



Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

WQARF
ANNUAL
REPORT
2004
(A.R.S. 49-282.G)

TABLE OF CONTENTS

WQARF Program Overview	1
Major Issues and Accomplishments	4
Activities and Accomplishments of WQARF Sites	6
Activities and Accomplishments of Federal Sites	9
Emergency Response Program	11
Voluntary Remediation Program	13
Water Quality Assessment and Management Program	14
Well Inspection and Approval Program	14
Risk Assessment Program	14

Appendices:

- 1 - Revenues and Expenditures
- 2 - Water Quality Advisory Board Retreat
- 3 - Voluntary Remediation Program
- 4 - Water Quality Assessment and Management Program
- 5 - Well Inspection and Approval Program
- 6 - Risk Assessment Program

Appendices to this report are available by contacting the [ADEQ Records Center](#) at (602) 771-4380.

This annual report has been prepared pursuant to A.R.S. § 49-282(G) and SB 1402 (FY 2004 - FY 2005 General Appropriations Bill), Laws 2004, Chapter 275, page 39, as approved by the Governor on May 28, 2004 and filed by the Secretary of State on the same day.

WQARF PROGRAM OVERVIEW

Program Description

Through the Water Quality Assurance Revolving Fund (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 with support from state funds and also oversees privately-funded cleanup efforts. Responsible parties are identified and 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 clean up efforts in the state. The program underwent significant revisions as a result of what is know 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. 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 legislature supports the WQARF program with 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 in the aquifer itself.

Community Involvement – Enhanced community involvement is provided for 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
- Voluntary Remediation Program
- Water Quality Monitoring Program
- State matching monies or 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

The date that a site is added to the WQARF Registry generally does not indicate the date that cleanup is started. Under most circumstances, numerous investigative, planning, community involvement, risk assessment, and legal steps must be executed before a cleanup can begin.

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. The RI/FS requires extensive technical information 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 (PRP) searches.

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 activities take place during investigations and prior to development of the proposed remedial action plan (PRAP), 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 have input on the investigative activities because they may evaluate the subsequent data to determine the potential risk to human health.

Once the FS is completed and cleanup alternatives are identified, a PRAP is developed. At this point in the process, activities to allow the public to comment on the PRAP are conducted. A record of decision (ROD) documenting the selected cleanup alternative is signed, followed by an allocation process in which past and future costs are distributed among responsible parties.

After the ROD is finalized, extensive design development and review must be undertaken. Several months to several years may be needed to finalize a design, construct the remedy, and start the actual cleanup. After the cleanup is implemented, operation and maintenance may be conducted for a period of time specific to the remedy.

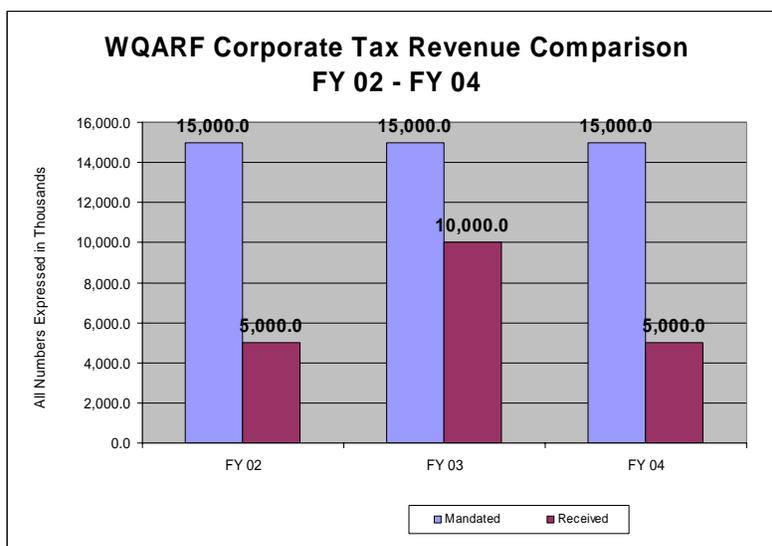
Because formal investigation and remediation can take many years, ADEQ developed a process to address contamination that requires immediate action. The early response action process can be used at any time prior to the implementation of a final remedy. Early response actions can be conducted to address 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 FOR FY 2004

WQARF Funding

As described earlier in the report, ADEQ's ability to administer and implement the WQARF Program depends on \$18 million in dedicated funding. A.R.S. § 49-282(B) specifies that \$15 million of that \$18 million is designated from the Corporate Income Tax. However, due to budget shortfalls, the WQARF Program received a total of \$20 million from the Corporate Income Tax for Fiscal Years 2002, 2003, and 2004 (Please see table below). This has left the Program with insufficient funds to address all existing and new sites on the registry. Underfunding of the program has caused ADEQ to postpone the implementation of several investigations and has delayed progress on several final cleanups, though the department continues to direct its limited resources on early response actions and other activities where human health is at risk.



Two New Sites Added to the State's Superfund List

ADEQ listed 2 new sites on the Water Quality Assurance Revolving Fund (WQARF) Registry. The WQARF Registry is a list, created pursuant to A.R.S. §287.01, of sites in Arizona where groundwater and/or soil contamination is known to be present. Sites listed on the Registry qualify for WQARF Funds for investigation and/or cleanup of contamination. Currently, there are 36 sites on the Registry, with 2 sites added during FY 2004 and 1 in FY 2005 (to be addressed in next year's report). The following sites are the first to be listed on the Registry since 2000:

56th Street & Earll Drive - Listed on the WQARF Registry on June 2, 2004, the site consists of an arsenic and trichloroethylene (TCE) contaminated groundwater plume located near 56th Street and Earll Drive in Phoenix. The site was originally investigated as part of the Motorola

52nd Street National Priorities List (NPL) site. However, groundwater data from both sites indicate that the two are separate and distinct plumes. Therefore, the site was disassociated from the larger Motorola 52nd Street NPL. ADEQ is working cooperatively with a party potentially responsible for the contamination to further evaluate the site and develop a cleanup strategy.

Cooper Road & Commerce Avenue - The site was listed on the WQARF Registry on June 14, 2004. Tetrachloroethylene (PCE) has been detected in soil and groundwater at the site located near Guadalupe Road and Baseline in Gilbert. Groundwater contamination is near a Town of Gilbert drinking water production well and could threaten its use if appropriate actions are not taken. ADEQ is currently evaluating the site for an early response action.

Early Response Actions

ADEQ's WQARF Program continues to place a high priority on early response actions where human health 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. Operation and maintenance continues at eight early response actions that were initiated in prior years. In FY 2004, the WQARF Program initiated the following three significant early response actions:

East Central Phoenix: 32nd Street and Indian School Road WQARF Site - In April 2004, ADEQ constructed an early response action to remove the source of contamination at a former dry cleaner located on the southeast corner of 32nd St. and Indian School Road in Phoenix. Soil contaminated with PCE was present beneath an existing building which resulted in PCE vapors in the building. PCE is also a continuing source of contamination to groundwater. ADEQ constructed an air sparge and soil vapor extraction (SVE) system to remove groundwater and soil contamination.

East Central Phoenix: 40th Street and Indian School Road WQARF Site - In April 2004, ADEQ constructed an early response action to remove the source of contamination at a former dry cleaner facility located on the northeast corner of 40th St. and Indian School Road in Phoenix. Soil contaminated with PCE is present in soil and represents a continuing source of contamination in groundwater. ADEQ constructed an air sparge and SVE system to remove groundwater and soil contamination.

South Mesa WQARF Site - In June 2004, ADEQ constructed an early response action to remove the source of contamination at a former facility located at 1545 North McQueen Road in Gilbert. Soil contaminated with PCE is present beneath the existing office building which resulted in PCE vapors migrating into the building. PCE is also as a continuing source of contamination to the groundwater. ADEQ constructed an SVE system to remove subsurface soil contamination.

FY 2004 ACTIVITIES AND ACCOMPLISHMENTS AT WQARF SITES

Summaries are provided below of activities and accomplishments for sites on the WQARF Registry. The revenues and expenditures for the WQARF Program can be found in Appendix 1. A detailed description of activities and accomplishments of the Program can be found in Appendix 2. Appendix 2 is a complete presentation to the WQARF Advisory Board on the WQARF Program that was presented on September 24 and October 29, 2004.

Remediation

- Millions of gallons of groundwater treated:

214.00	Broadway-Panatano
42.71	Central and Camelback
11.60	Los Reales Landfill
426.50	Payson PCE
1729.94	Pinal Creek
9.00	Shannon Road - Rillito Creek
<u>.07</u>	Tyson Wash
2,434.45	FY 2004 Total

- Pounds of volatile organic compounds removed from the environment:

87.24	Central and Camelback
1.06	Los Reales Landfill
476.35	Payson PCE
1.80	Shannon Road - Rillito Creek
31.00	Silverbell Landfill
550.00	West Central Phoenix - East Grand Avenue
<u>864.00</u>	West Central Phoenix - North Plume
2,011.45	FY 2004 Total

- Pounds of metals removed from the environment:

<u>3285238.03</u>	Pinal Creek
3,285,238.03	FY 2004 Total

- Tons of contaminated soil removed:

88636	Vulture Mill
88,636	FY 2004 Total

Community Involvement Activities

- Fact Sheets and/or Public Notices:
 - 1 7th Street & Arizona Ave.
 - 2 West Central Phoenix - East Grand Avenue
 - 2 West Central Phoenix - West Grand Avenue
 - 5 **FY 2004 Total**

- Public Meetings:
 - 2 Broadway - Pantano
 - 1 Camelback Rd. & Central Avenue
 - 1 El Camino Del Cerro
 - 1 Miracle Mile
 - 1 Park Euclid
 - 1 Payson PCE
 - 1 Shannon Road & Rillito Creek
 - 1 South Mesa
 - 1 West Central Phoenix - North Canal Plume
 - 1 West Central Phoenix - North Plume
 - 2 West Central Phoenix - West Grand Avenue
 - 1 West Central Phoenix - West Osborn
 - 14 **FY 2004 Total**

Legal Activities

- Total Consent Decrees/Consent Orders completed (ARS § 49-282.G.3):
 - 5 **FY 2004 Total**

- Terms of WQARF Consent Decrees (ARS § 49-282.G.3):

Settlor	Settlement Amount
Frazer Industries, Inc.	\$90,000.00
GAC, Inc.	\$140,000.00
Honeywell, Inc.	\$1,125,000.00
Safety-Kleen Systems, Inc.	\$99,000.00
Waste Management of Arizona, Inc.	\$219,000.00
FY 2004 Total	\$1,673,000

- Qualified Business or Financial Hardship Settlement applications received (ARS § 49-282.G.4(a)):
 - No applications for qualified business or financial hardship settlements were received in FY 04.**
- Qualified Business or Financial Hardship Settlements denied (ARS § 49-282.G.4(b)):
 - No applications for qualified business or financial hardship settlements were denied in FY 04.**
- Qualified Business Settlements completed (ARS § 49-282.G.4(c)):
 - No qualified business settlements were completed in FY 04.**
- Financial Hardship Settlements completed (ARS § 49-282.G.4(d)):
 - No financial hardship settlements were completed in FY 04.**
- Prospective Purchaser Agreements completed:
 - 3 FY 2004 Total**
- Access Agreements completed:
 - 4 FY 2004 Total**
- Potentially Responsible Party (PRP) Searches started:
 - 1 FY 2004 Total**
- Cost Recovery Activity

Description	# of Packages	Dollar Amount
At the beginning of the year	5	368,366.94
New Packages	5	271,287.81
Payments Received	6	388,700.67
Adjustments Package reduction		1,356.00
Balance at end of year	4	249,598.08

FY 2004 ACTIVITIES AND ACCOMPLISHMENTS AT FEDERAL SITES

Pursuant to A.R.S. § 49-282(E)(1), WQARF can be used to provide state matching monies or to meet other obligations as prescribed by § 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). WQARF monies are also used for remedial actions 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.

- Millions of gallons of groundwater treated:

19.9	Apache Powder
2.844	Hassayampa Landfill
3025.0	Luke AFB
141.00	Motorola 52 nd St. - OU1
842.16	Motorola 52 nd St. - OU2
6.264	North Indian Bend Wash
293.00	Phoenix-Goodyear Airport - South
671.00	Phoenix-Goodyear Airport - North
2,170.00	TARP - Tucson Airport Remediation Project
63.30	TIAA/Arizona Air National Guard Tucson
7.30	TIAA/Burr Brown
8.10	TIAA/Former West Cap
831.0	US Air Force Plant 44, Tucson
8,080.868	FY 2004 Total

- Pounds of volatile organic compounds removed from the environment:

11,904	Davis-Monthan AFB - TPH (jet fuel)
8927	161 st Air National Guard
32	Hassayampa Landfill
3538	Luke AFB
736	Motorola 52 nd Street/OU1
1300	Motorola 52 nd Street/OU2
5503	North Indian Bend Wash
177.9	Phoenix-Goodyear Airport/South
1296	Phoenix-Goodyear Airport/North
2.94	AANG 162 nd (TIAA)
0.74	Burr Brown (TIAA) Texas Instruments
0.13	Former West Cap (TIAA)
325	TARP - Tucson Airport Remediation Project
545	US Air Force Plant 44, Tucson
34,287.71	FY 2004 Total

- Pounds of hazardous substances removed from the environment:

44,579	Apache Powder (nitrate)
3,068	Motorola 52 nd Street - Honeywell (solvent/jet fuel mixture)
47,647	FY 2004 Total

- Pounds of other contaminants removed from the environment:

20.5	Phoenix Goodyear Airport North (perchlorate)
20.5	FY 2004 Total

- Pounds of metals removed from the environment:

0	FY 2004 Total
---	----------------------

- Tons of contaminated soil removed:

2,969.28	Camp Navajo
2,969.28	FY 2004 Total

Community Involvement Activities at Federal Sites

- Fact Sheets and Public Notices:

1	Apache
1	Williams Field Bomb Target #6 - FUDS
4	Williams AFB
2	Camp Navajo
1	Motorola 52 nd Street
1	Phoenix Goodyear Airport North & South
10	FY 2004 Total

- Public Meetings:

1	Williams Bomb Target #6
1	Davis-Monthan AFB
4	Williams AFB
4	Camp Navajo
1	Motorola 52 nd Street
1	PGA South
1	Phoenix Goodyear Airport North and South
6	UCAB - TARP, TIAA, AZ Air National Guard, USAF Plant 44
19	FY 2004 Total

Legal Activities at Federal Sites

- Access Agreements:
0 **FY 2004 Total**
- Consent Decrees/Consent Orders:
1 **FY 2004 Total**
- Applicable or Relevant and Appropriate Requirements:
0 **FY 2004 Total**
- Records of Decision (ROD) and ROD Amendments:
0 **FY 2004 Total**

EMERGENCY RESPONSE PROGRAM

Pursuant to A.R.S. § 49-282(E)(8), WQARF monies are used for all reasonable costs incurred in 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 2004 Activities and Accomplishments

The Emergency Response Team (ERT) received and responded to 175 reported incidents, 37 of which required a response action. The ERT also was involved in several emergency drills and exercises including the Arizona / Sonora Binational Full-Scale Terrorism Response Exercise and the annual Palo Verde Nuclear Generating Station Drill. In addition, the ERT dedicates significant staff resources in support of several local, state and federal agencies during wildfire operations and as a member of the Regional Response Team for the lower Colorado River. Because of ERT involvement in these activities, ADEQ has received hundreds of thousands of dollars in grant monies from the U.S. EPA and ODP. Grants funding will be utilized to upgrade the Team's ability to respond to threats to public health and safety. Significant emergency response actions include:

Unsafe Storage of Hazardous Waste: During an inspection of a hazardous waste transfer facility near Tucson, ADEQ hazardous waste inspectors discovered several drums and containers of hazardous waste that appeared to be in an unstable condition due to age and improper storage. At the request of the inspectors, the ERT responded and determined that materials stored at the facility did pose a significant threat to the health and safety of

the surrounding community. ERT personnel then undertook response actions to stabilize and secure the materials. ADEQ worked cooperatively with EPA to remove the hazardous materials after they were stabilized. The operator of the facility has been charged with environmental crimes.

Release of Chlorine Gas: At the request of a local fire department, the ERT responded to a release of chlorine gas at a facility located in Glendale. This action took place after a large amount of chlorine gas was released from a 90-ton railcar during a cross-loading operation. During this incident, the ERT provided on-site technical assistance to local response agencies and assumed the role of State On-Scene Coordinator for additional state resources that were involved in the response.

Cross Border Release of 30 Million Gallons of Raw Sewage: At the request of Nogales Arizona, the ERT undertook a response action to treat and remove the remains of 30 million gallons of raw sewage released into the Nogales Wash south of the US / Mexico Border. During this operation, ERT personnel provided oversight during the removal of more than 200 tons of solid debris and the deployment of several hundred pounds of chlorine that was used to treat the sewage that remained in the wash.

A.R.S. §49-282(E)(11) also provides for reimbursement to political subdivisions for 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 the public health or the environment. There were no new applications received in FY 2004, but there were two applications received in FY 2003 that were denied in FY 2004. The total amount denied was \$12,405.82

VOLUNTARY REMEDIATION PROGRAM

Senate Bill 1454 went into effect on July 18, 2000 which created a new Voluntary Remediation Program (VRP) to be implemented by the ADEQ. The VRP provides an opportunity for property owners, prospective purchasers and other interested parties to step forward to investigate and remediate a contaminated site in cooperation with ADEQ. The volunteer reimburses ADEQ for oversight costs as arranged through a signed reimbursement agreement. Upon successful completion of remediation activities, the volunteer has the opportunity to receive either a no further action (NFA) or conditional NFA determination from ADEQ for a site or portion of a site. A.R.S. § 49-282(E) and §49-187 authorizes the use of WQARF for this program.

FY 2004 Accomplishments

VRP continues its success in encouraging property owners, prospective purchasers, and other interested parties to investigate and cleanup contaminated sites in cooperation with the agency. Benefits of the program include reducing exposures to contaminants and ensuring that cleanups meet applicable requirements. In exchange for their initiative and cooperation, program participants benefit from ADEQ's expedited review of the clean up and upon successful completion, a closure document that is accepted by all relevant ADEQ programs. In addition, applicants can utilize the closure document to demonstrate to potential purchasers and lending institutions that all applicable cleanup standards have been achieved.

Due to aggressive marketing, referrals from successful applicants, and program enhancements, the numbers of applicants to the VRP continues to grow. In 2004, the VRP accepted 18 new sites, containing both soil and groundwater contamination. ADEQ continues to educate consultants and potential applicants about the benefits of the program by relaying other success stories. Several applicants that have gone through the VRP for one site have returned to the program for additional sites where remediation is needed. In addition, ADEQ has integrated the VRP into its enforcement strategy for facilities that have been identified by the regulatory programs as requiring remediation. These facilities are encouraged to enter the VRP in lieu of enforcement action. This not only provides for a facility to return to compliance, it allows both the facility and ADEQ to focus time and money on the cleanup instead of on efforts to compel the clean up. It also allows the agency's inspection and enforcement staff to focus on identifying new sites and allows VRP staff to ensure that remediation is conducted in a consistent manner across the agency.

There are currently 79 active and 81 closed sites in the VRP with remediation of 568,213 tons of soil at participating VRP sites. A detailed description of VRP activities and accomplishments can be found in Appendix 3.

WATER QUALITY ASSESSMENT AND MANAGEMENT PROGRAM

Pursuant to A.R.S. § 49-282(E)(3), WQARF monies 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 2004 activities and accomplishments can be found in Appendix 4.

WELL INSPECTIONS AND APPROVAL PROGRAM

Pursuant to A.R.S. 282(E)(12) WQARF monies are used to fund the Arizona Department of Resources to conduct well inspections, remedial actions, and review of and approval well construction necessary to prevent vertical cross-contamination. The FY 2004 accomplishments of the Well Inspections and Approval Program can be found in Appendix 5.

RISK ASSESSMENT PROGRAM

Pursuant to A.R.S. 282(E)(15) WQARF monies 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 2004 accomplishments of the Risk Assessment Program can be found in Appendix 6.