant to A.R.S. § 282(E)(12) WQARF funds are used to fund the Arizona Department of Water Resources to conduct well inspections and remedial actions, and for the review and approval of well construction design necessary to prevent vertical cross-contamination. The FY 2013 accomplishments of the Well Inspections and Approval Program can be found in Appendix 6.

RISK ASSESSMENT PROGRAM

Pursuant to A.R.S. § 282(E)(15) WQARF funds are used to fund the Arizona Department of Health Services to assess and evaluate the effect of a release or a threatened release of hazardous substances to the public health, welfare, or the environment. The FY 2013 accomplishments of the Risk Assessment Program can be found in Appendix 7.

APPENDIX 1

FY 2014 WQARF Projected Site Budgets

FY 2013 WQARF Program Budget

FY2014 WQARF Site Budgets

Site Name	Projected Budget
7th Ave and Arizona	\$26,000
7th Avenue and Bethany Home Road	\$400,000
16th Street and Camelback	\$116,000
20th and Factor	\$413,000
56th Street and Earll Drive	\$0
Broadway Pantano	\$84,000
Central Avenue & Camelback Road	\$410,000
Cooper and Commerce	\$625,000
ECP-24th Street and Grand Canal	\$445,000
ECP-32nd Street and Indian School	\$1,290,000
ECP-38th Street and Indian School	\$448,000
ECP-40th Street and Indian School	\$461,000
ECP-40th Street and Osborn	\$348,000
ECP-48th Street and Indian School	\$1,344,600
Estes Landfill	\$34,000
Klondyke Tailings	\$72,000
Los Reales Landfill	\$17,000
Main Street and Kofa	\$0
Miracle Mile	\$57,000
Mountain View	\$15,000
Nogales Grand Ave.	\$3,000
Park Euclid	\$17,000
Payson PCE	\$290,000
Pinal Creek	\$0
Shannon Road-Rillito Creek/El Camino del Cerro	\$152,000
Silverbell Landfill	\$17,000
South Mesa	\$45,000
Tonto & Cherry	\$18,000
Tyson Wash	\$50,000
Vulture Mill	\$0
WCP - North Canal Plume	\$127,000
WCP - North Plume	\$248,000
WCP - West Osborn Complex (site-specific)	\$63,000
WCP - East Grand Ave.	\$0
WCP - West Grand Avenue	\$17,000
Western Avenue PCE	\$93,000
West Van Buren	\$285,000
subtotal	\$8,030,600
Proposed New Sites	\$0
Site specific community involvement	\$79,000
Preliminary Investigations	\$176,000
WQARF Sites Budget FY2014*	\$8,285,600

*Money reimbursed by Federal Project Unit for cost recovery not included in sites total

\$333,500

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Expenditure Statement

For Period Ending: 13th Month - FY13

EXPENDITURE CATEGORIES	SPENDING PLAN	EXPENDITURES FY 2013
Core Expenditures:		
WQARF Professional & Support Staff	4,614.0	3,722.9
Professional & Outside - Remedial Projects	34.0	91.2
Hydrologic Support & Assessment	394.7	265.2
Professional & Outside - Hydrologic Support & Assessment	70.0	32.9
Preliminary Investigations	131.6	81.9
Emergency Response	245.0	0.0
Attorney General's Office	546.0	568.7
PRP Identification/Liability	957.0	652.4
Litigation	50.0	10.3
Appeals	0.0	0.0
Advisory Board	0.0	0.0
Rule Development	0.0	0.0
Community Involvement/General WQARF	1.0	0.0
Subtotal - Core Expenditures	7,043.3	5,425.6
Registry Sites		
New Sites	450.0	
RI/FS (RI, RO, FS, ERA & IRA Investigations)	6,529.2	4,466.3
Clean-up (PRAP/ROD, final O&M)	247.8	532.0
Subtotal - Registry Sites	7,227.0	4,998.3
Community Involvement (CAB)	158.5	63.8
Preliminary Investigation	186.8	77.1
Subtotal - Registry Sites & PI	7,572.3	5,139.2
Subtotal - WQARF Program	14,615.6	10,564.8
Dept of Health Services - Risk Assessment	60.0	44.0
Dept of Water Resource - Appropriation Transfer Out	300.0	300.0
Emergency Response - Aid to Municipalities	35.0	259.0
Voluntary Program	0.0	0.0
Total Disbursements	15,010.6	11,167.7

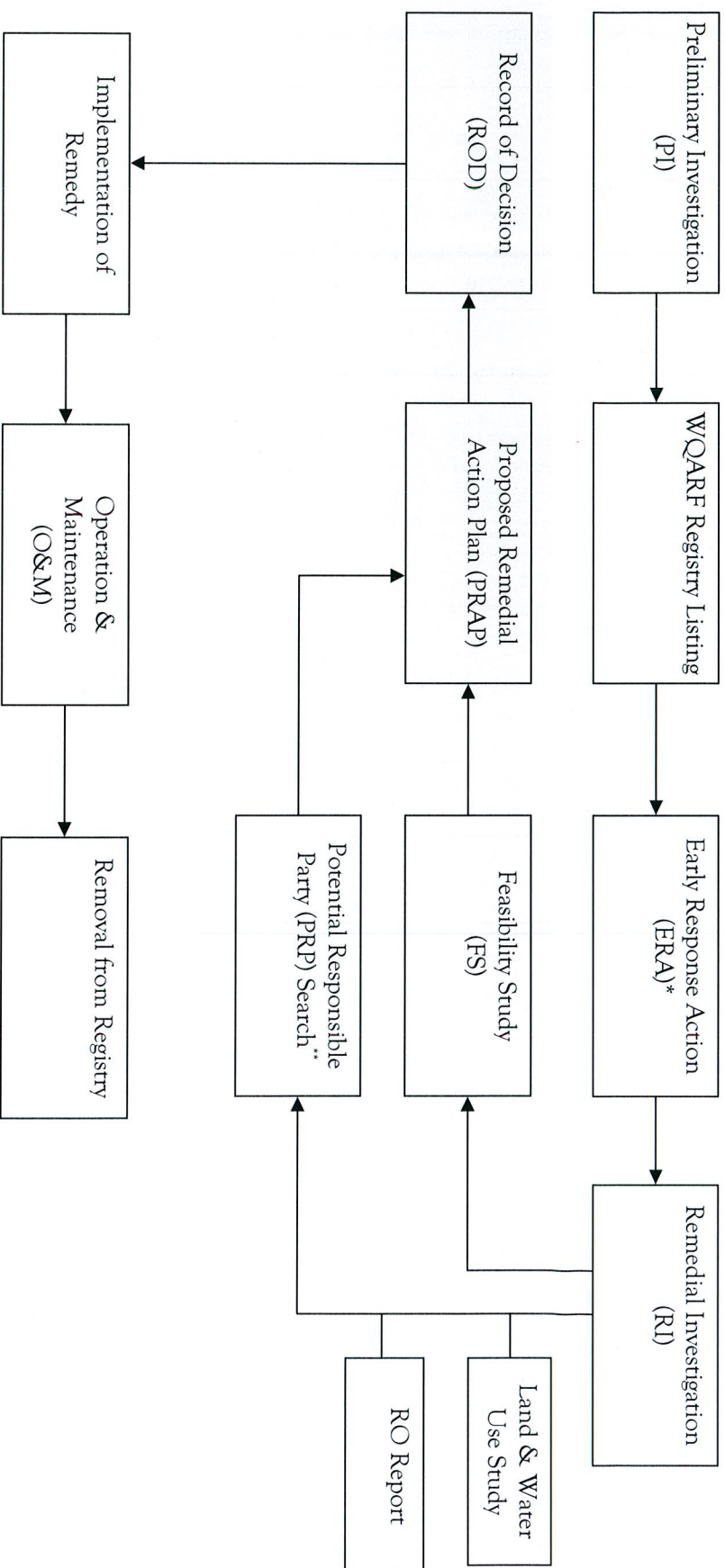
Footnote: Expenditures total does not include general fund sweep amount.

All figures expressed in thousands.

APPENDIX 2

WQARF Remedy Selection Phase Chart And Narrative Description

WQARF Phases



* - ERAs can occur anytime before a PRAP and can occur concurrently with the rest of phases

** - PRP search proceeds concurrently with RI/FS

DESCRIPTION OF WQARF PHASES

Preliminary Investigation (PI)

The WQARF process begins when ADEQ receives information about a release or potential release of a hazardous substance. This information may come from a citizen complaint, from an investigation conducted by ADEQ or from an investigation conducted by an outside party. ADEQ assesses whether the information is credible, if another regulatory program has jurisdiction, or if the site is already being cleaned up voluntarily. If a potential release has occurred and no other regulatory program has jurisdiction, a WQARF PI is initiated.

The purpose of the PI is to confirm the release or potential release and determine whether further investigation or action is necessary. The PI is not a full investigation to determine the extent of the contamination nor is its purpose to identify the parties potentially responsible for the contamination. If ADEQ determines that no additional investigation or action is necessary, the site is removed from further consideration. If ADEQ determines that additional investigation or action is necessary, the site is scored using the eligibility and evaluation model and is eligible for listing on the WQARF registry.

WQARF Registry Listing

The WQARF registry provides public access to information on WQARF sites. The registry replaces the former WQARF Priority List and provides a list of sites where groundwater and/or soil contamination is known to be present. Sites listed on the WQARF registry qualify for WQARF funds for investigation and/or clean up. The WQARF registry contains a brief description of each site, the site's score, and the current status of the cleanup. The date that a site is added to the registry does not necessarily indicate the date that a cleanup is started.

Early Response Actions (ERAs)

Many years are normally required to conduct a full investigation of a site and select the remedy. ADEQ developed the ERA process to address contamination where human health or the environment is potentially impacted, where sources of contamination can cause significant environmental impact, or where early actions can save significant WQARF funds by limiting the spread of contamination. ERAs may be relatively inexpensive short-term actions, such as fencing or providing alternative water supplies, or they may involve an expensive large-scale groundwater treatment system.

An initial evaluation (ERA evaluation) of risks at a site occurs immediately after a site is listed in the WQARF registry. If a current or potential risk to human health or the environment exists through direct contact with a hazardous substance, an ERA may be

implemented immediately. If there is no risk, ADEQ collects information about a site to determine if an ERA is appropriate to protect a water supply or to prevent the spread of contamination. A site is continuously reevaluated as more data becomes available and an ERA can be implemented at any time prior to the selection of a final remedy. Just as with the selection of a final remedy, the implementation of an ERA includes design and construction and may include a period of operation and maintenance.

The Remedial Investigation (RI)

The purpose of a RI is to collect enough information to determine the appropriate cleanup actions needed at the site. The information collected includes the physical characteristics of the site; the nature, extent and sources of the contamination and the actual and potential impacts of contaminants on the site to public health, welfare and the environment. The RI also identifies present and reasonably foreseeable uses of land and waters of the state that have been or may be impacted by the contamination.

After conditions at the site are known, ADEQ holds public meetings to establish remedial objectives. ADEQ invites land owners, local governments, water providers, and the public to discuss land and water uses impaired or lost due to the contamination as well as future uses which could be impacted by the contamination. Based upon this input, ADEQ prepares a report of the proposed remedial objectives for the site that lists the uses, the time-frames when completion of cleanup is required to protect or provide for the use, and the duration of the required actions.

The Feasibility Study (FS)

Using the information collected in the RI, the FS documents technologies and options that may achieve remedial objectives. Various options are identified and compared to facilitate selection of the most feasible and cost-effective cleanup method for the site.

Proposed Remedial Action Plan (PRAP)

After the FS is completed, ADEQ prepares a PRAP to document the proposed cleanup or remedy. The plan describes the means by which the proposed remedy will meet each of the remedial objectives identified in the RI and how accomplishment of the remedial objectives is to be measured. The plan also provides an estimate of the cost of the cleanup.

If ADEQ intends to seek recovery of costs from potentially responsible parties, notice is provided to these parties of the opportunity to submit an accounting of cleanup costs they may have incurred at the site and of the opportunity to object to costs submitted by other potentially responsible parties. Any costs approved by ADEQ as reasonable and necessary may be used as a credit against potential liability in a settlement or allocation.

Record of Decision (ROD)

The ROD documents the selected remedy for a site. The ROD includes an estimated cost, time-frames for beginning and completing the cleanup process, and a demonstration that the selected remedy meets the remedial objectives. After the ROD is signed, an allocation process follows in which past and future costs are distributed among responsible parties.

Implementation of Remedy

The design and implementation stage includes the development of the engineered design of the selected remedy and implementation of the remedy through construction. A period of operation and maintenance may follow the design and construction activities.

Operation and Maintenance (O&M)

The O&M is conducted pursuant to a schedule applicable to the type of remedy completed. This includes performance of all operations and maintenance steps required for performance of the remedy.

Removal from Registry

Once the remedy is completed at a site, or ADEQ determines that no further investigation or cleanup is needed, the site is eligible for delisting from the WQARF registry.

APPENDIX 3

Revenues and Expenditures

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
 WQARF REVENUES AND EXPENDITURES
 THROUGH THE PERIOD ENDING: 13th Month FY13
 PREPARED BY OFFICE OF FISCAL SERVICES July 29, 2013

	FY 12 Actual	FY 13 Projection	FY 13 Actual
Balance			
Beginning Fund Balance - WQARF & Priority Sites	6,288.0	7,385.7	7,067.4
Beginning Fund Balance - Site Specific Account	887.8	887.8	1,206.1
Sub-Total: Funds Available	7,175.8	8,273.5	8,273.5
Prior Year Corporate Income Tax Reversion	0.0	0.0	0.0
Total: Balance from Prior Year	7,175.8	8,273.5	8,273.5
Revenue Subject to 18M Cap			
Corporate Income Tax	7,000.0	7,000.0	7,000.0
Fees:			
Municipal Water (ARS 42-5302)	2,546.1	1,977.3	2,427.1
Fertilizer Registration (ARS 3-272)	58.5	22.7	60.3
HW Facility Registration Fee (ARS 49-929/49-930)	203.9	218.8	229.3
HW Manifest Resubmittal Fee (ARS 49-922.01)	0.0	0.0	
Industrial Discharge Permit Fee (ARS 49-209)	34.0	34.1	25.2
Pesticide Registration (ARS 3-351)	874.0	1,010.0	1,085.6
Quality Assurance Fee (ARS 45-616)	331.2	0.0	330.0
Fees Subtotal	4,047.7	3,262.9	4,157.5
Total: Revenue Subject to 18M Cap	11,047.7	10,262.9	11,157.5
Revenue Not Subject to 18M Cap			
Consent Decrees	405.0	0.0	75.0
Cost Recovery (ARS 49-282)	504.8	0.0	538.9
Responsible Parties Subtotal	909.8	0.0	613.9
Prospective Purchaser Agreement (ARS 49-285.01)	2.5	0.0	16.9
Interest (ARS 49-282)	88.3	50.0	89.5
Prior Year Reimbursement (ADHS)	20.0	0.0	12.0
Other Income	110.8	50.0	118.4
Other Revenue Subtotal	110.8	50.0	118.4
Total: Revenue Not Subject to 18M Cap	1,020.6	50.0	732.2
Beginning Balance and Revenue	19,244.1	18,586.4	20,163.2
Expenditures			
Non-Site Expenditures	5,021.7	7,138.3	5,728.5
Site Expenditures	5,112.6	7,572.3	5,139.2
Transfers Out	300.0	300.0	300.0
General Fund Sweep	536.3	0.0	0.0
Total Expenditures	10,970.6	15,010.6	11,167.7
Proposed Carry Forward			
Beginning Balance and Revenue minus Expenditures	8,273.5	3,575.8	8,995.6
Revenue in Excess of 18M Cap to be Reverted	0.0		0.0
Uncommitted Balance/Carry Forward	8,273.5	3,575.8	8,995.6

Note: All figures expressed in thousands.

APPENDIX 4

WQARF Site Updates

**Department of Environmental Quality
2013 Water Quality Assurance Revolving Fund Registry**

Pursuant to Arizona Revised Statute (A.R.S.) §49-287.01 (E), the Arizona Department of Environmental Quality (ADEQ) is providing this annual report of the location, remedial status, and score of the sites on the Water Quality Assurance Revolving Fund (WQARF) Registry as of September 1, 2013. The Registry includes those sites within the state that may pose risk to public health, welfare or the environment from the release of hazardous substances and for which there is current or planned investigation and cleanup. There are 34 sites on the WQARF Registry:

**21 in Maricopa County,
7 in Pima County,
3 in Gila County,
1 in Graham County,
1 in La Paz County, and
1 in Yuma County**

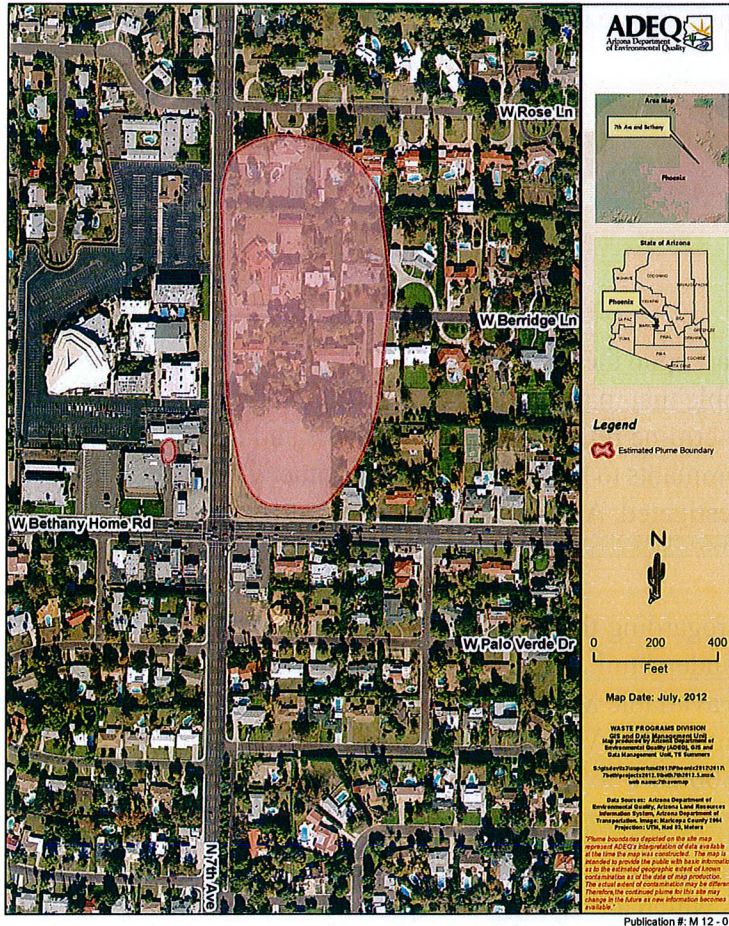
Sites on the Registry are scored based in part upon the type of contamination present, the location of the contamination, and the number of people that may be affected. The maximum score a site may receive is 120. Scores are used to help determine relative risk from the site and do not necessarily mean that there is direct exposure of contaminants to humans or the environment. Whether the site is currently being remediated or is being investigated, ADEQ takes steps to identify the contamination and to prevent exposure.

The Registry and additional information regarding these sites is available on ADEQ's web site at <http://www.azdeq.gov/environ/waste/sps/index.html>. With 24-hour notice, an appointment to review the Registry and additional information is available Monday through Friday from 8:30 a.m. to 4:30 p.m., at ADEQ, Records Management Center, 1110 W. Washington Street, Phoenix, AZ. Please call (602) 771-4380 or (toll-free in Arizona) 800-234-5677 to schedule an appointment.

Note: As an aside, there are 17 active National Priority List (NPL) sites, three delisted NPL sites, and one Superfund alternative site in Arizona, which are all federal Superfund cleanup sites. There are also 10 Department of Defense (DoD) cleanup sites in Arizona with an additional 206 formerly used defense sites that have been or will be investigated. Information on these sites is available at the following ADEQ web site link: <http://www.azdeq.gov/environ/waste/sps/siteinfo.html>.

7th Avenue and Bethany Home Road – This site was placed on the WQARF Registry on August 25, 2004 and has a score of 29. The site is located in Phoenix and is bounded to the north by W. Rose Lane, to the south by W. Bethany Home Road, to the east by N. Fifth Avenue and to the west by N. Eighth Avenue, and includes the 2.6-acre former shopping center that housed a dry cleaning facility.

7th Avenue and Bethany Home Road WQARF Site - Phoenix, Arizona



ADEQ initiated an Early Response Action (ERA) evaluation on the site in October 2004 to collect data necessary to characterize the source area of tetrachloroethene (PCE) contamination below the site. Based on the results of the ERA evaluation, soil vapor extraction (SVE) was chosen for remediation of PCE contaminated soil beneath the site. The SVE system began operations in June 2005 and the SVE system was shut down in January 2006 after recovering approximately 380 pounds of volatile organic compounds (VOCs). Confirmation soil samples indicated that the source area soils had been successfully remediated to levels that are below ADEQ Soil Remediation Levels and Groundwater Protection Levels.

ADEQ initiated an investigation of an additional dry cleaner in the area of the site. During March 2008, a site investigation was conducted which indicated that PCE had been released

to the soil and groundwater beneath the site but concentrations remaining in the soil, between 8.0 and 24 part per billion (ppb), at the property did not warrant further remediation. Trichloroethene (TCE) and vinyl chloride are also present above their respective Aquifer Water Quality Standard (AWQS).

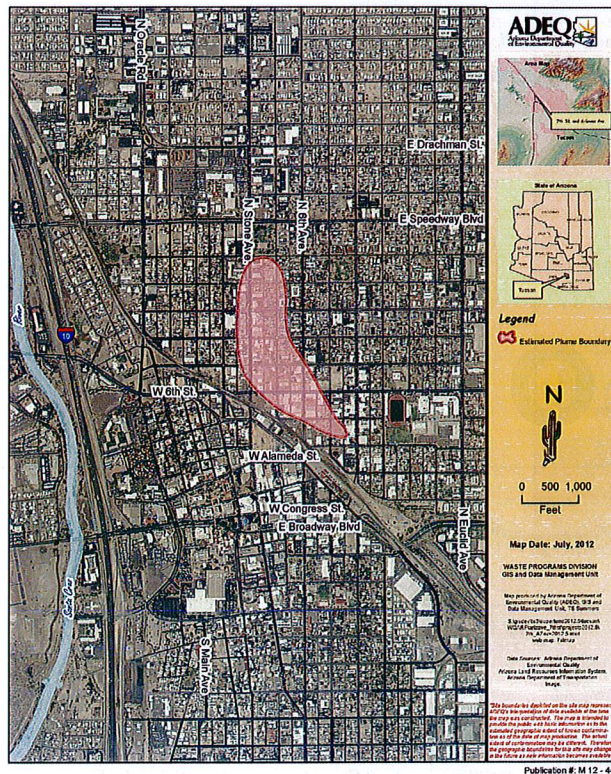
A groundwater sample collected from a Salt River Project (SRP) irrigation well located approximately one-half mile north of the site detected PCE at the AWQS of 5 ppb for the first time in January 2012. ADEQ completed the final Remedial Investigation (RI) report in April 2011. The Feasibility Study (FS) work plan was completed in May 2011 and the FS was completed in November 2012. Due to increasing concentrations of PCE at the source area as well as a SRP irrigation well located approximately one-half mile north of the site, the FS recommended enhanced

reductive de-chlorination at the site. An additional ERA was initiated and a pilot test for enhanced reductive de-chlorination began in March 2013 and is still underway. A community advisory board has been established for the site.

Contaminants of concern at the site include PCE, TCE and vinyl chloride.

7th Street and Arizona Avenue - This site was placed on the WQARF Registry in April 2000 and has a score of 40. The site is located in downtown Tucson, approximately 1/3 mile north of Broadway Boulevard and approximately 3/4 mile east of Interstate 10. The site boundary is a northwest-trending oval extending approximately 1,200 feet from the former Oliver's Cleaners facility at 300 E. Seventh Street to approximately 150 feet north of Sixth Street and approximately 100 feet east of Seventh Avenue.

7th Street and Arizona Avenue WQARF Site - Tucson, Arizona

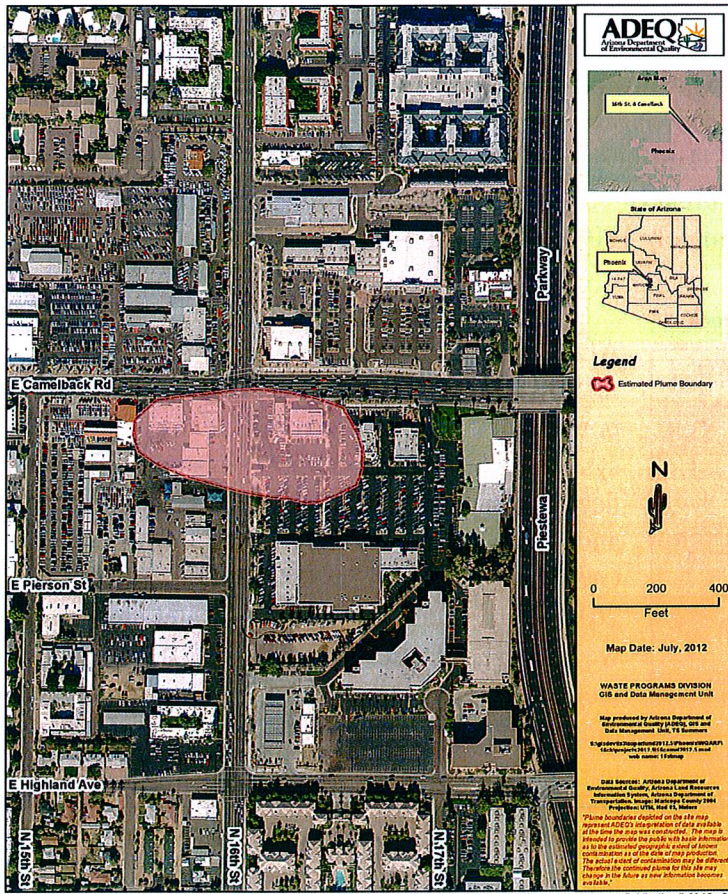


ADEQ operated a SVE system from June 2006 to July 2009 as an ERA for the site. Over 700 pounds of VOCs were removed by the SVE system prior to the system being decommissioned in July 2009. Groundwater and soil vapor samples were collected in October and November 2011 and May 2012. Three additional groundwater monitor wells were installed September 2012. These wells are used to define the northern edge of the plume and verify that the regional aquifer has not been impacted. New regional well 7AZP-3 had no VOCs and verified that the regional aquifer has not been impacted, ADEQ will move ahead with an accelerated soil RI/FS/Proposed Remedial Action Plan/Record of Decision (ROD) during fiscal year (FY) 2014.

Contaminants of concern at the site include PCE, TCE, and cis-1, 2-dichloroethene (cis-1, 2-DCE).

16th Street and Camelback Road - This site was placed on the WQARF Registry in April 1999 and has a score of 23. The site is located in Phoenix and is bounded approximately by Medlock Drive to the north, Highland Avenue to the south, 17th Street to the east, and 15th Street to the west.

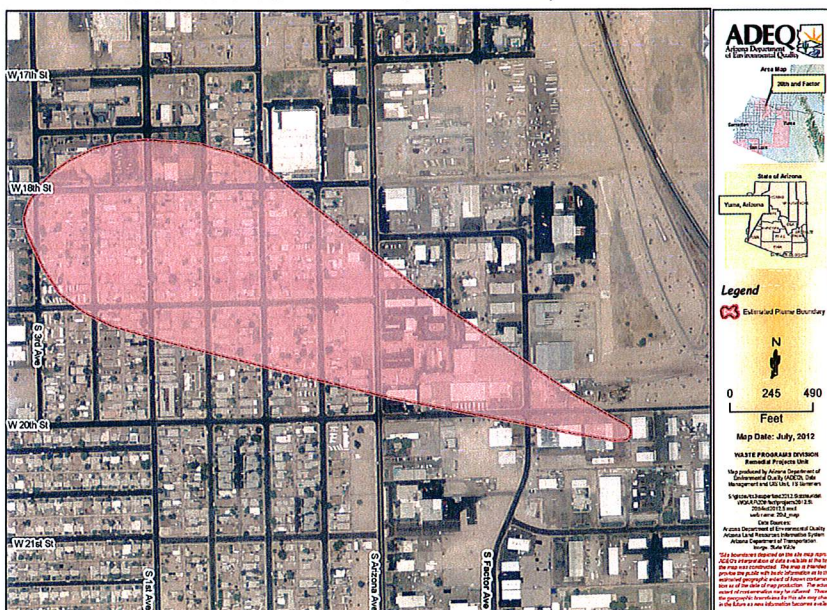
16th Street and Camelback Road WQARF Site - Phoenix, Arizona



Based on the results of an ERA evaluation conducted in 2003, ADEQ determined that SVE was not a feasible remedy for the site. Due to a lack of funding, site activities were suspended from 2008-2012. In the spring of 2013, groundwater monitoring activities were resumed. The RI is currently underway.

Contaminants of concern at the site include PCE, 1, 2-dichloropropane and 1, 2-dichloroethane (1, 2-DCA).

20th Street and Factor Avenue WQARF Site - Yuma, Arizona



20th Street and Factor Avenue - This site was placed on the WQARF Registry in March 2000 and has a score of 31. The site is located in Yuma, approximately one-half mile south of 16th Street and approximately three quarters of a mile east of Fourth Avenue.

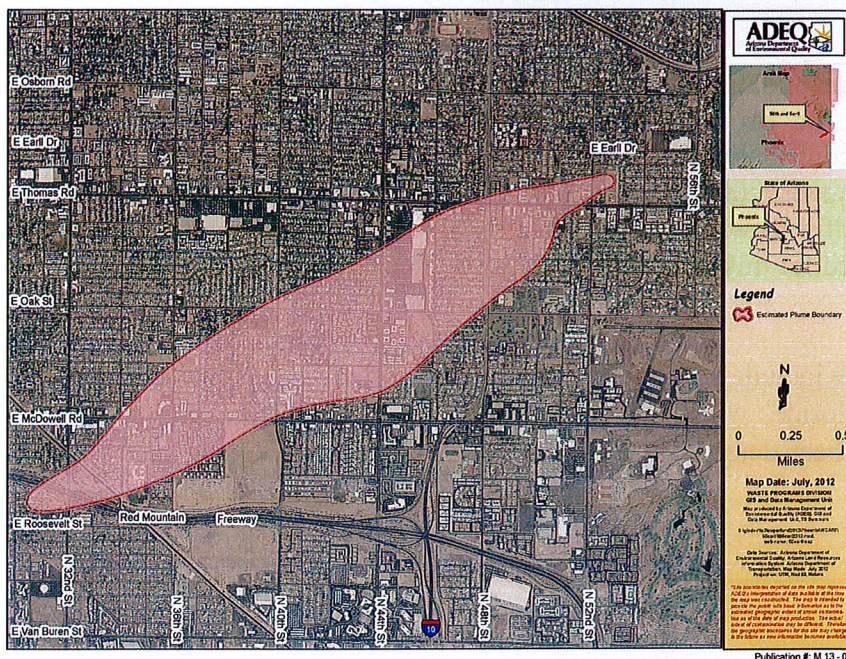
In 2002, ADEQ conducted a soil removal action and cleaned out sumps and septic tanks at an active facility as

part of an ERA. ADEQ continues to investigate the site to identify the extent of the groundwater contamination. A shallow soil vapor investigation was performed to help identify potential source areas. The soil vapor investigation included the installation of several permanent soil vapor monitor probes and performing a soil vapor survey. During February 2103, three addition monitor wells were installed to complete the lateral and vertical definition of the groundwater plume down gradient of the site. These wells are located approximately 3,800 feet down gradient of the source area property and were drilled to a depth of 160 feet. Groundwater monitoring activities are on-going and no drinking water wells have been impacted by the contamination from the site. In May 2013, ADEQ began the installation of a permanent asphalt based engineered cap for the Houston facility. The cap is being placed over the cyanide impacted soils still remaining at the site. A community advisory board was formed for this site in May 2013

Contaminants of concern at the site include PCE, TCE, cyanide and Di (2-ethylhexyl) phthalate.

56th Street & Earll Drive – This site was placed on the WQARF Registry on June 2, 2004 and has a score of 40. The site is located in Phoenix near 56th Street and Earll Drive. The plume is bounded by Earll Drive to the north, Roosevelt Street to the south, 56th Street to the east and 28th Street to the west.

56th Street and Earll Drive WQARF Site - Phoenix, Arizona

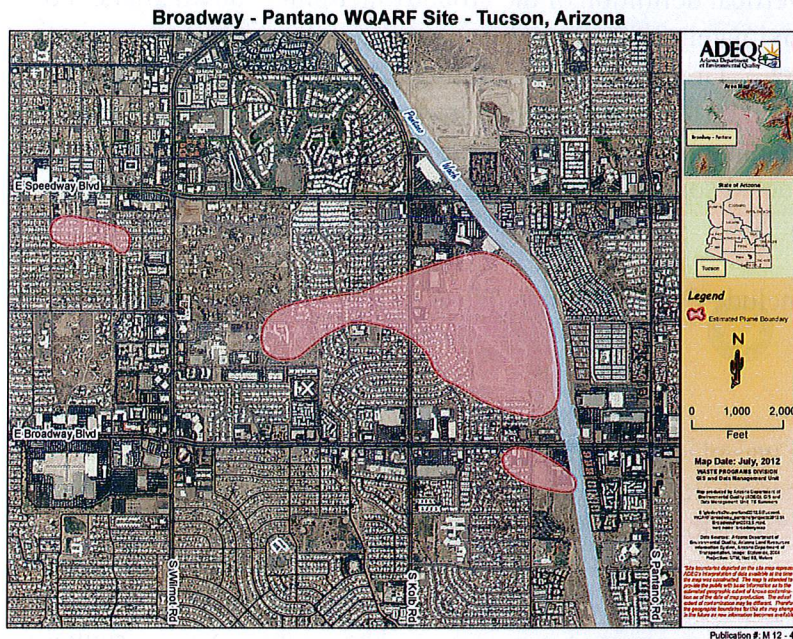


The site was originally investigated as part of the Motorola 52nd Street NPL site. However, groundwater data from both sites indicate that the two TCE groundwater contaminant plumes are separate and distinct plumes. Therefore, the site was disassociated from the larger Motorola 52nd Street NPL site. ADEQ is working cooperatively with a party potentially responsible for the contamination to further evaluate the site and develop a cleanup strategy. An ERA evaluation has been completed

and the working party negotiated a Consent Order with ADEQ. The working party submitted a work plan for a pump and treat groundwater system ERA and construction of the system is nearing completion. A community advisory board has been established for this site.

Contaminants of concern at the site include TCE.

Broadway Pantano - This site was placed on the WQARF Registry in December 1998 and has a score of 57. The site is located in the east-central part of Tucson and is bounded approximately by Speedway Boulevard to the north, Pantano Wash to the east, Broadway Boulevard to the south, and Craycroft Road to the west.



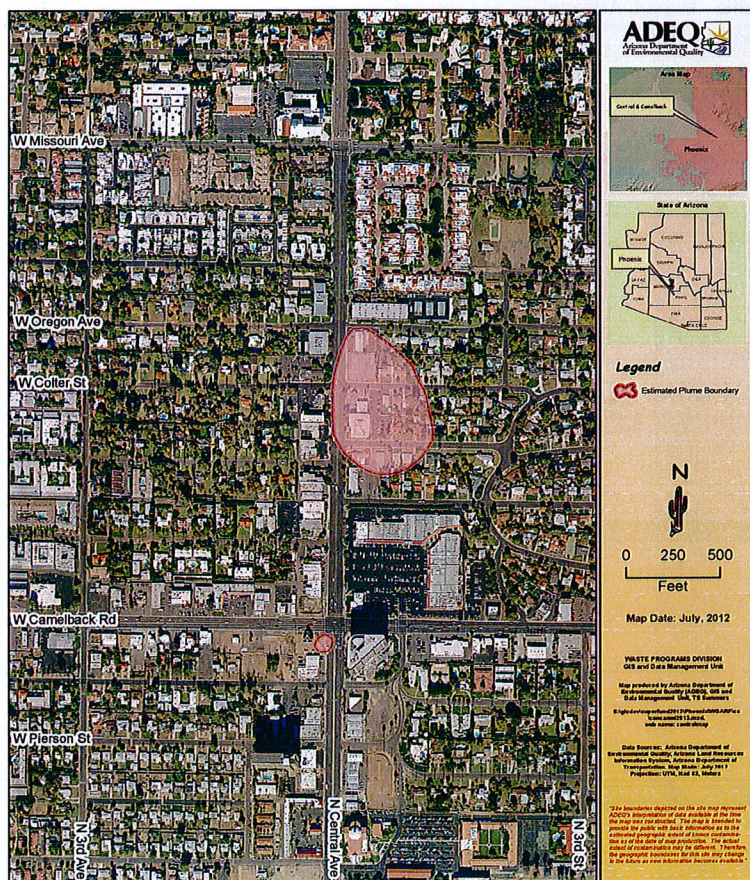
Four Tucson Water production wells have been removed from service as a result of groundwater contamination. A groundwater containment system was installed in 2003 to prevent further westward migration of contaminated groundwater. This system was shut down in October 2012 because incoming groundwater contaminant concentrations do not warrant continued operation; however the system is being maintained in a state of readiness in case site conditions change.

The sources of the groundwater contamination are the former Broadway North and South Landfills. A SVE system was installed at the Broadway North Landfill in 2000 to remove and treat contaminated VOC landfill gases contributing to the groundwater contamination. This system was operated until 2002 and removed over 5,000 pounds of VOCs. The groundwater RI report was finalized in June 2012 and the landfill RI will be finalized in fiscal year (FY) 2014. A community advisory board has been established for this site.

Contaminants of concern at the site include PCE, TCE, and vinyl chloride. Cis-1,2-dichloroethene (cis-1,2-DCE) and methylene chloride, which have historically been considered groundwater contaminants of concern, have not been detected in site groundwater at a level exceeding the AWQS since 2005.

Central Avenue and Camelback Road - This site was placed on the WQARF Registry in June 2000 and has a score of 32. The boundaries of the site are approximately Missouri Avenue to the north, First Street to the east, Pierson Street to the south and Third Avenue to the west.

Central Avenue and Camelback Road WQARF Site - Phoenix, Arizona



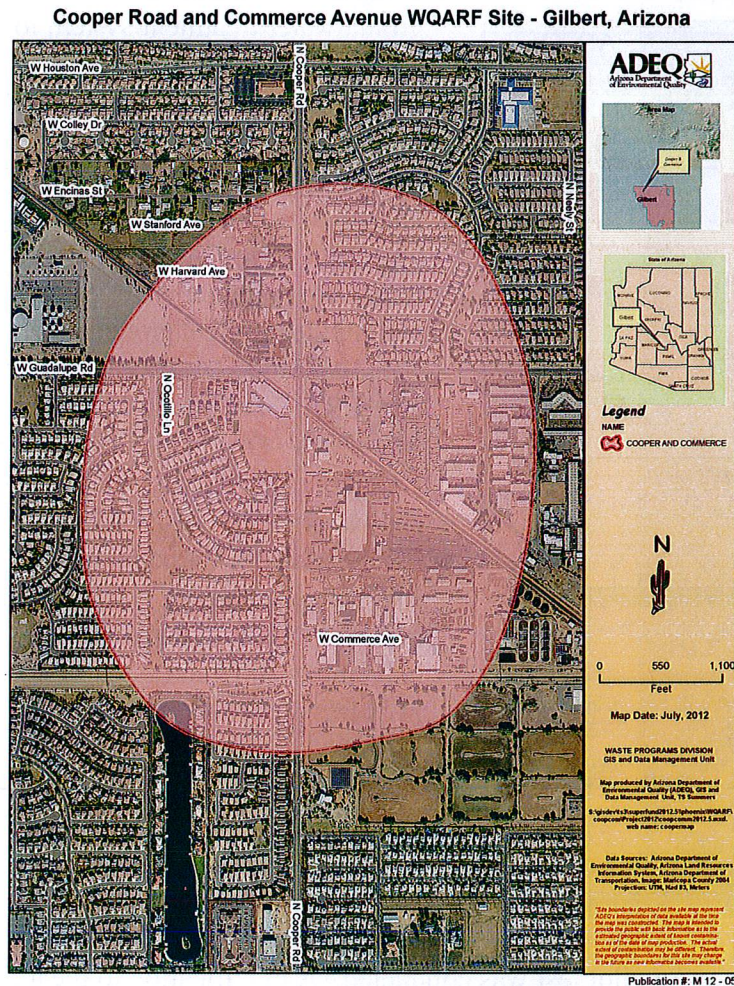
In January 2003, ADEQ completed construction of a groundwater treatment system to remediate and control the migration of contaminated groundwater at the site as an ERA. The groundwater pump and treat system has been in operation since January 2003 and treats approximately 30 gallons per minute (gpm) of groundwater.

In June 2004, ADEQ initiated an ERA evaluation of the Maroney's Drycleaner facility. Based on the results of the ERA evaluation, SVE was proposed for remediation of PCE contaminated soil beneath the site. The SVE system was installed in November 2007 and is currently in operation. The RI was initiated in 2007 and a community advisory board has been established for this site. Passive and active soil gas surveys were conducted in the vicinity of the former drycleaner's building. A

nested SVE well was installed at the site and a pilot test was conducted. A modification to the air permit is being prepared to add the new SVE well to the system.

Contaminants of concern at the site include PCE, TCE, and cis 1, 2-DCE. Other contaminants present due to past releases from gasoline underground storage tanks in the area include benzene, toluene, ethylbenzene, total xylenes, methyl tertiary butyl ether (MTBE), and DCA.

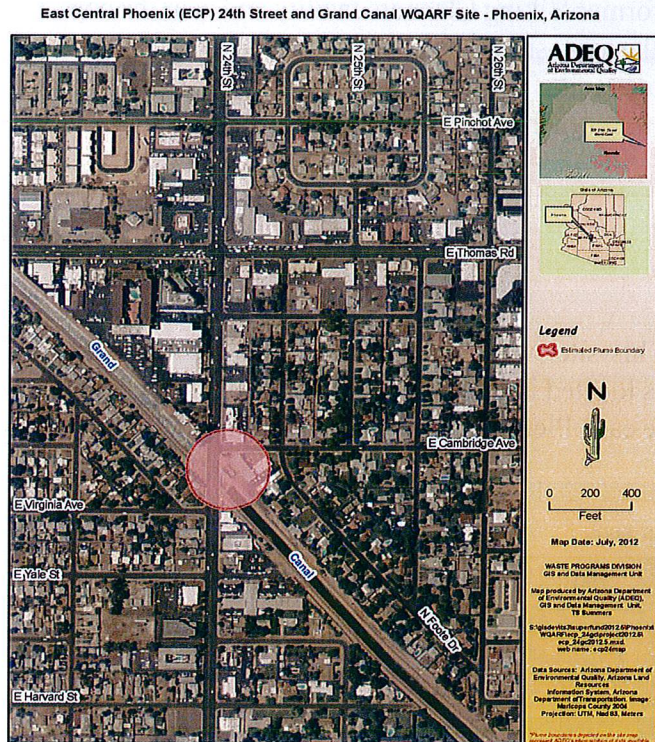
Cooper Road & Commerce Avenue - The site was listed on the WQARF Registry on June 14, 2004 and has a score of 33. The site is located in Gilbert near Guadalupe Road and Cooper Road and the plume is bounded to the north by West Encinas Street, to the south by the Neely Ranch Preserve, to the east by the North Neely Street and to the west by North Ocotillo Drive.



PCE and TCE have been detected in the groundwater at the site. In 2001, groundwater samples collected from a Town of Gilbert monitoring well detected PCE concentrations above the AWQS. A Town of Gilbert public supply well is located nearby. Installation of off-site monitor wells began in 2003 and quarterly groundwater monitoring has been conducted at the site since March 2005. ADEQ initiated an ERA evaluation of the site in March 2006 to collect data necessary to characterize the source areas of VOCs and metals contamination at the site. The ERA evaluation consisted of drilling and sampling twenty soil borings and installation of two SVE/air sparge (AS) wells, a groundwater extraction well and three soil vapor monitor wells. Construction of the SVE/AS, groundwater pump and treat remediation system was completed in July 2008. Initial

startup of the SVE system occurred on December 22, 2008. Start-up of the AS component of the system occurred in May 2009. Additional SVE wells were added in 2011 and 2012. SRP and ADEQ finalized the agreement to discharge treated groundwater to the lateral south of the site in June 2010 and the construction of the conveyances of treated groundwater to the SRP lateral and Town of Gilbert sanitary sewer were also completed in June 2010. The groundwater pump and treat system began continuous operations on August 25, 2010. During August 2013, five additional monitor wells were installed in the shallow aquifer to the north and southwest of the source area. An additional monitor well to the deep aquifer will also be installed. Installation of this well will complete the lateral and vertical definition of the groundwater contamination plume. A community advisory board has been established for the site.

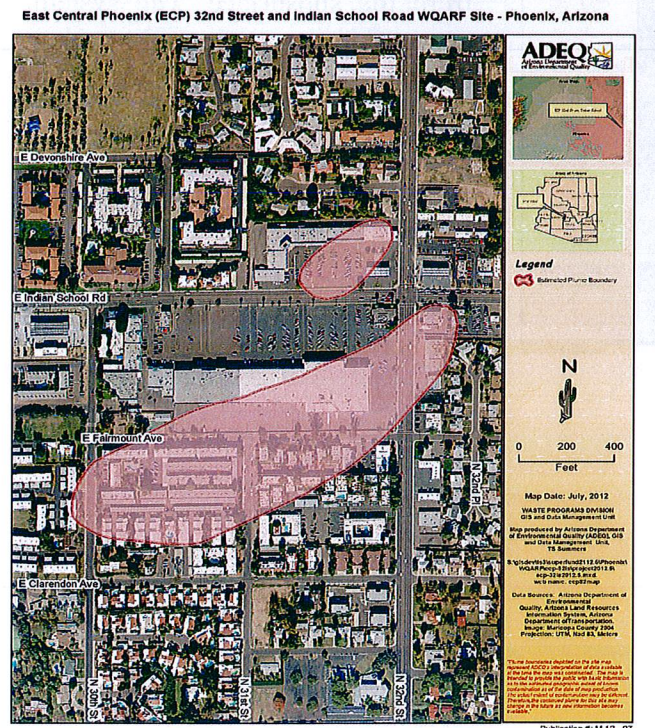
Contaminants of concern at the site in groundwater include PCE and TCE. Contaminants of concern in the soils at the site include PCE, arsenic, chromium, copper, total petroleum hydrocarbons, mercury and lead.



East Central Phoenix (ECP) 24th Street and Grand Canal - This site was placed on the WQARF Registry in May 2000 and has a score of 29. The site is located in Phoenix, and the current site boundary is a 400-foot diameter circle centered on the SRP well 16E-6.8N.

The RI began in 2007. In July 2008, CVS drilled a groundwater monitor well as part of their Prospective Purchaser Agreement. The well, approximately 800 feet north of the WQARF site, had a depth to water measurement of 86 feet and a PCE concentration of 300 micrograms per liter ($\mu\text{g/L}$). A community advisory board has been established for this site.

The contaminant of concern at the site is PCE.



ECP 32nd Street and Indian School Road - This site was placed on the WQARF Registry in May 2000 and has a score of 29. The site has two separate areas of groundwater contamination. The plumes are bounded by E. Monterosa Street to the north, 30th Street to the west, E. Clarendon Avenue to the south, and 32nd Place to the east.

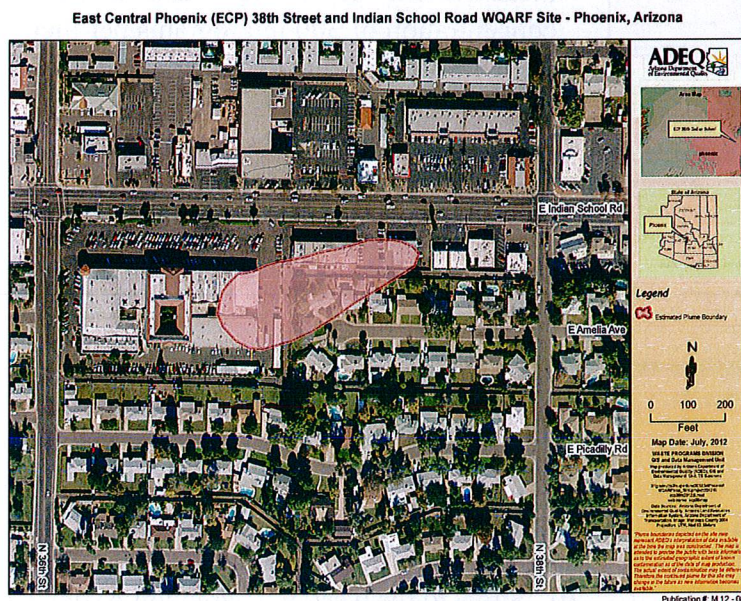
ADEQ initiated a SVE and an ERA in December 2004 and approximately 3,100 pounds of PCE had been removed through December 2006. The SVE equipment was dismantled at this site for use at another WQARF site. One groundwater monitor

well was installed for further plume definition. Recent groundwater data indicated PCE levels in the groundwater at 1,400 parts per billion (ppb).

ADEQ continues to conduct a soil vapor investigation along 31st Street and Fairmont Avenue which will be used to help characterize contaminants in the shallow subsurface soil. Short-term SVE pilot tests were conducted at Maroney's Cleaners, the former Viking Cleaners facility and near the corner of 31st Street and Fairmont Avenue. Based upon the analysis of soil vapor data, ADEQ constructed a SVE remediation system near the Maroney's Cleaners site. Construction of the SVE systems located near the former Viking Cleaners facility and near the corner of 31st Street and Fairmont Avenue will be completed during 2013.

The contaminant of concern at the site is PCE.

ECP 38th Street and Indian School Road - This site was placed on the WQARF Registry in September 1998 and has a score of 25. The site is located in Phoenix, and the plume is bounded by Indian School Road to the north, 38th Street to the east, Piccadilly Road to the south and 36th Street to the west.



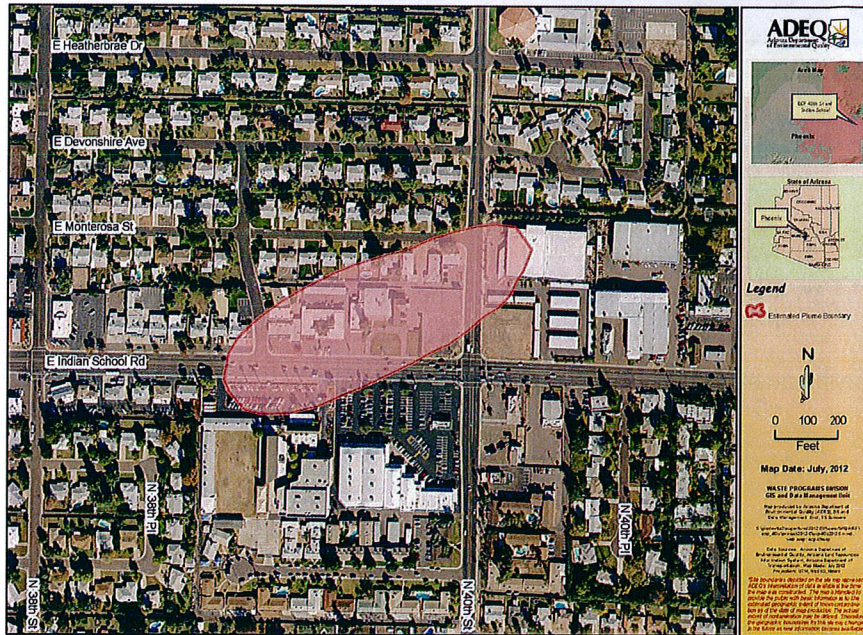
ADEQ conducted an ERA, which consisted of a SVE system to remediate the source of PCE in the soil and groundwater. The system was started in 1994 and extracted approximately 7.67 pounds of PCE from the subsurface. The system operated intermittently and was shut down in March 2003.

The RI began in 2007. A community advisory board has been established for this site.

The contaminant of concern at the site is PCE.

ECP 40th Street and Indian School Road - This site was placed on the WQARF Registry in September 1998 and has a score of 25. The site is located in Phoenix, and the plume is bounded by Devonshire Avenue to the north, 40th Street to the east, Amelia Avenue to the south, and 38th Street to the west.

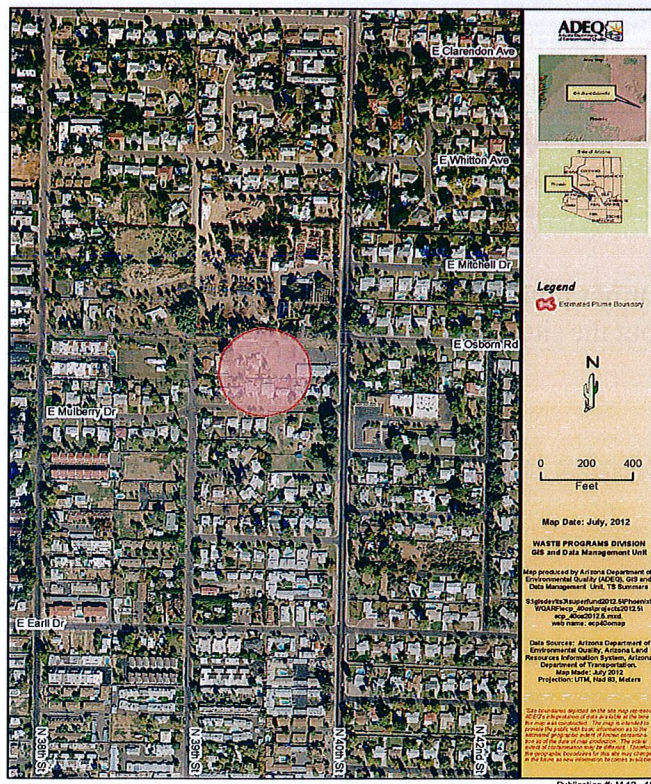
East Central Phoenix (ECP) 40th Street and Indian School Road WQARF Site - Phoenix, Arizona



ADEQ conducted an ERA, which consisted of a SVE and air sparging system to remediate the source of PCE in the soil and groundwater. The system was started on December 20, 2004 and extracted approximately 35 pounds of PCE from the subsurface. The system was shut down in June 2005.

The RI began in 2007. A community advisory board has been established for this site.

Contaminants of concern at the site include PCE and TCE.



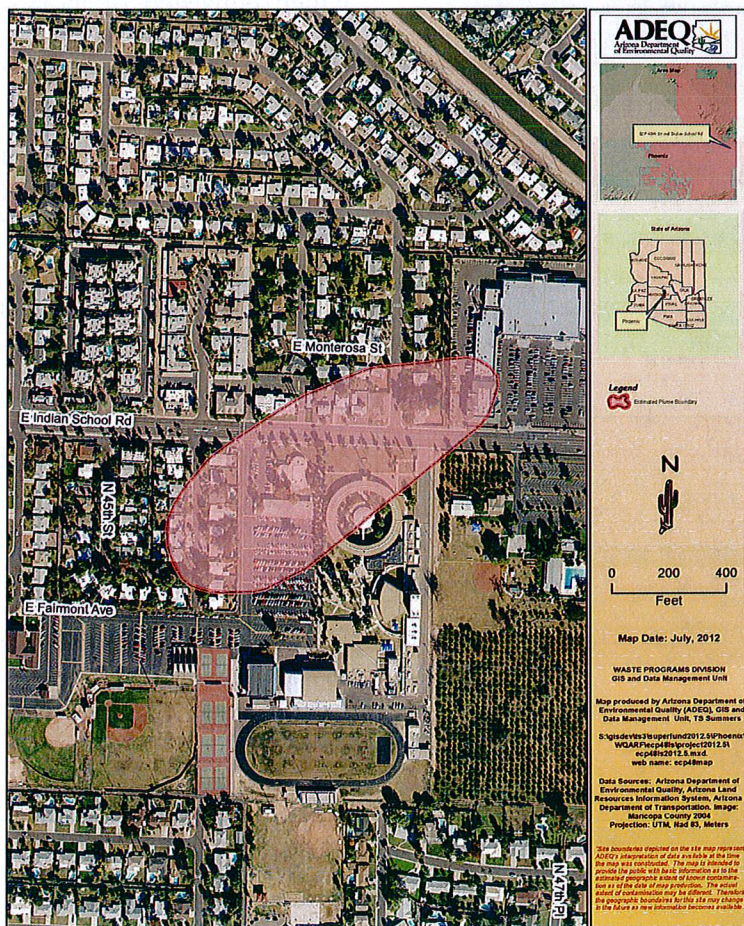
ECP 40th Street and Osborn Road - This site was placed on the WQARF Registry in May 2000 and has a score of 30. The site is located in Phoenix, and the current site boundary is a 400-foot diameter circle centered on the SRP well 17.9E-7.5N.

The RI began in 2007. A community advisory board has been established for this site.

The contaminant of concern at the site is PCE.

ECP 48th Street and Indian School Road - This site was placed on the WQARF Registry in March 1999 and has a score of 27. The site is located in Phoenix, and the plume is bounded by Devonshire Avenue to the north, 48th Street to the east, E. Fairmont Ave. to the south and 45th Place to the west.

East Central Phoenix (ECP) 48th Street and Indian School Road WQARF Site - Phoenix, Arizona



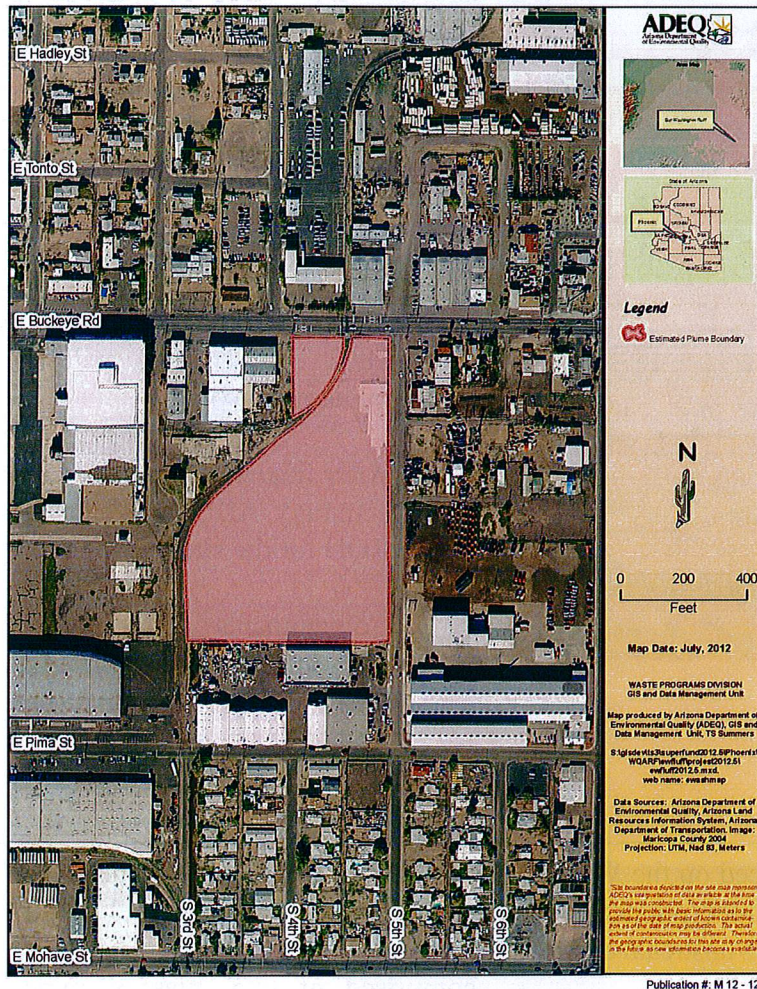
ADEQ and the SRP entered into an agreement to conduct a source control interim remedial action (IRA) in 2004. As part of the IRA, SRP constructed a SVE system to remediate the source of PCE in soil at the site. SRP relinquished control of the SVE system to ADEQ in April 2012 because the Governmental Service Contract between ADEQ and SRP for the operation of the treatment system had ended and ADEQ wanted to make modifications to the system. The system was dismantled by SRP. In January 2012, a short-term SVE test was conducted at the site and SVE was determined to still be a viable remediation option. ADEQ plans to initiate a SVE ERA at the site. ADEQ continues to conduct a soil vapor investigation along 45th Place and Indian School Road to help characterize contaminants in the shallow subsurface soil. Three

groundwater monitor wells were installed for further plume definition. Groundwater monitoring activities are currently being conducted throughout the site. A community advisory board has been established for this site.

The contaminant of concern at the site is PCE.

East Washington Fluff - This site was placed on the WQARF Registry in June 1999 and has a score of 34. The site is located in Phoenix at 433 E. Buckeye Road and is 10 acres in size.

East Washington Fluff WQARF Site - Phoenix, Arizona

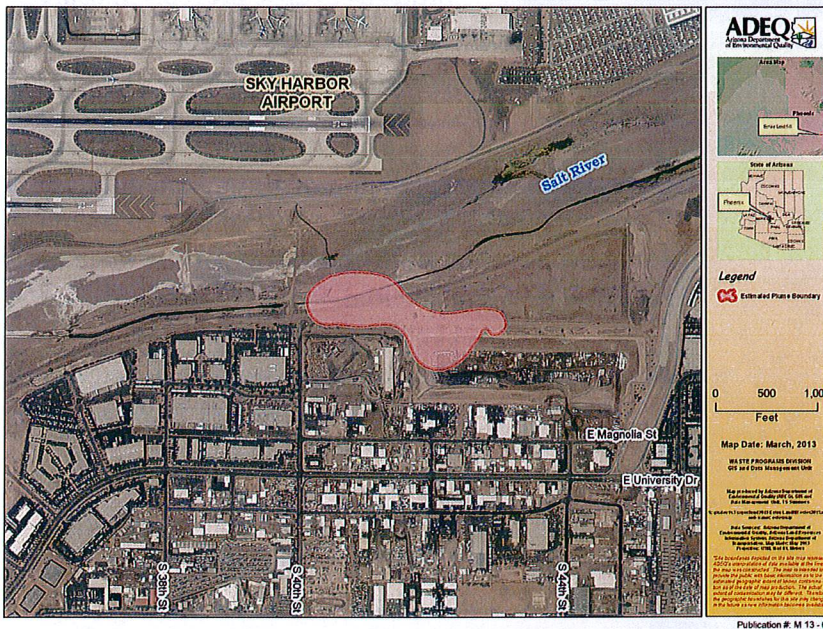


An ERA was conducted to remove auto shredder fluff piles and install a protective cap to prevent exposure to contaminants. The ERA was completed in September 2001. The RI/FS and PRAP have been completed. On May 18, 2007, a Declaration of Environmental Use Restriction (DEUR) was placed on the site that provides for a non-residential use restriction and acknowledges that there is an engineering control on the site. A modified DEUR was recorded in June 2009. The property owner (Harrison Properties) worked with ADEQ and spread crushed concrete on the cap. ADEQ completed the PRAP and ROD in 2012. The site was removed from the WQARF registry in March 2013.

Contaminants of concern in soil at the site include arsenic, lead, cadmium and polychlorinated biphenyls (PCBs).

Estes Landfill - This site was placed on the WQARF Registry in April 1998 and has a score of 50. The site is located in Phoenix, south of Sky Harbor Airport and is bounded approximately by the Salt River to the north, Magnolia Street to the south, State Route 153 to the east and 40th Street to the west.

Estes Landfill WQARF Site - Phoenix, Arizona



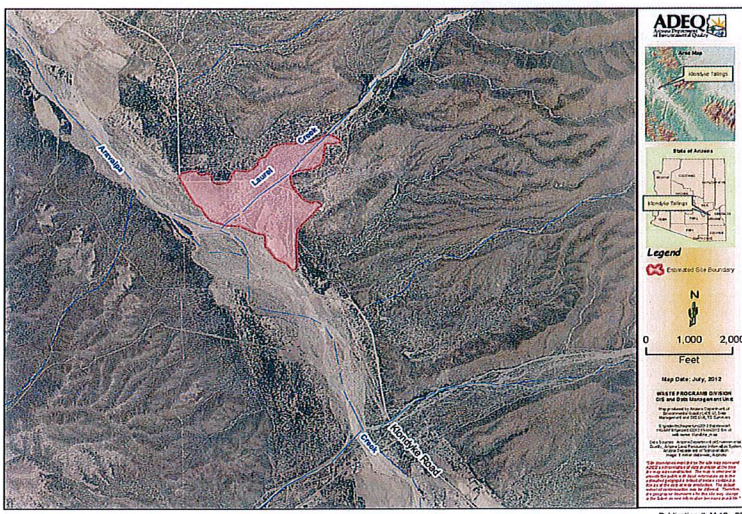
In January 2008, methane and VOC vapor samples were collected from the landfill. Groundwater is sampled twice a year. Two contaminants of concern have not been detected above AQWS in groundwater beneath the site. The RI/FS has been completed. ADEQ is evaluating comments on the 2002 PRAP and will be updating the plan.

After finalizing the responsive summary, ADEQ will prepare a ROD for the site.

Contaminants of concern at the site include vinyl chloride, DCE, TCE, in groundwater; lead, arsenic and thallium in soil.

Klondyke Tailings - This site was placed on the WQARF Registry in September 1998 and has a score of 69. The site is located in the unincorporated community of Klondyke, on the north bank of Aravaipa Creek, approximately 4.5 miles upstream of Aravaipa Canyon Wilderness Area. The site is

Klondyke Tailings WQARF Site - Graham County, Arizona



comprised of two piles of mine tailings, the soil between and adjacent to these piles, and the area approximately 50 feet into the stream bed of Aravaipa Creek, directly adjacent to the tailings piles. The site is bounded to the east by Klondyke Road.

ADEQ has completed several studies during the RI phase of the site investigation including a bioavailability study, biological,

archeological & cultural resources surveys and an acid-base accounting study. Private wells in the area were sampled to help determine the impacts of the tailings on the groundwater. No contaminants were found in the groundwater above regulatory levels. Annual groundwater monitoring continues at the site.

Sampling to determine the extent of off-site soil contamination began in 2006. To date, approximately 2,500 soil samples have been collected from the site and adjacent properties and analyzed by x-ray fluorescence. The limits of the 400 milligrams per kilogram (mg/kg) residential Soil Remediation Level for lead have been defined to extend approximately one-half mile from the site and impact nine properties adjacent to the site.

ERA activities continue at the site. These activities have included geophysical surveys to identify the presence of buried tanks or drums and minor repairs to the berms on the tailings piles to prevent erosion by rainfall. Aerial photography, topographic mapping, historic aerial photography analysis, floodplain delineation & analysis of the 10-, 25-, 50- and 100-year floodplains and a geomorphology study of Aravaipa and Laurel Creeks were done to evaluate possible remedies due to the site's location near these creeks. ADEQ selected gabion mattresses for erosion protection in October 2007.

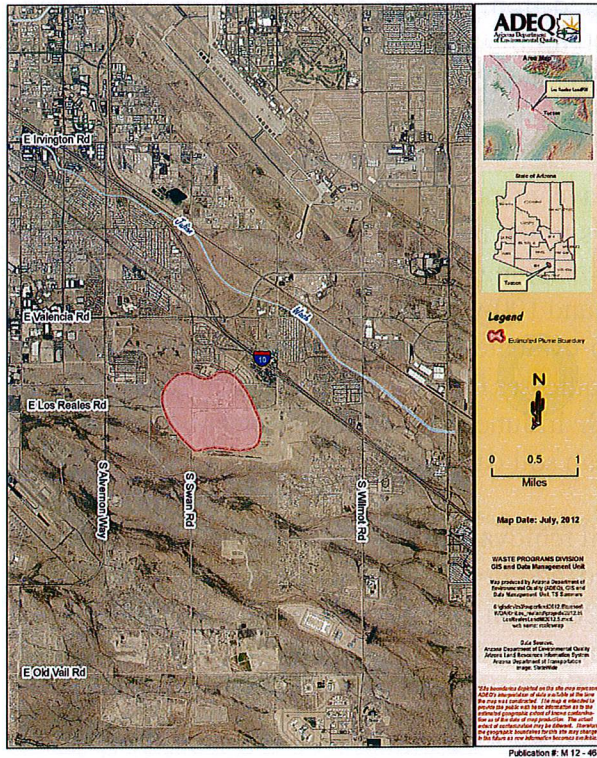
Erosion protection installation began in March 2008. In June 2008, erosion protection installation was completed on the upper tailings pile and the clean soil cap was seeded.

ADEQ, with the assistance of the EPA, evaluated soil removal options on the residential properties located in the vicinity of the site. EPA collected additional samples in the immediate area surrounding five residences near the site in March 2010. In FY 2012, EPA initiated the planned removal of contaminated soils from four properties near the site. During FY 2012, approximately 2,000 cubic yards of contaminated soil were removed from two of the four properties. Additional soil removal is scheduled to begin again in September 2013 on two or more properties. A community advisory board has been established for the site.

Contaminants of concern at the site include antimony, arsenic, cadmium, copper, lead, manganese, mercury, and zinc.

Los Reales Landfill - This site was placed on the WQARF Registry in April 1999 and has a score of 32. The site is an active municipal sanitary landfill (approximately 283 acre waste footprint) located in southeast Tucson and has been in operation since 1967.

Los Reales Landfill WQARF Site - Tucson, Arizona

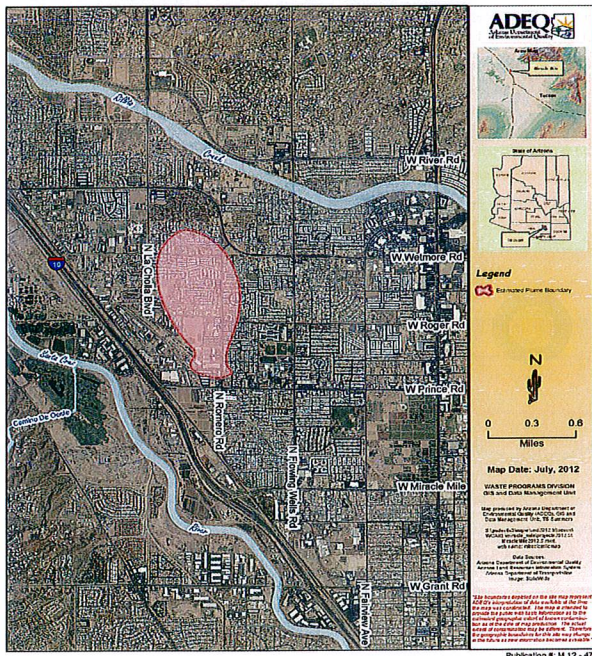


The City of Tucson has implemented a groundwater pump and treat system as required by a 1995 remedial action plan. A portion of the treated water is re-injected into the aquifer and a portion is used for dust control at the landfill. In FY 2013, the City submitted to ADEQ a proposed remedial action plan modification of transitioning to “groundwater sampling only” based on continued plume stability (apparent natural attenuation).

ADEQ provided the City with comments and, in FY2014, the City plans to install additional groundwater monitor wells to confirm natural attenuation of the groundwater plume and to submit a revised remediation action plan that responds to ADEQ’s comments.

Contaminants of concern at the site include PCE and TCE.

Miracle Mile WQARF Site - Tucson, Arizona



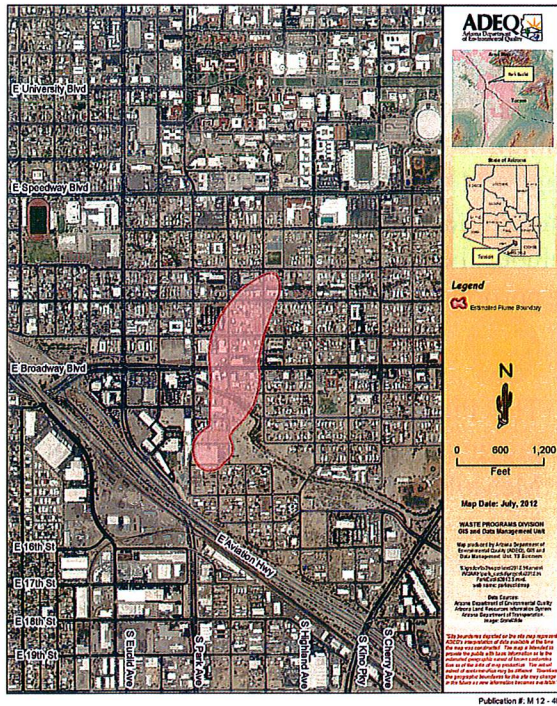
Miracle Mile - This site was placed on the WQARF Registry in September 1998 and has a score of 62. The site is located in Tucson and is bounded approximately by Wetmore Road to the north, Prince Road to the south, Pomona Road to the east, and La Cholla Boulevard to the west.

The local water provider is operating an ADEQ-funded wellhead treatment system as an ERA to remove TCE. In FY2013 the final RI report was issued and the FS initiated. A community advisory board has been established for this site.

Contaminants of concern at the site include TCE and chromium.

Park-Euclid - This site was placed on the WQARF Registry in April 1999 and has a score of 51. The site is in Tucson and is approximately bounded by Ninth Street to the north, 14th Street to the south, Santa Rita Avenue to the east, and Park Avenue to the west.

Park - Euclid WQARF Site - Tucson, Arizona

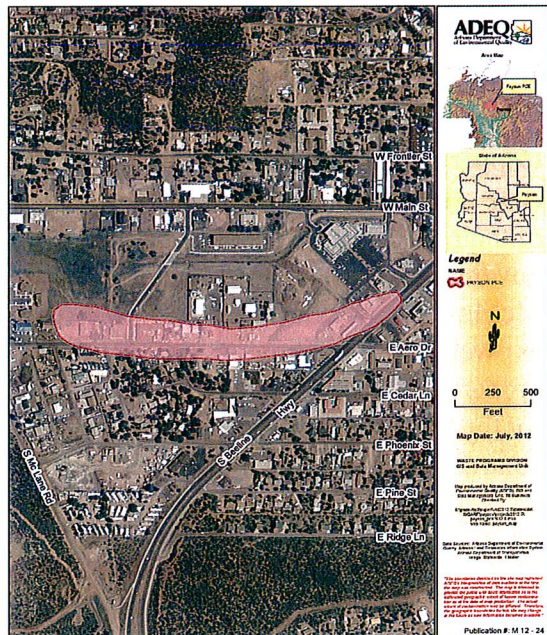


ADEQ successfully negotiated an Agreement to Conduct Work with Potentially Responsible Parties, Mission Linen and Haskell Linen (Park-Euclid Working Group) in 2010. In November 2011, ADEQ completed the final RI and Remedial Objectives reports. The Park-Euclid Working Group submitted an FS work plan which was approved in June 2013. A community advisory board has been established for this site.

Contaminants of concern at the site include PCE, TCE and cis-1, 2-DCE.

Payson PCE - This site was placed on the WQARF Registry in April 1998 and has a score of 63. The site is located in Payson and the plume is bounded approximately by Main Street to the north, Cedar Lane to the south, Beeline Highway (State Route 87) to the east and McLane Road to the west.

Payson PCE WQARF Site - Payson, Arizona



Two groundwater treatment systems have been constructed. The Interim Groundwater Treatment System (IGTS) was constructed to remediate the contamination in the source area. The IGTS was operated from October 1998 to January 2003 and was shut down due to low levels of contamination in the source area.

The Expanded Groundwater Treatment System (EGTS) began operation in October 1998 and continues to operate at the site treating contaminated water and preventing the contamination plume from migrating further. Treated water from the EGTS is delivered to the Town of Payson drinking water system.

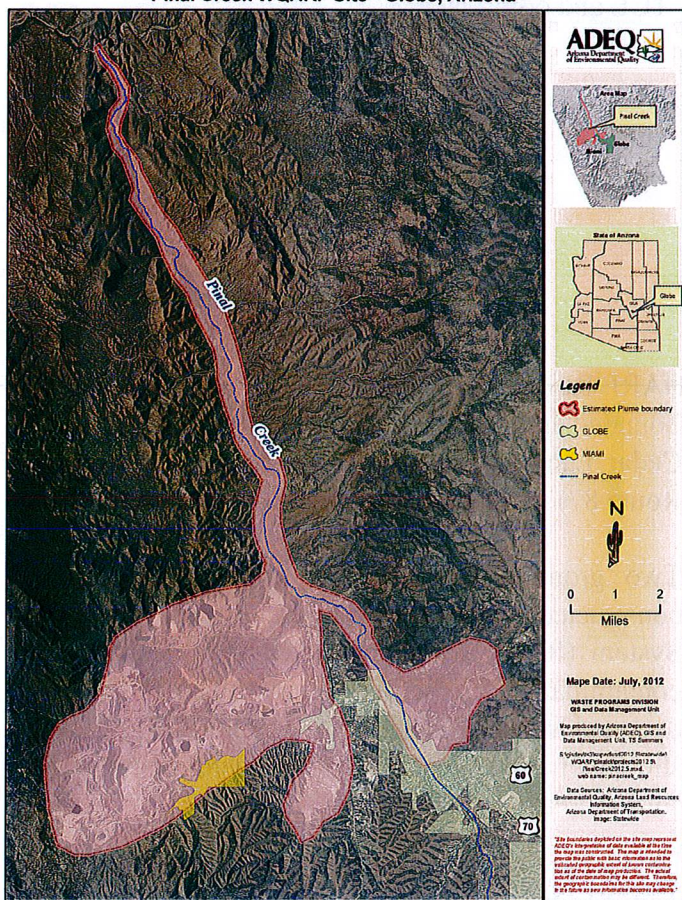
ADEQ completed the ROD for the site in June 2007. ADEQ conducts groundwater monitoring at the site twice per fiscal year. The IGTS was decommissioned in July 2013.

The Periodic Site Review is currently scheduled to be completed in FY 2014.

The contaminant of concern in the groundwater at the site is PCE.

Pinal Creek - This site was placed on the WQARF Registry in October 1998 and has a score of 97. The site is located in Gila County in and around the communities of Globe and Miami, Claypool and Wheatfields. The site includes the BHP Copper and Freeport McMoRan (formerly Phelps Dodge) Miami mining properties, and the drainages and underlying aquifers of Miami Wash, Bloody Tanks Wash, Russell Gulch, and Pinal Creek. The site also includes the entire floodplain of Pinal Creek from the Old Dominion Mine to the Salt River, plus those portions of the communities underlain by contaminated groundwater.

Pinal Creek WQARF Site - Globe, Arizona



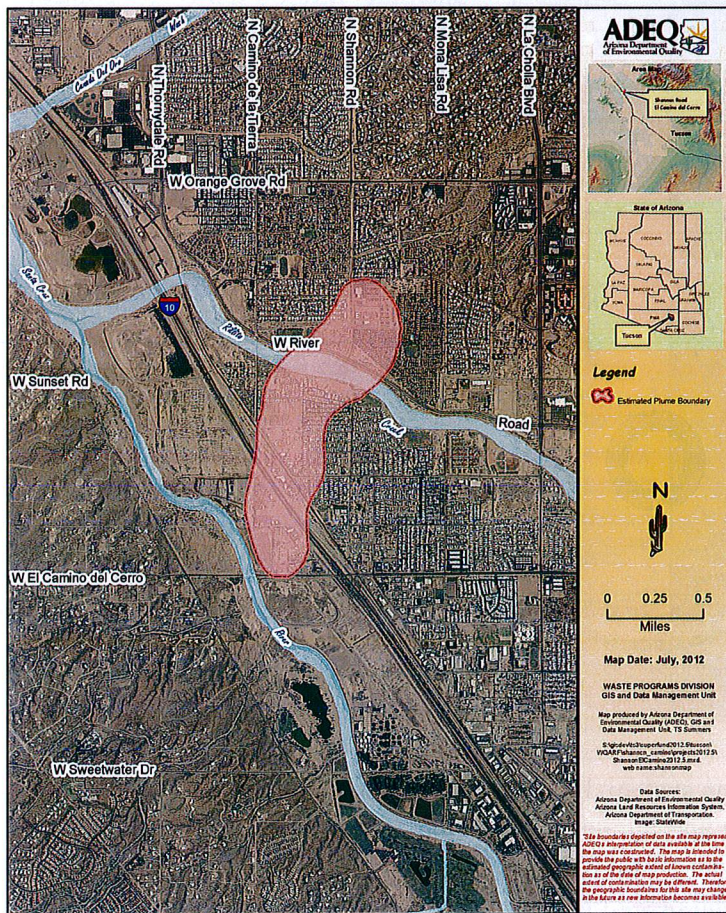
The Pinal Creek Group (PCG), which previously consisted of BHP, Freeport McMoRan and Inspiration Copper, have been conducting remedial actions including source control since 1988 and have completed RI, risk assessments, a FS and a recommended remedial action plan. They have also conducted a well replacement program for contaminated private and public supply wells. The PCG has been conducting groundwater extraction and treatment from the alluvial and the regional aquifers since 1988. In 2010, the Pinal Creek Group petitioned the U.S. District Court to modify the membership of the PCG to Freeport McMoRan and Inspiration Copper. BHP Copper is no longer a part of the group. BHP still is responsible for management of their properties in accordance with the governing Consent Decree. Freeport McMoRan now solely manages the PCG, as well as remedial actions at their properties. The PCG is still responsible for the site wide remedial actions. Source control, groundwater remediation and

groundwater monitoring continue. To speed up aquifer restoration, groundwater remedy optimization pilot tests have been conducted near the source area in Bloody Tanks Wash.

Contaminants of concern in groundwater at the site include heavy metals such as aluminum, iron, manganese, copper, cobalt, nickel, zinc, cadmium, and other contaminants such as sulfate, acidity and dissolved solids. Localized soil and stream sediment contamination are being investigated; contaminants of concern include arsenic, lead, copper, cadmium, manganese, nickel and zinc.

Shannon Road/El Camino del Cerro – The El Camino del Cerro WQARF site and Shannon Road-Rillito Creek WQARF site were administratively combined into one site, the Shannon Road/El Camino del Cerro WQARF site, in January 2005 based on sampling results showing there is a single plume. The El Camino del Cerro site was placed on the WQARF Registry in August 1998 and has a score of 71. The Shannon Road-Rillito Creek site was placed on the WQARF Registry in April 1999, and has a score of 53.

Shannon Road/El Camino del Cerro WQARF Site - Tucson, Arizona



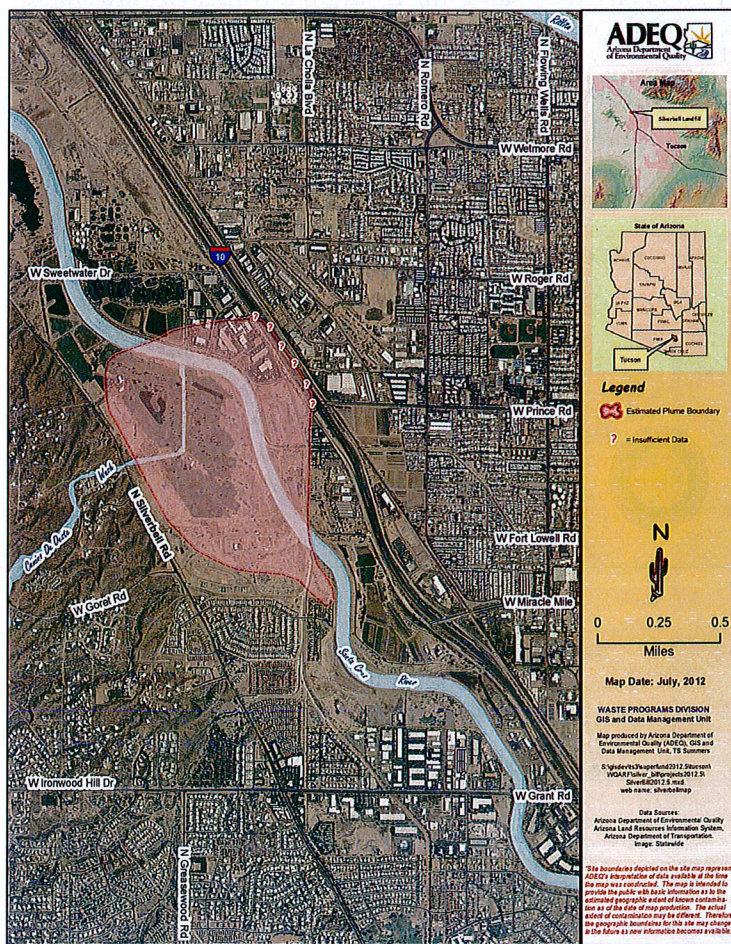
This site is located in northwest Tucson and is bounded approximately by Meadowbrook Park on the east, the Santa Cruz River on the west, El Camino del Cerro Road on the south, and on the north, a quarter mile north of Rillito Creek. The site consists of industrial and residential properties, and a former landfill which occupies approximately 20 acres in the southwest portion of the site.

The contaminant plume has impacted three community wells which were removed from service. One of these wells now has a wellhead treatment system which removes VOCs and arsenic in the groundwater in order to meet drinking water standards. The RI is in progress and will be completed by December 2013. A joint community advisory board has been established for the site.

Contaminants of concern at the site include PCE, TCE, 1, 1-dichloroethene (1,1-DCE), vinyl chloride, benzene and lead.

Silverbell Landfill - This site was placed on the WQARF Registry in April 1999 and has a score of 51. The site is located at 3200 North Silverbell Road in northwest Tucson. The site is bounded approximately by Sweetwater Drive on the north, Grant Road/Ironwood Hills Drive on the south, Interstate 10 on the east, and Silverbell Road on the west, and is comprised of approximately 40 acres.

Silverbell Landfill WQARF Site - Tucson, Arizona



In 2001, the City of Tucson began operation of a full-scale SVE system to remove and treat contaminated VOC landfill gases contributing to the groundwater contamination. From December 2006 until 2008, the system was operated intermittently to control methane migration. In April 2008, the system was shut down and the equipment was removed. The City of Tucson continues to conduct soil gas rebound testing periodically.

In 2010, the City of Tucson proposed to install a pump-treat-inject system to address the central part of the site plume with the highest VOC concentrations. A concern at this site is the overlapping of the northern part of the Kinder Morgan Silvercrock Wash Release (SWR) site MTBE groundwater plume with the southern part of the Silverbell Landfill PCE groundwater plume. The City of Tucson has been preparing the Request for Proposal

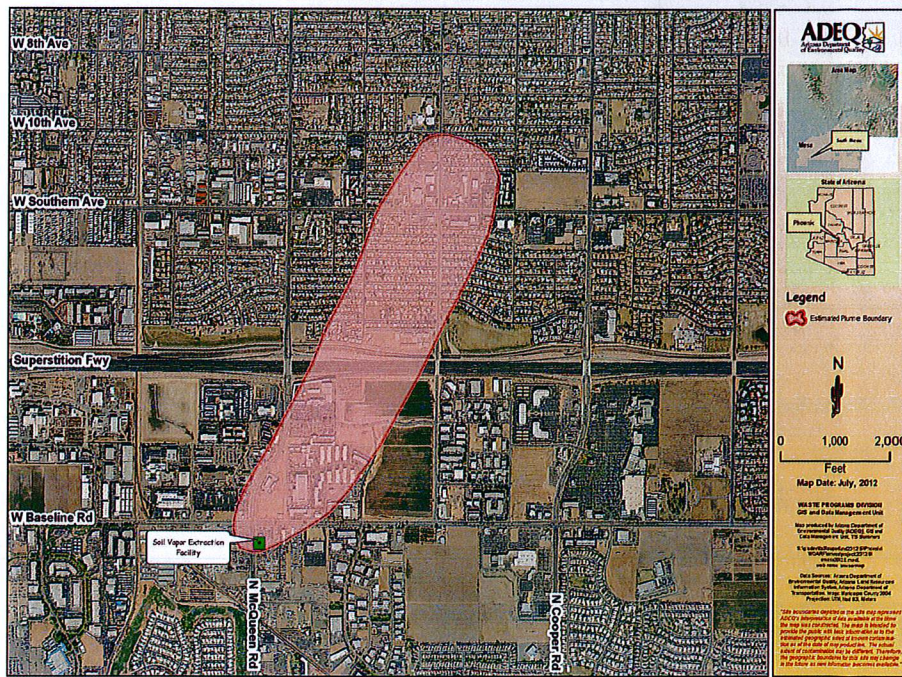
(RFP) for the proposed groundwater cleanup system, but this RFP will not address the MTBE from the SWR site. ADEQ, the City of Tucson and Kinder Morgan have been meeting periodically to improve coordination regarding sampling and cleanup of the two sites. Throughout 2012 and 2013, City of Tucson began finalizing a conceptual design for the proposed groundwater pump and treat system. As part of this, additional groundwater modeling was performed to estimate when the

contamination would reach the proposed groundwater treatment system. [Note -ADEQ is addressing the SWR site through its Voluntary Remediation Program.]

Contaminants of concern at the site include PCE, TCE, cis-1, 2-DCE and vinyl chloride.

South Mesa - This site was placed on the WQARF Registry in August 1998 and has a score of 31. The site is located in Mesa and Gilbert and is bounded approximately by Tenth Avenue to the north, the railroad south of Baseline Road to the south, Stapley Road to the east, and the railroad west of Center Street to the west.

South Mesa WQARF Site - Mesa, Arizona



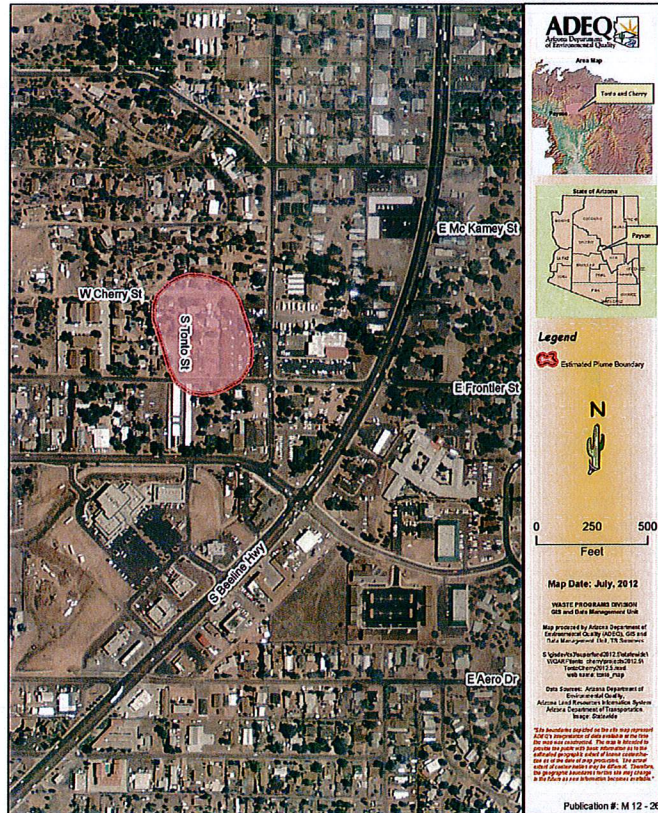
Two remedial action projects at the site have significantly reduced the contamination by treating pumped groundwater and extracting vapors from the soil. ADEQ began an ERA in June 2004, to address the remaining subsurface contamination. A SVE well was installed and connected to the existing SVE system and the system began operations in September 2004. ADEQ shut down the SVE system in November 2007 and removed it from the site in June 2008.

A RI report has been completed as well as the RO report. A community advisory board has been established for this site.

Contaminants of concern at the site include PCE.

Tonto and Cherry - This site was placed on the WQARF Registry in June 2000 and has a score of 45. The site is located in Payson, approximately 400 feet west of the Beeline Highway and immediately north of Main Street. The plume is a northwest-trending area, bounded by W. Cherry Street to the north, S. Colcord Road to the east, S. Tonto Street to the west and W. Frontier Street to the south.

Tonto and Cherry WQARF Site - Payson, Arizona

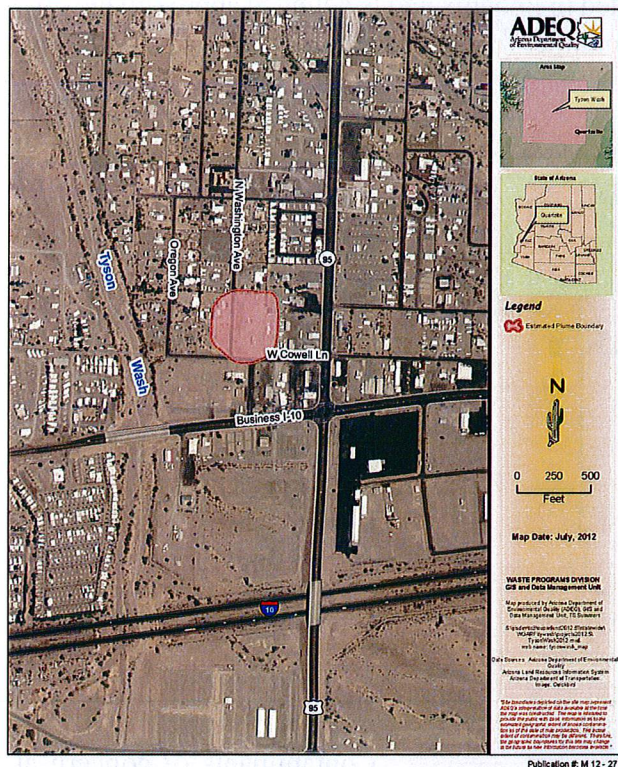


The ROD has been completed. The site is at the operation and maintenance (O&M) phase and recent sampling results were below respective AWQS, indicating that monitored natural attenuation is working. The monitoring wells will be abandoned in fall of 2013.

The contaminant of concern at the site is PCE.

Tyson Wash - This site was placed on the WQARF Registry in December 1998 and has a score of 46. The site is located in the Town of Quartzsite and the contaminated groundwater plume is bounded by W. Sunset Street to the north, Oregon Avenue to the west, Main Street (Business I-10) to the south, and N. Central Boulevard (SR-95) to the east. The known groundwater contamination exists northwest of the intersection of State Hwy 95 and Business Route I-10 in Quartzsite.

Tyson Wash WQARF Site - Quartzsite, Arizona



As part of an ERA, a groundwater treatment system was constructed in 2003 and is currently being operated to reduce concentrations in the aquifer and prevent migration of the plume to private drinking water wells. The RI has been completed for the site and the PRAP was completed in June 2008. The ROD was completed in June 2009. The site is in the O&M phase. Additional wells were installed between 2010 and 2012 that increased the effectiveness of the groundwater treatment system. An ISCO pilot test was conducted in May 2013 and showed promising results. During FY 2013, the system pumped and treated approximately 1.3 million gallons of water.

Contaminants of concern at the site include PCE and TCE.

Vulture Mill – This site was placed on the WQARF Registry in April 1998, and has a score of 65.

The site is located just east of U.S. Route 89/93 about 1 mile northwest of the center of the Town of Wickenburg. The eastern boundary of the site is approximately one-fourth mile west of the Hassayampa River channel.

Vulture Mill WQARF Site - Wickenburg, Arizona



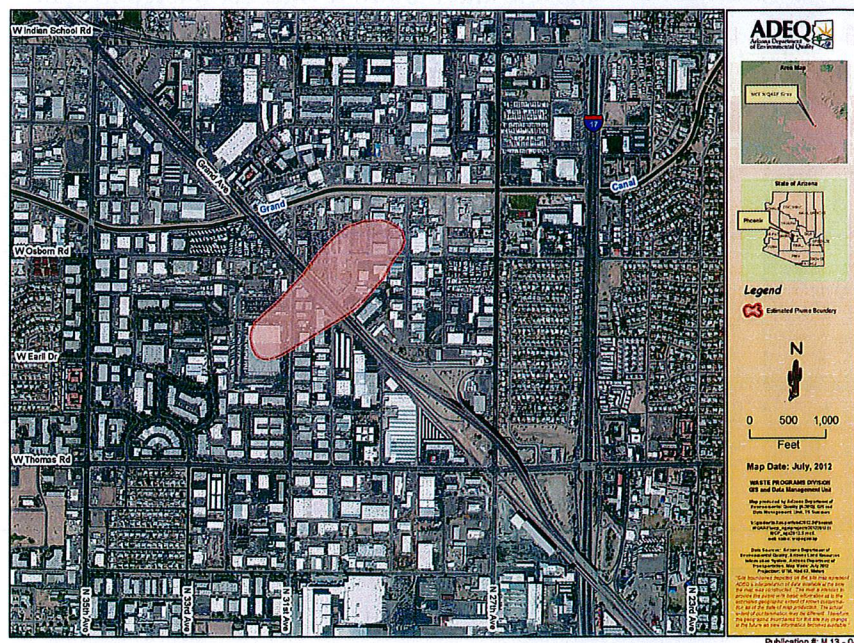
The ROD was signed in September 1999. ADEQ has implemented the remedy, which consists of excavation of contaminated soil, placement in a

consolidation pile, installation of a clean soil cover, and planting of vegetation to control erosion. Presently, the site is used as pasture and inspected on an annual basis. The last inspection occurred in January 2013.

Contaminants of concern at the site include lead and arsenic.

West Central Phoenix (WCP) East Grand Avenue - This site was placed on the WQARF Registry in April 1998 and has a score of 31. The site is located in Phoenix and is bounded approximately by Whitton Avenue to the north, Osborn Road to the south, 29th Avenue to the east, and 30th Avenue to the west.

West Central Phoenix (WCP) East Grand Avenue WQARF Site - Phoenix, Arizona

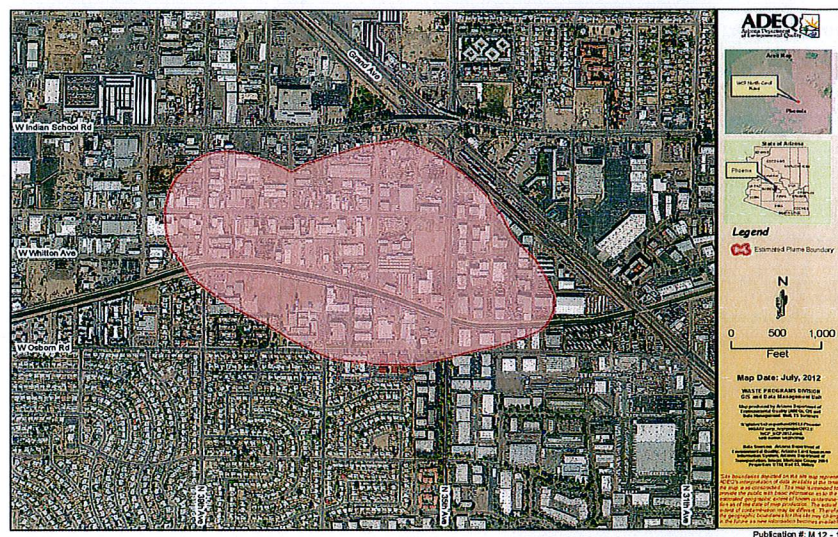


The field investigative activities were completed in December 2001. The RI report has been completed. In 2004, a working party constructed and still operates a SVE system at the former Van Waters & Rogers facility. To date, over 1,175 pounds of VOCs have been removed. The working party is in the process of completing the FS.

A community advisory board has been established for this site.

Contaminants of concern at the site include PCE and TCE.

West Central Phoenix (WCP) North Canal Plume WQARF Site - Phoenix, Arizona



WCP North Canal Plume - This site was placed on the WQARF Registry in June 1998 and has a score of 27. The site is located in Phoenix and the approximate boundaries of this site are Indian School Road on the north, 36th Avenue on the east, Clarendon

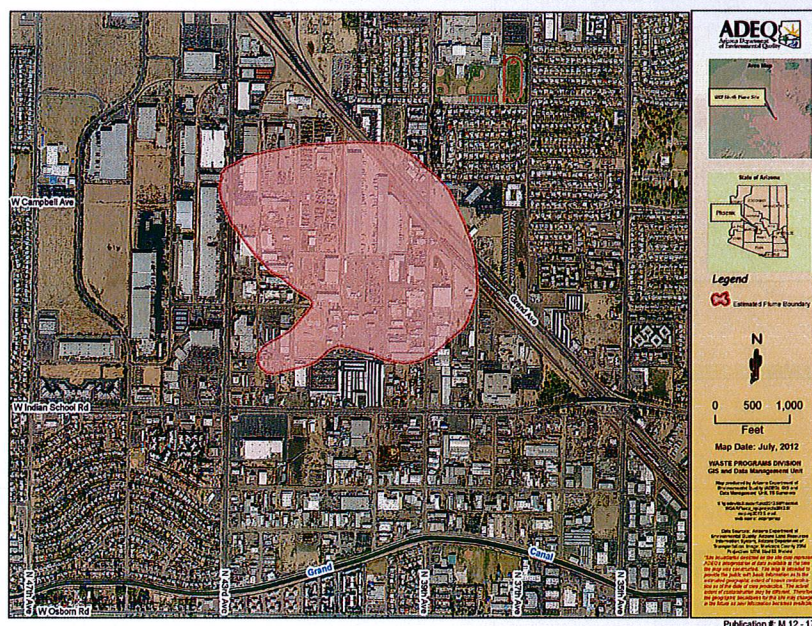
Avenue on the south, and 40th Avenue on the west.

The RI was initiated in February 2001 and ADEQ conducted ERA evaluations in 2005. Due to lack of funding, site activities were suspended from 2008-2012. In the summer of 2013, funding was restored for monitoring and investigation activities.

Contaminants of concern at the site include PCE, TCE and chromium.

WCP North Plume - This site was placed on the WQARF Registry in April 1998 and has a score of 55. The site is located in Phoenix and is bounded approximately by Turney Avenue to the north, Indian School Road to the south, 38th Avenue to the east, and 43rd Avenue to the west.

West Central Phoenix (WCP) North Plume WQARF Site - Phoenix, Arizona



The FS is underway and a SVE system was installed at the F&B facility as part of an ERA. To date, the SVE system has removed over 43,791 pounds of VOCs. Further evaluations are being conducted to address groundwater contamination.

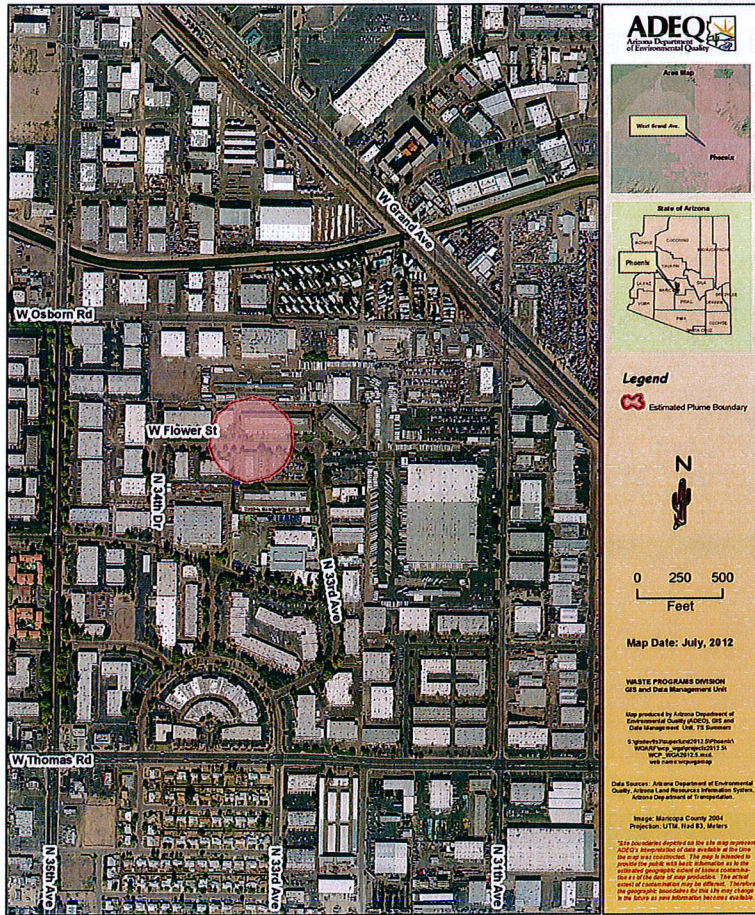
Through a working party agreement, an SVE system was operated at the Hill Brothers Chemical Company. The system removed over 277 pounds of VOCs from the soils below the surface. A No Further Action (NFA)

determination was issued for this facility following confirmation sampling and a public notice for review. The RI report along with the RO report has been completed for this site. A community advisory board has been established.

Contaminants of concern at the site include PCE and TCE.

WCP West Grand Avenue - This site was placed on the WQARF Registry in April 1998 and has a score of 22. The site is located in Phoenix and is bounded approximately by Osborn Road to the north, Earll Drive to the south, 33rd Avenue to the east, and 35th Avenue to the west.

West Central Phoenix - (WCP) West Grand Avenue WQARF Site - Phoenix, Arizona



The RI, FS and RO reports have been completed. A community advisory board has been established for this site

The contaminant of concern at the site is TCE.

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Water Quality Assurance Revolving Fund
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EQR*

was excavated and hauled from the facility. An NFA for soil for 14 release areas was issued to Reynolds Metals Co. in 2000. Maricopa County Materials Management operated a SVE system at their facility during 1997. In 2001, Maricopa County settled with ADEQ.

Dolphin Incorporated began operation of a SVE/AS system at the Dolphin facility in October 1998. In December 2002, Dolphin received authorization from ADEQ to shut-down the SVE/AS system. A SVE system was installed and operated periodically at the Van Waters and Rogers Inc. (VW&R) facility from 1992 to 1998. In August 2002, ADEQ issued an NFA determination for soil for the former Van Waters and Rogers facility.

ChemResearch Company Inc. excavated and disposed of contaminated soil from beneath the eastern portion of their facility. ChemReserach Company is currently under a consent order with ADEQ RCRA division to perform groundwater monitoring and remediate soil beneath the western portion of their facility.

SVE/AS and groundwater pump and treat remediation systems began operation in March 2001 at the former American Linen Supply Company (ALSCo). The SVE/AS was discontinued in May 2003 because the response action objectives were attained. The groundwater pump and treat system continued operations until September 12, 2003, at which time ADEQ determined the system had reached its limit of effectiveness. ADEQ granted ALSCo an NFA determination for soil on March 24, 2008.

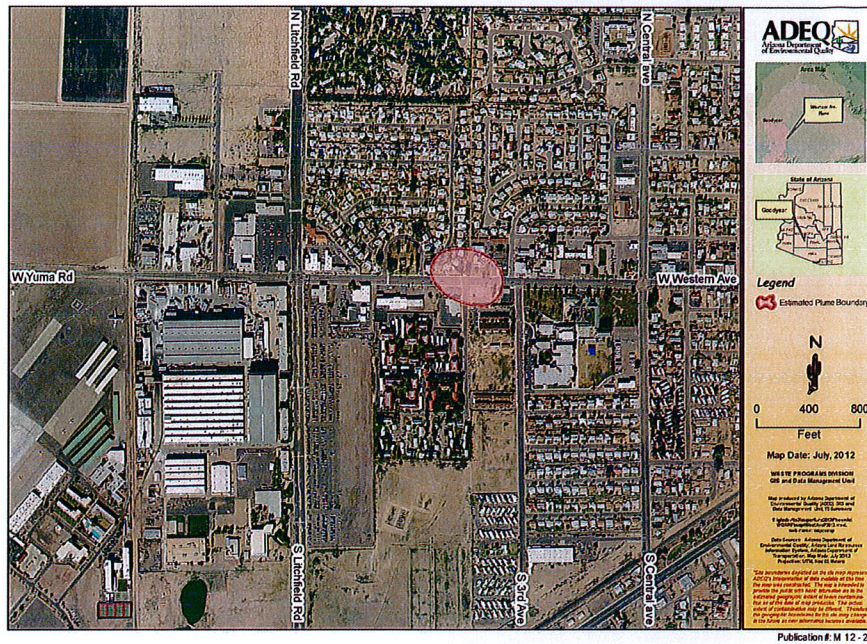
ADEQ conditionally approved an ERA on June 24, 2010, submitted by the Roosevelt Irrigation District (RID). The approved ERA consists of integrated pumping and treatment of the 10 most highly contaminated RID wells in the West Van Buren Area site. RID is currently conducting the Wellhead Pilot Treatment System (Pilot System) investigation, outside of the existing working agreement.

The RI and RO reports were finalized in August 2012. In July and August 2013, ADEQ approved two FS work plans submitted by outside parties. Additional monitoring wells have been installed by ADEQ to delineate the extent of the contamination and further investigate potential source areas. A community advisory board has been established for this site.

Contaminants of concern at the site include PCE, TCE, DCE, DCA, cis-1, 2-DCE and chromium.

Western Avenue Plume - This site was placed on the WQARF Registry in December 1998 and has a score of 51. The site is located in Avondale and Goodyear and is bounded approximately by San Xavier Boulevard to the north, Third Street to the east, and Phoenix Goodyear Airport to the west; State Route 85 to the south.

Western Avenue PCE WQARF Site - Goodyear, Arizona



The RI and ROs reports have been completed. ADEQ is currently preparing the FS and should be completed in FY 14. The City of Goodyear Municipal Well No. 1 (COG-1) is located in the Western Avenue site. Historically, PCE has been detected at this well under the AWQS of 5 µg/L. ADEQ conducted a Time-Series Groundwater Sampling Test of COG-1 from March 25, 2013 through April 10, 2013 in order to further develop the

conceptual understanding of PCE at COG-1. A draft summary report was completed May 15, 2013. Groundwater monitoring wells at the site are currently being sampled quarterly, along with COG-01. A community advisory group has been established for this site in conjunction with the PGA Superfund site. The contaminant of concern at the site is PCE.

APPENDIX 5

Water Quality Assessment and Management Program

WATER QUALITY ASSURANCE REVOLVING FUND
ANNUAL REPORT TO THE JOINT LEGISLATIVE BUDGET COMMITTEE
WATER QUALITY ASSESSMENT AND MANAGEMENT
A.R.S. §§ 49-202 to 49-205; § 49-208; §§ 49-221 to 49-225; § 49-249; § 49-282

Debra Daniel, Manager 771-4665

ADEQ/Water Quality Division/Surface Water Section

July 1, 2012 through June 30, 2013

FY 2013 ACCOMPLISHMENTS

Water Quality Monitoring and Assessment

Surface Water Monitoring § 49-225 (Water quality monitoring) & § 49-282 (Remedial investigations)

- Integrated Report of the Status of Arizona's Water Quality: The draft 2010 Assessment is complete and the draft 303(d) impaired waters list was completed in October 2012. The 2012/2014 Assessment has been drafted and is being reviewed internally.
- Ambient Surface Water Program: FY13 monitoring focused on warm water streams. Approximately 186 samples were collected from 43 sites. Sample sites were used to fill in data gaps, monitor outstanding Arizona waters, and to monitor sites for reference conditions. The FY13 sample plan also focused efforts in the area impacted by the Wallow Fire. The Surface Water Section (SWS) continues to fund a Joint Cooperative Agreement with the USGS to sample 10 sites on the large rivers in the state from its gauging stations. (§49-225)
- Lakes Program: The Ambient Surface Water Program participated in the National Lake Survey in FY12 and FY13.

Priority Pollutant sampling program: Four waterbodies were sampled for mercury in FY 2013: Pena Blanca Lake, Alamo Lake along with Tonto and Christopher Creeks. Fish tissue samples were collected from Tonto Creek to determine how far upstream from Roosevelt Lake mercury is bioaccumulating. Tonto Creek and Lake Powell were added to the 2010 CWA 303(d) Impaired Waters List due to high levels of mercury in fish tissue.

Water column and fish tissue pesticide (DDT, DDE, toxaphene and chlordane) samples were collected from three waterbodies. The data collected showed that the levels have fallen and ADEQ is proposing to remove these waters from the Impaired Waters List.

- Status of ongoing water quality studies (§49-225 & §49-282):
- Status of ongoing water quality studies

TMDL Monitoring and Development- The TMDL Unit achieved the following in FY13

- 4 TMDLs were submitted to EPA for approval
- Received Lyman Lake coring and Parker Canyon Lake modeling reports from contractor
- Continued monitoring for TMDL development on 27 TMDLs
- Conducted effectiveness monitoring on 4 effectiveness monitoring projects

- Coordinated efforts with the WQIG Program to assist the Targeted Watershed Grants with training, data interpretation, and technical support

Groundwater Monitoring §49-225 (Water Quality Monitoring)

Ambient Groundwater Monitoring –

Field staff is limited to one employee. Despite this, the groundwater program achieved the following in FY12:

- Over 73 wells/springs in the Tonto, Gila and Harquahala basins were sampled with results provided to owners.
- The Butler Valley and Aravaipa Canyon basin reports are completed and in the review process.

Pesticide Program § 49-249 (Pesticides)

- The Pesticide Program conducted groundwater sampling from groundwater monitoring wells in Yuma, Maricopa and Graham Counties in April 2013.
- The Pesticide Program continues to maintain an information submittal and review database for the pesticide data call-in program. Sixteen new pesticide active ingredients were added to the database in FY13.
- The final 2012 GWPL took effect on December 1, 2012 and contains 82 active ingredients (one addition).
- The draft 2013 GWPL was published in the *Arizona Administrative Register* in March 2013 for public review and comment prior to finalization. The final 2013 List contains 85 active ingredients (three additions). The new List takes effect on December 1, 2013.

Quality Assurance/Quality Control (QA/QC) Activities

- Served as WQD representative on QA/QC Advisory Committee for the redrafting of the agency's Quality Management Plan (QMP).
- The Surface Water Section (SWS) redrafted an integrated and comprehensive Quality Assurance Program Plan (QAPP) that covers SWS monitoring programs. This document was submitted to EPA for approval in June 07.

Other Technical Activities: § 49-202 through § 49-205

- Continuing coordination with the remedial programs in Waste Programs Division to capture WQARF, CERCLA and UST groundwater quality data.
- Continue to develop performance measurement tools to determine effectiveness of several water quality programs including nonpoint source pollution control, best management practices and enhanced application of WQIP grants program to reduce impacts of pollutants in impaired areas (§49-225).

APPENDIX 6

ADWR Well Inspection and Approval Program

**Arizona Department of Water Resources
Arizona Water Quality Fund
Year-End Summary - Fiscal Year 2013**

1. Arizona Water Quality Fund (WQARF Support) Program Objectives

- Perform technical review of well applications (Notices of Intent to Drill/Abandon/Deepen/Modify/Replace a Well, Applications to Drill and Operate a Non-Exempt Well, and Groundwater Withdrawal Permits)* and consult with Arizona Department of Environmental Quality (ADEQ) regarding new wells, abandonments, modifications to wells near remedial action sites.
- Conduct well inventories to support ADEQ's WQARF Program as requested.+
- Coordinate with ADEQ regarding database needs in support of ADEQ's WQARF Program.*
- Establish mechanism to exchange verified well locations and GPS measurements within ADWR's Well Registry (WELLS55) database.+
- Perform other WQARF and water quality activities as required by statute, rule, or Interagency Service Agreement (ISA).

*Required by statute or rule

+Recommended by Groundwater Cleanup Task Force

2. Arizona Water Quality Fund Program Accomplishments: Fiscal Year 2013

- Well application and withdrawal permit review:
 - Reviewed 2554 Notices of Intent (NOI) to Drill/Abandon/Deepen/Modify/Replace a Well for proximity to WQARF/CERCLA or other remedial action sites.
 - Performed technical review of 856 NOIs to Drill/Abandon/Deepen/Modify/Replace wells near or within WQARF/CERCLA or other remedial action sites for water quality concerns, potential contaminant plume migration, and well construction.
 - Reviewed 91 permit applications to withdraw groundwater for proximity to WQARF/CERCLA or other remedial action sites.
 - Performed technical review of 14 permit applications near or within WQARF/CERCLA or other remedial action sites for water quality concerns, potential contaminant plume migration, well construction, and well impacts. These permits include Poor Quality Ground Water Withdraw Permits for remediation projects.
- Well inventories:
 - No well inventory activities were performed during fiscal year 2013.
- Other WQARF and Water Quality Activities
 - Submitted quarterly reports to ADEQ and the WQARF Advisory Board as required by the ADEQ-ADWR ISA.
 - Submitted annual report on ADWR WQARF activities to the Governor, Legislature, and WQARF Advisory Board for fiscal year 2012.

**Arizona Department of Water Resources
Arizona Water Quality Fund
Year-End Summary - Fiscal Year 2013**

from potential contaminant plume migration, and for compliance with applicable well construction requirements to prevent vertical cross-contamination between aquifers.

- Continue to coordinate with ADEQ regarding database needs in support of the WQARF Program.
- Continue to prepare quarterly, annual and other reports as specified in the Inter-agency Service Agreement for fiscal year 2014.
- Submit annual report on ADWR WQARF activities to the Governor, Legislature, and WQARF Advisory Board for fiscal year 2013.

5. ADWR Water Quality Fund Budget - Fiscal Year 2014

Description	Amount
Funds Available	
Balance Forward 07/01/13	\$171,846
Transfer from ADEQ	300,000
Total Funds Available	\$471,846
 Expenditures	
Personal Services	\$131,250
Employee Related Expenditures	57,750
In State Travel	5,000
Other Operating Expenditures	1,000
Non-Capital Equipment	0
Indirect	95,520
Total Expenditures	\$290,520
 Fund Balance (06/30/14 estimate)	 <u>\$181,326</u>

APPENDIX 7

ADHS Risk Assessment Program

FY 13 Risk Assessment Summary

Arizona Department of Health Services
Risk Assessment & Health Consultation Program

Office of Environmental Health
(602) 364-3118
150 N. 18th Avenue, Phoenix, AZ



Leadership for a Healthy Arizona

Program Objectives

- Program Created by A.R.S. §36-(1691-1694)
 - Analyze health risks from environmental exposure
 - Provide independent evaluation of strategies to prevent health risks from environmental exposures
 - Provide the ADEQ and others with information to address potential public health risks from environmental exposures

Leadership for a Healthy Arizona



ADEQ/ADHS ISA Agreement

- ISA calls for \$15,000 minimum quarterly payments, maximum \$25,000
 - Extra \$10,000 is dependent on additional amount of work
- ISA is used to provide availability of ADHS staff on demand
 - 2 staff funded = ~ 0.2 FTE (\$60,000 annually will provide this base availability)



FY 13 ISA Accomplishments

- No specific assignments received from ADEQ programs under ISA.

Leadership for a Healthy Arizona



FY 13 Non ISA Projects

- Health Consultations under Agency for Toxic Substances and Disease Registry (ATSDR) Cooperative Agreement Grant
 - Iron King Mine (ambient air), Yavapai County
 - New River (private well), Maricopa County
 - Green Valley (private wells), La Paz County
 - Perchlorates in Colorado River, Mohave County
 - Hydrogen Sulfide Chronic Health Effects, Maricopa County
 - Hydrogen Sulfide Acute Health Effects, Maricopa County



FY 13 Non ISA Projects Cont.

- Technical Assistants
 - Lake Powell Fish Advisory
 - Liquid Nitrogen
 - Nuclear Disaster Training
 - Sanitarian Conference
 - Arizona Infectious Disease Conference
 - Phoenix Institute of Herbal Medicine and Acupuncture
 - San Tan Generating Station
 - Mission of Mercy
 - Public Health Accreditation Board
 - Advisory Panel on Emerging Contaminants
 - Asbestos



Leadership for a Healthy Arizona

FY 13 Non ISA Projects Cont.

- Health Education
 - Activities
 - Iron King Mine
 - BHP Superior
 - Motorola 52nd Street
 - San Tan Generating Station
 - Bisbee Mining
 - Hydrogen Sulfide



Leadership for a Healthy Arizona

FY 13 Budget & Expenditures

Category	Budget	Spent	Est. Unused
Personnel	16,356	12,515	3841
Benefits	7,462	3,423	4039
Travel	500	0	500
Operations	779	0	779
Indirect	4,903	2,476	2427
Total	\$30,000	18,414	11,586



Leadership for a Healthy Arizona

FY 2014 Budget

Category	Budget
Personnel	26,100
Benefits	7,830
Travel	1,000
Operations	14,130
Indirect	10,940
Total	\$60,000



Leadership for a Healthy Arizona