A REPORT
TO THE
ARIZONA LEGISLATURE

Performance Audit Division

Performance Audit

Department of Environmental Quality—
Compliance Management

March • 2013
REPORT NO. 13-01

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

Debra K. Davenport
Auditor General

The **Auditor General** is appointed by the Joint Legislative Audit Committee, a bipartisan committee composed of five senators and five representatives. Her mission is to provide independent and impartial information and specific recommendations to improve the operations of state and local government entities. To this end, she provides financial audits and accounting services to the State and political subdivisions, investigates possible misuse of public monies, and conducts performance audits of school districts, state agencies, and the programs they administer.

The Joint Legislative Audit Committee

Senator **Chester Crandell,** Chair

Senator **Judy Burges**
Senator **Rich Crandall**
Senator **Steve Gallardo**
Senator **Katie Hobbs**
Senator **Andy Biggs** (*ex officio*)

Representative **John Allen,** Vice Chair

Representative **Paul Boyer**
Representative **Andrea Dalessandro**
Representative **Martin Quezada**
Representative **Kelly Townsend**
Representative **Andy Tobin** (*ex officio*)

Audit Staff

Dale Chapman, Director

Shan Hays, Manager and Contact Person
Catherine Dahlquist, Team Leader
Jennifer Allen
Jeffrey Gove
Marc Owen

Copies of the Auditor General's reports are free.
You may request them by contacting us at:

Office of the Auditor General
2910 N. 44th Street, Suite 410 • Phoenix, AZ 85018 • (602) 553-0333

Additionally, many of our reports can be found in electronic format at:

www.azauditor.gov

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

DEBRA K. DAVENPORT, CPA
AUDITOR GENERAL

MELANIE M. CHESNEY
DEPUTY AUDITOR GENERAL

March 26, 2013

Members of the Arizona Legislature

The Honorable Janice K. Brewer, Governor

Mr. Henry Darwin, Director
Department of Environmental Quality

Transmitted herewith is a report of the Auditor General, *A Performance Audit of the Department of Environmental Quality—Compliance Management*. This report is in response to an October 26, 2010, resolution of the Joint Legislative Audit Committee. The performance audit was conducted as part of the sunset review process prescribed in Arizona Revised Statutes §41-2951 et seq. I am also transmitting within this report a copy of the Report Highlights for this audit to provide a quick summary for your convenience.

As outlined in its response, the Department of Environmental Quality agrees with all of the findings and plans to implement all of the recommendations.

My staff and I will be pleased to discuss or clarify items in the report.

Sincerely,

Debbie Davenport
Auditor General

Attachment

2910 NORTH 44th STREET • SUITE 410 • PHOENIX, ARIZONA 85018 • (602) 553-0333 • FAX (602) 553-0051

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

Department of Environmental Quality—
Compliance Management

REPORT HIGHLIGHTS
PERFORMANCE AUDIT

Department can more effectively target inspections

Our Conclusion

The Department of Environmental Quality (Department) monitors and enforces regulated facilities' compliance with environmental laws and regulations to control or prevent the release of contaminants into the environment that may have negative effects on the public's health. Regulated facilities include power plants, wastewater treatment plants, dry cleaners, construction equipment, and other portable pollution sources. Although the Department monitors compliance by conducting inspections of regulated facilities, it can more effectively protect public health and the environment by targeting inspections of facilities based on risk. Additionally, the Department needs to take more consistent, timely, and effective enforcement actions.

Department monitors and enforces compliance with environmental laws and regulations—Department staff are responsible for ensuring that regulated facilities are following all applicable environmental laws and regulations. Compliance monitoring and enforcement help control or prevent the release of contaminants into the environment that may affect public health. The Department monitors compliance through various types of inspections. Between fiscal years 2006 and 2012, the Department conducted nearly 26,000 inspections.

Types of department inspections

File reviews—In-office reviews of reports and records on a facility's emissions, discharges, and compliance history.

Onsite inspections—Visits to the regulated facility to assess its compliance with the terms of its permit and/or environmental laws and regulations.

Complaint inspections—Investigations of regulated facilities in response to citizen complaints.

Department shares responsibility with the EPA for regulating federal environmental programs—The Department shares regulatory responsibility with the U.S. Environmental Protection Agency (EPA) for several environmental programs addressing air, water, and solid and hazardous waste. The Department negotiates monitoring agreements with the EPA for these programs based on federal guidance and policy, which include recommended inspection frequencies.

Department typically inspects similar types or categories of facilities with same frequency—The Department's strategy for scheduling routine inspections, which is mostly dictated by its monitoring agreements with the EPA, is to inspect all facilities of the same type or category with the same frequency, regardless of risk. For example, every public drinking water system that gets water from a surface source, such as a reservoir, is inspected every 2 years. Although this inspection approach satisfies EPA inspection requirements, it results in similar rates of inspections for compliant facilities, which may pose lower risks to public health and the environment, and for less compliant facilities, which may pose higher risks to public health and the environment.

This inspection approach may also lead to a high rate of inspections for facilities that are consistently compliant. For example, between fiscal years 2006 and 2011, the Department conducted four or more inspections each at 358 facilities where it did not identify any violations. These 358 facilities represented 5 percent of the facilities inspected during this period but accounted for 14 percent of the total inspections the Department conducted.

Targeting inspections toward riskiest facilities increases efficiency and effectiveness—Targeting inspections based on various risk factors can lower compliance-monitoring costs while increasing the effectiveness of inspections by focusing inspection efforts on the facilities most likely to violate regulations. Additionally, targeting inspections based on violations history and other risk factors offers facilities a positive incentive to follow regulations by allowing them to receive reduced regulatory oversight, including fewer inspections, if they remain compliant and take other steps to minimize their risk of violations.

2013

March • Report No. 13-01

Although the EPA has been reluctant in the past to approve department deviations from inspection frequencies recommended in federal guidance and policy, EPA officials from the western region, which covers Arizona, stated that they will consider alternative approaches based on local priorities and goals. Therefore, the Department should request that the EPA collaborate with it to develop a framework for implementing a risk-based inspections approach. Further, for the programs where the Department implements a risk-based inspections approach, the Department should develop and implement policies and procedures for assessing the effectiveness of the risk-based inspections approach.

Recommendation

The Department should request that the EPA collaborate with it to develop a framework for a risk-based inspections approach, which will allow it to focus its inspection activities toward facilities that pose the greatest risk to public health and the environment.

Department does not consistently take timely and effective enforcement actions

Enforcement notices not always issued within department timeline—Although effective and timely enforcement deters or discourages violations, the Department has not consistently met its own time frames for issuing enforcement action. For example, although notices of corrective action and notices of violation should be issued within 45 days of inspection, 80 percent of the notices issued to hazardous waste facilities between fiscal years 2006 and 2011 were late, taking 78 days to issue, on average. Compliance managers indicated that the reason for the delays is the multi-level process for approving notices, but they are developing a more streamlined approval process.

Department not ensuring facilities return to compliance within deadlines—The Department gives facilities specific deadlines to address violations and return to compliance. However, 45 percent of the 5,840 enforcement cases from fiscal years 2006 through 2011 did not meet the Department's compliance deadlines. Department staff attributed the delays to reduced staffing, which limited their ability to monitor facility efforts to return to compliance.

Of particular concern are drinking water systems. The Department prioritizes enforcement of water systems with the most systemic noncompliance with a goal of returning them to compliance within 6 months. In August 2012, 25 of the 79 water systems identified as enforcement priorities had not returned to compliance for more than 1 year. This, too, was attributed to limited availability of department enforcement staff. Additionally, department staff indicated that small water systems may lack the money to purchase equipment to address compliance issues.

Department infrequently escalated enforcement when compliance deadlines not met—Department policy calls for escalating enforcement action when facilities miss deadlines, but it seldom does so. When the Department escalates enforcement, it usually is in the most serious cases. Department managers explained that policies and procedures regarding enforcement escalation are too rigid and do not provide for professional judgment. However, the Department undermines its credibility as a consistent and fair regulator, and reduces its ability to deter noncompliance when it fails to enforce deadlines and escalate enforcement.

Recommendations

The Department should:

- Notify facilities in a timely manner about their violations and how to resolve them;
- Implement a corrective action plan that addresses the main barriers to providing effective assistance to noncompliant facilities; and
- Develop and adhere to more effective policies for escalating enforcement action.

TABLE OF CONTENTS

• continued

TABLE OF CONTENTS

Tables

Figures

INTRODUCTION
Scope and Objectives

The Office of the Auditor General has conducted a performance audit of the Department of Environmental Quality (Department)—Compliance Management pursuant to an October 26, 2010, resolution of the Joint Legislative Audit Committee. This audit is the first in a series of audits conducted as part of the sunset review process prescribed in Arizona Revised Statutes (A.R.S.) §41-2951 et seq and examines the Department's processes for monitoring and enforcing compliance with state and federal environmental laws and regulations. Future audits will focus on other aspects of the Department's operations and include an analysis of the statutory sunset factors.

Department's mission is to protect public health and the environment

The Department is the State's primary environmental regulatory agency. The Department's mission is to "protect and enhance public health and the environment in Arizona." The Department carries out its mission through several core functions, including granting permits to prevent and control pollutant discharge by helping to ensure that facilities are constructed and operated in accordance with environmental laws and regulations, and monitoring and enforcing regulated facilities' compliance with laws and regulations.[1]

Compliance monitoring and enforcement are important to help control or prevent the release of contaminants into the environment that may have negative effects on the public's health. For example, Arizona citizens need access to safe drinking water, but drinking water can potentially be contaminated in a number of ways (see textbox). Although a low level of certain contaminants is generally allowed, high levels of some contaminants can cause short- and long-term health risks and even death to those at special risk.

Examples of drinking water contaminants

Fecal coliform—The major source of fecal coliform in drinking water is human and animal fecal waste. Exposure to fecal coliform can cause short-term effects, such as diarrhea, cramps, nausea, and headaches, and may pose a special health risk for infants, young children, and people with severely compromised immune systems. The presence of these bacteria can also indicate that other harmful organisms are present in the water.

Nitrates—The primary sources of nitrates in drinking water are human and animal waste and fertilizer. Infants younger than 6 months who drink water containing excess nitrates can become seriously ill and, if untreated, may die.

Source: U.S. Environmental Protection Agency.

Department responsible for monitoring and enforcing compliance with environmental laws and regulations

Department compliance staff are responsible for ensuring that facilities regulated by the Department, such as mines and wastewater treatment plants,

[1] This report uses the word "facility" to mean any place/entity for which the Department has regulatory responsibility, including stationary facilities, such as power plants, wastewater treatment plants, and dry cleaners, and other entities, such as construction equipment and other portable pollution sources.

Types of department inspections

File reviews—In-office reviews of reports and records on a facility's emissions, discharges, and compliance history. The Department conducted 391 file reviews in fiscal year 2012.[1]

Onsite inspections—Visits to the regulated facility to assess its compliance with the terms of its permit and/or environmental laws and regulations. The Department conducted 2,085 onsite inspections in fiscal year 2012.

Complaint inspections—Investigations of regulated facilities in response to citizen complaints. The Department conducted 250 complaint inspections in fiscal year 2012.

[1] This number includes all air program file reviews, some of which are conducted in preparation for an onsite inspection. The number also includes waste and water program file reviews that resulted in enforcement actions.

Source: Department information and Auditor General staff analysis of department inspection data.

are following all applicable environmental laws and regulations, and for taking enforcement action against violating facilities. Department compliance staff monitor compliance by conducting onsite inspections of regulated facilities, reviewing information submitted to the Department by facilities as part of self-monitoring and reporting requirements, and responding to citizen complaints alleging environmental violations. The Department classifies all these activities as forms of inspections (see textbox). If department compliance staff identify violations, they may pursue enforcement actions to bring the violating facilities back into compliance with regulations.

The Department can take enforcement actions ranging from issuing an informal Notice of Opportunity to Correct, which allows facility operators a specified number of days to correct a minor deficiency, to filing a civil action, which involves the Arizona Attorney General's Office and can include substantial financial penalties to the violating facility. See Figure 3, page 24, for additional information on enforcement actions available to the Department.

As shown in Table 1, between fiscal years 2006 and 2012, department compliance staff conducted nearly 26,000 inspections and initiated nearly 9,000 enforcement cases. Between fiscal years 2006 and 2010, the number of annual inspections the Department conducted increased steadily, but in fiscal year 2011, the number of inspections performed decreased to fiscal year 2006 levels, and declined even further in fiscal year 2012. Department officials attributed the decline to a 29 percent reduction in compliance staff between fiscal years 2008 and 2011 that occurred because of a combination of attrition and layoffs due to budget cuts.

Table 1: Department inspection and enforcement activity Fiscal years 2006 through 2012

Activity	2006	2007	2008	2009	2010	2011	2012	Total
Inspections	3,148	3,643	4,032	4,436	4,698	3,113	2,726	25,796
Enforcement cases	1,125	1,482	1,630	1,658	1,297	889	895	8,976

Source: Auditor General staff analysis of department inspection and enforcement data for fiscal years 2006 through 2012.

Department shares responsibility with EPA for regulating federal environmental programs

The Department shares regulatory responsibility for several federal environmental programs with the U.S. Environmental Protection Agency (EPA).[1] These programs are authorized and established under federal laws and regulations and are designed to control or prevent environmental pollution. For example, the Clean Water Act authorizes the regulation and enforcement of requirements that govern waste discharges into U.S. waters; while the Solid Waste Disposal Act and Resource Conservation and Recovery Act govern the regulation of solid and hazardous wastes. According to EPA policy, state and local governments are expected to assume primary responsibility for the implementation of environmental programs (see textbox). The EPA's role is to provide national environmental leadership, develop general program frameworks, conduct research and national information collection, help states prepare to assume responsibility for program operations, provide technical support to states in maintaining high quality programs, and ensure national compliance with environmental quality standards. In addition, the EPA is responsible for establishing standards, which may be incorporated into law or regulation. Standards may specify a desired state, such as the level of nitrogen in the air not exceeding 0.053 parts per million; limit alterations, such as allowing no more than 10 percent of natural forest be damaged; or require the use of certain technologies or practices.

Federal delegation—The assumption of partial or full control over one of the federal environmental programs is known as "delegation." In order for delegation to occur, the state legislature must have passed authorizing legislation that is at least as stringent as the federal standard while demonstrating the state has adequate resources to run the program. The state then files a petition with the EPA. Delegation usually includes granting permits, performing inspections, conducting monitoring and enforcement, and often includes setting standards.

Source: EPA policy on delegation to state and local governments and the Environmental Council of the States.

The Department negotiates compliance monitoring plans, or agreements, with the EPA for its federally delegated programs based on federal guidance and policies such as the EPA's *Office of Enforcement and Compliance Assurance National Program Manager Guidance* and compliance monitoring strategies, which include recommended inspection frequencies.[2] Annually, EPA and department staff will jointly evaluate the Department's performance in meeting its inspection commitments, and in those cases where it did not, determine why and what adjustments need to be made for the following year.

The Department negotiates inspection commitments with the EPA.

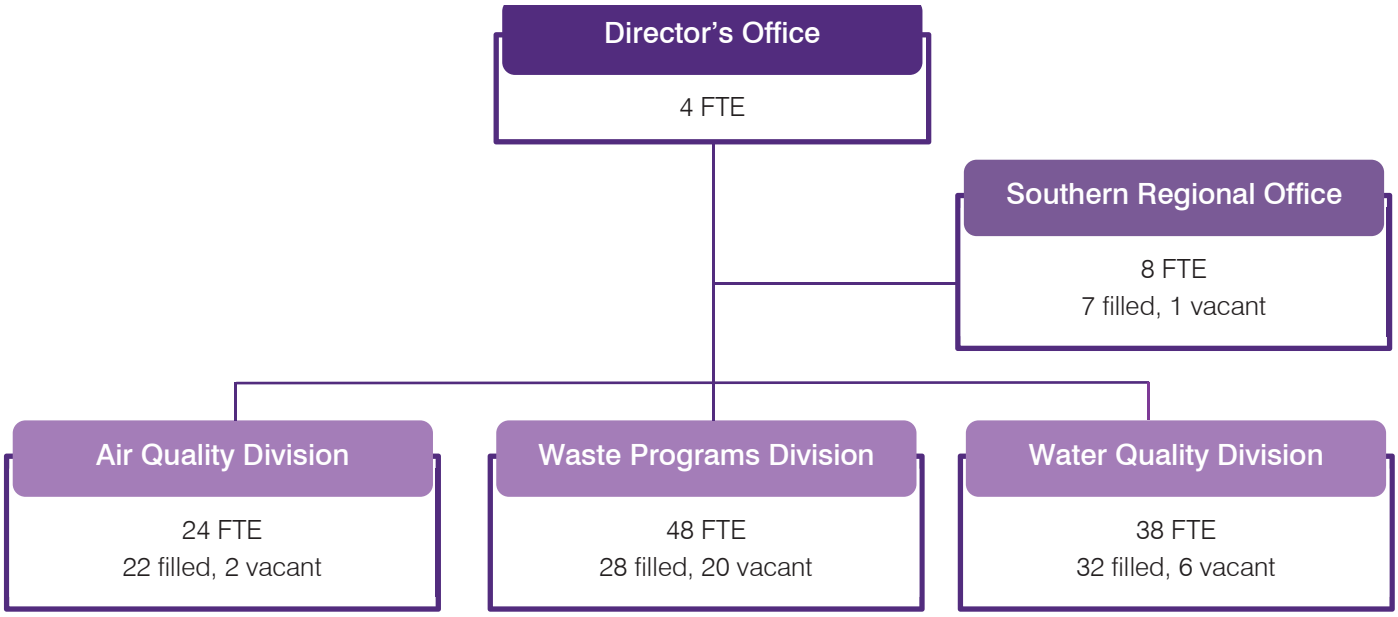
[1] Some tribal environmental programs are under the EPA's jurisdiction. Additionally, responsibility for some programs may be shared with the counties. For example, the Department is responsible for asbestos abatement in 12 of the State's 15 counties, but the EPA has delegated responsibility for asbestos abatement to Maricopa, Pima, and Pinal Counties.

[2] The EPA Office of Enforcement and Compliance Assurance issues various compliance-monitoring strategies, including the *2010 Clean Air Act Stationary Source Compliance Monitoring Strategy, 2007 Clean Water Act National Pollutant Discharge Elimination System Compliance Monitoring Strategy for the Core Program and Wet Weather Sources,* and *2010 Compliance Monitoring Strategy for the Resource Conservation and Recovery Act Subtitle C Program.*

Organization and staffing

The Department's 122 full-time equivalent (FTE) compliance staff work out of the Department's Phoenix office and southern regional office located in Tucson. The majority of the compliance FTE are assigned to the Department's three programatic divisions—air quality, waste programs, and water quality. See Figure 1 for the Department's allocation of its compliance FTE.

Figure 1: Department allocation of compliance FTE
As of November 2012
(Unaudited)



Source: Auditor General staff summary of department FTE data provided in November 2012.

Each division regulates several environmental programs or sources of pollutants. Figure 2 (see page 5) describes the primary environmental programs that the Department's divisions regulate.

Figure 2: Primary department-regulated environmental programs[1]

Air Quality Division

- **Air major** and **air minor sources** are facilities that may emit pollutants into the air such as power plants and crematoriums. Major sources have the potential to emit 100 or more tons per year of any conventional air pollutant or 10 or more tons per year of any hazardous air pollutant.
- **Asbestos abatement program** regulates the removal, transport, and disposal of asbestos-containing material during renovation/demolition activities.
- **Vehicle fleet emissions program** regulates facilities that conduct emissions testing of their vehicle fleets, such as auto dealers.

Waste Programs Division

- **Solid waste program** regulates transfer facilities and sites used to store, process, treat, or dispose of solid waste such as, garbage, trash, waste tires, or sludge from a waste treatment plant, water supply treatment plant, or pollution control facility.
- **Hazardous waste program** regulates the transportation, generation, treatment, storage, and disposal of hazardous waste.
- **Underground storage tank program** regulates the installation, operation, and closure of underground storage tanks that contain regulated substances such as petroleum.

Water Quality Division

- **Aquifer protection program** regulates facilities such as wastewater treatment plants and mines that discharge pollutants either directly to an underground aquifer or to the land surface such that there is a reasonable probability that the pollutant will reach an aquifer.
- **Arizona pollutant discharge elimination system (AZPDES)** regulates facilities such as wastewater treatment plants that discharge pollutants into U.S. waters. Major AZPDES sources can discharge more than 1 million gallons of wastewater per day.
- **AZPDES stormwater program** regulates stormwater runoff from construction and industrial sites.
- **Drinking water program** regulates public drinking water systems that have 15 or more service connections (hookups) or serve 25 or more people. The water for these systems can be from surface sources such as lakes or groundwater sources such as underground aquifers.

[1] According to a department official, federal regulations, and EPA agreements, all the programs listed above are federally delegated or approved with the exception of the aquifer protection program.

Source: Auditor General staff summary of department information.

Budget

As shown in Table 2 (see page 7), the Department expended approximately $7.5 million and $7.3 million in fiscal years 2011 and 2012, respectively, and estimates spending nearly $9 million in fiscal year 2013, to monitor and enforce compliance with environmental laws and regulations in its air, waste, and water divisions. Most of the expenditures are for personal services and related benefits. Approximately 30 percent of expenditures were to pay administrative and support service costs allocated by the Department to its various divisions. Since the Department did not receive State General Fund monies in fiscal years 2011 through 2013, it used a variety of other revenue sources to pay for these expenditures, including assessed fees, intergovernmental revenues such as federal monies, and a portion of revenues from the Underground Storage Tank and Water Quality Assurance Revolving Funds.

The Department did not receive State General Fund monies in fiscal years 2011 through 2013.

Table 2: Schedule of compliance management revenue sources and division expenditures Fiscal years 2011 through 2013 (Unaudited)

	2011 (Actual)	2012 (Actual)	2013 (Budget)[1]
Compliance management revenue sources			
Fee-based funds[2]	$ 3,149,600	$ 3,165,800	$ 4,355,800
Intergovernmental, including federal	3,345,500	3,252,700	4,321,800
Underground Storage Tank Revolving Fund[3]	846,900	659,100	169,100
Water Quality Assurance Revolving Fund[4]	204,000	197,500	101,200
Total compliance management revenue sources	$ 7,546,000	$ 7,275,100	$ 8,947,900
Compliance management expenditures			
Air Quality Division:			
Personal services and related benefits	$ 1,282,400	$ 1,268,000	$ 1,514,500
Professional and outside services	4,300	3,100	51,600
Travel	129,500	116,900	151,100
Other operating and equipment	23,900	25,000	56,300
Indirect costs[5]	644,300	544,100	676,500
Total Air Quality Division expenditures	2,084,400	1,957,100	2,450,000
Waste Quality Division:			
Personal services and related benefits	1,714,400	1,559,500	2,080,700
Professional and outside services	71,300	75,800	37,100
Travel	76,700	62,100	44,200
Other operating and equipment	33,700	24,900	25,600
Indirect costs[5]	843,800	702,700	588,300
Total Waste Quality Division expenditures	2,739,900	2,425,000	2,775,900
Water Quality Division:			
Personal services and related benefits	1,775,700	1,948,700	2,424,900
Professional and outside services		800	3,000
Travel	38,600	42,400	73,200
Other operating and equipment	34,400	24,400	78,100
Indirect costs[5]	873,000	876,700	1,173,800
Total Water Quality Division expenditures	2,721,700	2,893,000	3,753,000
Total compliance management expenditures	$ 7,546,000	$ 7,275,100	$ 8,978,900

[1] According to the Department, revenues and expenditures for fiscal year 2013 were based on budgeted amounts submitted to the State's budget offices in October 2012. The fiscal year 2013 budget amounts were similar to the fiscal year 2012 budgeted amounts; however, the Department's actual fiscal year 2012 expenditures were much lower than the budget. Similarly, the Department expects the fiscal year 2013 actual expenditures to be less than the budget amounts. In addition, revenues presented in the table were allocated to the program based on actual expenditures; therefore, the actual revenues for fiscal year 2013 will increase or decrease in relation to actual expenditures.

[2] Amount consists of the portion of monies spent for compliance management from department funds for which the primary revenue is fees. For example, the Department collects permit fees for its air, waste, and water functions and inspection fees for its Emission Inspection Fund. These fees are used to pay for various contract and administrative charges for inspections, including station auditing.

[3] Amount consists of the portion of the Underground Storage Tank Revolving Fund that is used for compliance management. The fund receives various revenues, including excise taxes, fees, fines, and penalties.

[4] Amount consists of the portion of the Water Quality Assurance Revolving Fund that is used for compliance management. The fund receives various revenues, including corporate income taxes and fees assessed for municipal water use, pesticides, fertilizers, hazardous waste, and groundwater withdrawal.

[5] Amount consists of administrative and support services costs that the Department allocates to its various divisions.

Source: Auditor General staff analysis of department-prepared financial information for fiscal years 2011 through 2013.

FINDING 1

Department can more effectively target inspections to protect public health and the environment

The Department of Environmental Quality (Department) can improve its use of a risk-based, targeted inspection approach to help ensure that it inspects facilities that pose a greater risk to public health and the environment. Under existing procedures, the Department inspects facilities that have not committed violations and facilities that have committed violations at similar rates. Although the U.S. Environmental Protection Agency (EPA), environmental compliance research, and international standards all support targeting inspections toward the riskiest facilities, the Department's annual inspection commitments with the EPA have typically resulted in facilities of the same type or category being inspected with the same frequency, regardless of risk. Since federal guidance and policy allow states some flexibility to alter inspection frequencies, the Department should request that the EPA collaborate with it to develop a framework for implementing a risk-based inspections approach. Additionally, as part of a risk-based inspections approach and to help ensure that all facilities comply with laws and regulations, the Department should conduct random inspections, analyze facilities' self-monitoring information, and develop and review standardized reports from its compliance data.

Department conducts similar rates of inspections on compliant and less compliant facilities

The Department's strategy for scheduling routine inspections, mostly dictated by the agreements it has negotiated with the EPA, is to inspect all facilities of the same type or category with the same frequency. Under this approach, however, the Department conducts similar rates of inspections for compliant facilities that may not pose significant risks to public health and the environment and for less compliant facilities that may pose higher risks to public health and the environment.

Department typically inspects similar types or categories of facilities with same frequency—The Department's approach for scheduling routine, onsite inspections involves attempting to inspect all facilities of the same type or category with the same frequency. For example, the Department aims to inspect every public drinking water system that obtains water from a surface water source, such as a reservoir, every 2 years (see Table 3, page 10, for more examples).

According to department officials, this approach stems mainly from the Department's goal of meeting the inspection frequency commitments it has negotiated with the EPA. In general, these commitments specify the same inspection frequency for all facilities of the same type. The commitments also generally specify more frequent inspections for facilities with greater potential to emit or discharge a specific type of pollution. For example, as shown in Table 3, the Department has committed to inspect Arizona pollutant discharge elimination system (AZPDES) major sources, which can discharge more than 1 million gallons of wastewater per day into the environment, once every 2 years and AZPDES minor sources, which can discharge less than 1 million gallons of wastewater per day, once every 5 years.[1] For facilities in programs where the EPA recommends a minimum inspection frequency, the Department's inspection commitment is the same or more stringent than the EPA's recommendation.[2]

[1] AZPDES major sources also include industrial facilities that score above 80 on an EPA permit rating worksheet that assesses criteria such as toxic pollutant potential, proximity to a public water source, and the condition of the waterway that will receive the discharge. Industrial facilities scoring less than 80 on the worksheet are classified as AZPDES minor sources.

[2] Minimum inspection frequencies for underground storage tank facilities are mandated by federal law, while minimum inspection frequencies for public drinking water systems are mandated by federal administrative code. Thus, both are nonnegotiable.

Table 3: Department inspection frequency commitments and goals for regulated sources As of February 2013[1]

Regulated sources	Inspection frequency
Air major sources	Annually
Air minor sources	Every 5 years
Aquifer protection individually permitted sources	Every 5 years
AZPDES major sources[2]	Every 2 years
AZPDES minor sources	Every 5 years
AZPDES stormwater permitted sources	2-6% of facilities annually[3]
Hazardous waste large quantity generators	Every 5 years
Public drinking water systems using surface water	Every 2 years
Public drinking water systems using ground water—community[4]	Every 3 years
Underground storage tanks	Every 3 years

[1] The frequencies listed represent the Department's EPA inspection commitments, except those listed for the air major, air minor, and aquifer protection individually permitted sources, which are internal department goals. The Department's EPA commitment for air major sources is every 2 years, and this commitment also includes a small number of minor sources. The aquifer protection program is a state program and, thus, has no EPA commitment.

[2] AZPDES is the acronym for the Arizona pollutant discharge elimination system.

[3] The EPA recommends inspecting 5 to 10 percent of storm water facilities each year depending on facility type, but according to department officials, the Department has negotiated a lower inspection frequency based on its staffing levels.

[4] Community systems serve residents or businesses year-round.

Source: Auditor General staff analysis of department negotiated plans or agreements with the EPA and interviews with department staff.

Department conducts similar numbers of inspections for compliant and noncompliant facilities—The Department's inspection approach may satisfy its EPA commitments, but it does not focus its inspections on facilities that have lower rates of compliance with applicable laws and regulations and thus may pose higher risks to public health and the environment.[1] Auditors analyzed compliance information for all facilities that had an onsite inspection between fiscal years 2006 and 2011. This analysis showed that, on average, the Department conducted similar rates of inspections among its most compliant facilities and its facilities that had violations, although the noncompliant facilities received slightly more inspections. Specifically, as shown in Table 4 (see page 11), for fiscal years 2006 through 2011, the Department conducted:

- 6,794 onsite inspections of 3,310 facilities that had no violations, an average of 2.1 inspections per facility.

[1] Auditor general staff calculated a compliance rate that specifies the percentage of a facility's onsite inspections that did not identify violations. For example, a facility with a 100 percent compliance rate had no violations.

Table 4: Inspections of compliant and noncompliant facilities Fiscal years 2006 through 2011

	Total facilities	Percent of total facilities	Total inspections	Percent of total inspections
Compliant facilities				
1 inspection	1,844	26%	1,844	11%
2 inspections	818	11	1,636	10
3 inspections	290	4	870	5
4+ inspections	358	5	2,444	14
Subtotal	3,310	46	6,794	40
Noncompliant facilities				
1 inspection	1,020	15	1,020	6
2 inspections	1,660	23	3,320	19
3 inspections	578	8	1,734	10
4+ inspections	556	8	4,221	25
Subtotal	3,814	54	10,295	60
Total for all facilities	7,124	100%	17,089	100%

Source: Auditor General staff analysis of department inspection data for fiscal years 2006 through 2011.

- 10,295 onsite inspections of 3,814 facilities that had at least one violation, an average of 2.7 inspections per facility.

Although, on average, noncompliant facilities received slightly more inspections, the Department conducted numerous inspections on some facilities that had no violations. For example, the Department conducted 4 or more inspections each at 358 compliant facilities during fiscal years 2006 through 2011 where it did not identify any violations. Although these 358 facilities represented only 5 percent of the total facilities inspected during fiscal years 2006 through 2011, they accounted for 14 percent of the total inspections the Department conducted during that time.

The Department conducted 4 or more inspections at 358 facilities that had no violations during fiscal years 2006 through 2011.

Additionally, auditors' analysis of department inspections used a conservative measure of compliance—100 percent—that did not include those facilities that likely posed less of a risk because inspections of these facilities found few or only minor violations. Specifically, the analysis considered any facility that had any violation in the 6-year review period as noncompliant, regardless of the number or severity of the violations. For example, 845 facilities that received a total of 1,980 inspections, representing an average of 2.3 inspections per facility, had only one violation during the review period. Additionally, nearly 2,000 of the noncompliant facilities the Department inspected committed only minor violations during the review period.[1]

[1] Minor violations are those that pose minimal or nonexistent risk to public health and the environment, such as failure to post a permit or failure to retain records of past laboratory tests for drinking water contaminants.

Department's inspections approach could put public health and the environment at risk

The Department's inspections approach of inspecting compliant and noncompliant facilities at similar rates could potentially lead it to miss violations that pose immediate or substantial risks to public health and the environment. The Department's inspections are an important piece of its overall approach for ensuring that regulated facilities comply with regulations and thus do not harm public health and the environment. According to the International Network for Environmental Compliance and Enforcement (INECE), effective programs for ensuring compliance with environmental regulations generally involve a combination of several activities, including compliance monitoring, which includes conducting inspections, conducting educational and promotional activities, providing incentives to induce facilities to comply, and taking enforcement actions such as imposing sanctions or fines to compel compliance (see Finding 2, pages 23 and 24, for a discussion of the Department's enforcement activities).[1] According to INECE, compliance monitoring is a key component of ensuring compliance.

Compliance monitoring serves two main purposes: (1) to identify violations so regulators can take enforcement action or other measures to convince or compel the facility to follow the rules, and (2) to provide deterrence to potential violators by conveying the likelihood that violations will be discovered and addressed with enforcement actions. However, inspections, which are a key component of compliance monitoring, are resource intensive and, as such, regulators must carefully prioritize which facilities to inspect (see textbox).

Given the Department's focus on conducting similar numbers of inspections at compliant and noncompliant facilities, it may potentially miss violations at noncompliant facilities that pose significant risks to public health and the environment, and may not provide adequate deterrence to these facilities to encourage them not to commit such violations. Moreover, if department resources are stretched too thin, inspectors may conduct less thorough inspections, and significant violations may go unnoticed and uncorrected. In both cases, public health and the environment are potentially at risk for increased harm.

Inspections take time

Onsite inspections may involve a variety of activities, including observing and documenting the operations of a facility to determine if it meets the requirements of permits, laws, or rules; examining the facility to determine if it is properly maintained; checking for significant changes to the facility that could affect its pollution output, operations, or compliance with permits, laws, and rules; taking samples or measurements of water, soil, air, or other substances; and reviewing or copying facility records. The Department's inspectors are also responsible for writing inspection reports for each inspection specifying what they inspected and identifying any actual or potential violations.

The time to complete an inspection can also vary by facility type and size. For example, an inspection of a facility with underground storage tanks can take as little as an hour and a half to longer than a week, depending on how many tanks the facility has and whether or not the inspector discovers problems, while an inspection of a public drinking water system can take as little as 8 hours to more than 1 week depending on the system's location and complexity and whether or not the inspector discovers violations, according to department inspectors.

Source: INECE, Department's *Compliance and Enforcement Handbook*, and interviews with department staff.

[1] International Network for Environmental Compliance and Enforcement (2009). *Principles of environmental compliance and enforcement handbook*. Washington, DC: Author.

Targeting inspections toward riskiest facilities increases efficiency and effectiveness, offers positive incentives for compliance

An alternative to the Department's approach of assigning the same inspection frequency to all facilities within a particular category would be to determine a facility's inspection frequency and priority for inspection based on the case-by-case risk associated with each facility. Risk-based targeting involves assessing the risk posed by certain facilities, industries, or pollution sources, and conducting higher rates of inspections on those that pose the greatest risks to public health and the environment. Literature on compliance monitoring identifies the following two benefits of risk-based targeting:

- **Greater efficiency and effectiveness—**Targeting inspections based on risk factors can lower compliance-monitoring costs while also increasing the effectiveness of inspections by focusing inspection efforts on the facilities most likely to be violating regulations, according to INECE and literature on the effectiveness of inspections targeting.[1]

- **Positive incentive for compliant and low-risk facilities—**Targeting inspections based on violations history and other risk factors offers facilities a positive incentive to follow regulations by allowing them to receive reduced regulatory oversight, including fewer inspections, if they remain compliant and take other steps to minimize their risk of violations. In practice, this incentive can increase overall compliance rates, according to literature on the effectiveness of inspections targeting.[2]

This approach would be particularly helpful to the Department given recent decreases in its compliance staff and other resources. From fiscal years 2008 through 2011, the Department's compliance and enforcement staff was reduced by 29 percent. In fiscal year 2011, the Department's annual number of inspections also dropped sharply (see Table 1, page 2), and department management attributed these decreases to the reduction in staffing. In specific programs, the Department has also struggled to meet its EPA inspection commitments. For example, in the underground storage tank program, the Department struggled to meet its inspection commitments in fiscal years 2011 and 2012. Therefore, the EPA hired contract inspectors to assist the Department in meeting these commitments during calendar year 2012. The Department also

The Department's compliance and enforcement staff was reduced by 29 percent from fiscal years 2008 through 2011.

[1] Studies identifying greater efficiencies and effectiveness resulting from targeted inspections include Lando, H., & Shavell, S. (2002). *The advantage of focusing law enforcement effort* [Discussion Paper No. 357]. Cambridge, MA: Harvard Law School, John M. Olin Center for Law, Economics and Business; and Rousseau, S. (in press). Evidence of a filtered approach to environmental monitoring. *European Journal of Law and Economics*.

[2] Studies discussing positive incentives for compliant facilities include Liu, L., & Neilson, W. (n.d.). *Enforcement with fixed inspection capacity*. Huntsville, TX: Sam Houston State University, Department of Economics and International Business; and Cason, T.N., & Gangadharan, L. (2004). *An experimental study of compliance and leverage in auditing and regulatory enforcement.* West Lafayette, IN: Purdue University, Department of Economics, Krannert School of Management and Melbourne, Australia: University of Melbourne, Department of Economics.

negotiated lower inspection commitments with the EPA in the AZPDES stormwater program in fiscal years 2012 and 2013, and is targeting facilities using an alternative inspection plan based on risk (see textbox). Department staff attributed the need for this alternate plan to a lack of staffing.

Instances of risk-based department targeting

Chrome-plating industry—In fiscal year 2008, the Department's Waste Programs Division began implementing a targeted inspections and enforcement campaign aimed at the chrome-plating industry, based on a mixture of citizen complaints and high rates of noncompliance discovered during department inspections, according to department staff.

Hazardous waste generators—In fiscal year 2011, the Waste Programs Division took advantage of an EPA initiative to exchange some routine inspections of facilities generating large quantities of hazardous waste for inspections of facilities generating small quantities of hazardous waste, based on an assessment that the smaller generators posed a greater risk for noncompliance.

Stormwater facilities—With support from the EPA and in response to reduced staffing, the Department implemented a risk-based inspections targeting approach for its AZPDES stormwater facilities beginning in fiscal year 2012. This approach targeted facilities based on proximity to sensitive waters, citizen complaints, reports of unpermitted facilities, and industrial sector.

Source: Auditor General staff summary of department and EPA documents and interviews with department staff.

Department should increase its use of risk analysis to target inspections

The Department should increase its targeting of inspections using a risk-based approach. In order to implement a risk-based inspections approach more widely, the Department should request that the EPA collaborate with it to develop a framework for implementing a risk-based inspections approach. The Department has used a risk-based approach to determine inspection frequencies for some facility categories, but the methods for assessing risk have been somewhat inconsistent. As a result, the Department should develop standard criteria for assessing facility risk in those environmental programs where the Department and EPA have developed a framework for implementing a risk-based inspections approach, and for those programs where there is no EPA oversight. The Department should use these criteria to assess the risk of individual facilities, facility types, and environmental programs, and it should use these assessments to determine inspection frequency based on risk. The Department should also establish policies and procedures for assessing the effectiveness of this approach and modifying it if needed. Finally, the Department should implement several other features of a risk-based targeting approach, including random inspections, reviews of self-monitoring information submitted by facilities, and compilation of standardized data reports.

Department should request that the EPA collaborate with it to allow risk-based targeting—According to department officials, one reason that it does not make greater use of a risk-based targeted inspections approach is because, in the past, the EPA has often been reluctant to allow the Department to negotiate inspection commitments that deviated from recommended inspection frequencies in federal guidance and policy. EPA Region 9 officials agreed that, in the past, they have been reluctant to approve deviations from guidance for inspection frequencies because, in general, they believed the guidelines provided the best strategy for meeting the EPA's goals. However, EPA Region 9 officials also stated that they are open to considering alternative strategies proposed by states for meeting priorities and goals that may differ from those of the EPA, and they stressed that past experience should not deter the Department from making such proposals.

The EPA has been reluctant in the past to allow department inspection commitments to deviate from those recommended in federal guidance and policy.

As discussed on pages 9 through 10, these EPA recommendations specify minimum inspection frequencies for each facility type and do not constitute a risk-based targeted approach. Thus, in order to implement a risk-based, targeted inspections approach more widely, the Department will need to request that the EPA collaborate with it to develop a framework for implementing a risk-based inspections approach to ensure that such an approach meets the terms of its EPA agreements. In general, federal guidance and policy allow states and other delegated authorities flexibility to negotiate alternative inspection frequencies based on local conditions, including risk factors such as violations history. Further, federal administrative rules allow states to propose alternative strategies that differ from the goals, objectives, and measures in the federal guidance. The Department's use of a risk-based targeting method and negotiation of lower inspection frequencies in the AZPDES stormwater program is an example of the EPA granting such flexibility. However, the amount of flexibility offered by the EPA may vary by environmental program, so the Department and the EPA may need to develop separate frameworks for each environmental program.

At least two other states have taken advantage of this flexibility to implement risk-based targeting strategies in multiple environmental programs with approval from the EPA:

- **Texas—**In fiscal year 2009, the Texas Commission on Environmental Quality (TCEQ) launched a 3-year pilot project to test a risk-based inspections strategy. At the time, TCEQ was having trouble inspecting all of the facilities in the state covered by EPA inspection frequency guidelines, which recommend inspecting similar types of facilities at the same frequency regardless of risk. The pilot project aimed to determine whether a risk-based approach could provide the same level of environmental protection as the EPA inspection guidelines.

  Under this pilot project, each of TCEQ's regions annually ranked its entire universe of facilities according to risk and then inspected the facilities identified as the riskiest. By targeting inspections by risk, TCEQ found more high-priority violations and took more enforcement actions than it had previously when attempting to follow EPA inspection guidelines. However, according to TCEQ

staff, the agency found that it was unable to use the risk-based approach as the primary mechanism for prioritizing inspections and still meet its inspection commitments with the EPA. According to TCEQ staff, this situation occurred because the risk-based approach identified many facilities for inspection that would not have been inspected according to EPA commitments. For example, the risk-based approach identified more frequent inspections for some facilities than required by EPA commitments. As such, according to TCEQ staff, after the pilot project ended in 2011, TCEQ began using the risk-based approach as a secondary mechanism for prioritizing inspections, with its EPA inspection commitments serving as the primary scheduling mechanism.

- **Virginia**—In fiscal year 2009, the Virginia Department of Environmental Quality (VA DEQ) launched a 3-year pilot program to test a risk-based method for prioritizing inspections. At that time, according to VA DEQ documents, VA DEQ was routinely exceeding its EPA inspection commitments. However, according to VA DEQ documents, it was also experiencing reductions in funding for inspections, and VA DEQ officials expressed concern that strictly following EPA guidance was leading to a heavy inspection focus on compliant facilities at the expense of providing adequate supervision of facilities with poor compliance records.

  Under the pilot program, VA DEQ assessed the risk of facilities in its air, hazardous waste, solid waste, and water programs. It used these assessments in some cases to reduce the inspection frequency of low-risk facilities, to conduct unplanned inspections on problematic facilities or facilities that would not have been scheduled for inspection under EPA guidance, and to identify facilities that might be eligible for partial rather than full inspections or for inspections covering several program areas.[1] According to VA DEQ staff, VA DEQ believes the program met its needs and expectations, and it continued to implement the provisions of the pilot program in fiscal years 2012 and 2013. The EPA expects to release an evaluation of the pilot program in the spring of 2013 that will include an assessment of program implementation and outcomes.

Virginia used risk assessments in some cases to reduce the inspection frequency of low-risk facilities.

Department should develop standard criteria for assessing facility risk in those environmental programs where it can proceed with a risk-based inspections approach—As indicated in the textbox on page 14, the Department has used a risk-based approach to target inspections in some cases, but the criteria used to assess risk has been somewhat inconsistent. In the three instances identified by department management where the Department has used risk-based targeting approaches, the criteria used to assess risk varied. For example, the water division's risk assessment of its stormwater facilities used a mixture of four criteria that included environmental risk as well as other factors such as citizen complaints, while the waste programs division's risk assessment

[1] The VA DEQ air program did not receive EPA approval to conduct partial inspections, and the VA DEQ hazardous waste program did not receive EPA approval to reduce inspection frequencies.

of hazardous waste generators was primarily based on compliance history. Further, the Department's *Compliance and Enforcement Handbook* (Handbook) does not offer staff specific guidance for assessing facility risk. Given these limitations in current practice, the Department should develop standard criteria to assess facility risk.

Literature on compliance monitoring suggests that risk assessment criteria should include a mixture of compliance history and other factors. According to the INECE, compliance monitoring programs can assess risk using several factors, including a facility's potential harm to the environment, the complexity of the inspection needed to evaluate compliance, facility compliance history, compliance history of similar facilities, and the availability of self-reported data.

The Organisation for Economic Co-operation and Development (OECD) also suggests a variety of risk factors that environmental regulators can use to prioritize inspections, including violations history, environmental impacts or public health impacts, and other characteristics of the facilities (see textbox).[1] As such, the Department's risk-assessment criteria should balance compliance history with other factors.

In addition, risk assessments developed by other environmental agencies could provide examples the Department can use in developing these criteria. For example, the Virginia Department of Environmental Quality's risk-based inspection strategy assesses compliance history to determine facility risk but also includes other factors, such as the environmental sensitivity of the area surrounding a facility, and a facility's voluntary implementation of environmental management systems and other measures not required by law. Further, according to the OECD, environmental regulators in the Netherlands use a method for assessing risk that includes an assessment of a facility's violations history along with an appraisal of a facility's implementation of an environmental management system designed to minimize the risk of violations as well as its capital investments that go

Selected examples of risk factors for prioritizing inspections and enforcement[1]

- Significant violators
- Industries or processes that emit high-risk pollutants
- Emission or discharge levels
- Sensitivity of the receiving environment
- Poor environmental conditions in a geographic area
- Specific type of pollution or environmental impact
- Companies with high staff turn-over or labor concerns
- Level of exposure to environmental impacts
- Proximity to residential areas
- Toxicity or hazard class of the pollutants being emitted or discharged
- Compliance history that exhibits systematic noncompliance

[1] Auditor General staff selected those factors from the OECD list that were associated with assessing risk, as opposed to factors associated with administrative or resource concerns.

Source: Auditor General staff summary of information published by the OECD.

[1] Organisation for Economic Co-operation and Development. (2004). *Assuring environmental compliance: A toolkit for building better environmental inspectorates in Eastern Europe, Caucasus, and Central Asia*. Paris, France: Author.

Risk assessment could include an analysis of a facility's voluntary steps to reduce environmental risk.

beyond regulatory requirements. These examples suggest that the Department could include a facility's voluntary implementation of both procedures or processes and capital improvements designed to reduce environmental risk in its risk-assessment criteria.

Department should conduct risk assessments of individual facilities, facility types, and environmental programs—Once it has developed risk-assessment criteria, the Department should conduct risk assessments of each individual regulated facility as well as assess the average risk of certain facility types and facilities in its environmental programs. Specifically, the Department should:

- **Assess risk at individual facilities—**As discussed earlier, 3,310 facilities inspected by the Department during fiscal years 2006 through 2011 had no identified violations and, thus, might be considered lower risk than facilities where the Department found violations. Further, among the facilities that had violations, 845 facilities had only one violation and nearly 2,000 facilities had only minor violations and, thus, might be considered lower risk than facilities with multiple or major violations.[1]

- **Assess average risk of facility types—**Certain types of facilities may, on average, pose differing levels of risk based on compliance history. For example, commercial gas stations had an average compliance rate of 22 percent during the review period, while wastewater treatment plants had an average compliance rate of 91 percent during the same time.

- **Assess average risk of facilities by environmental program—**When grouped by environmental program, certain facilities may pose different average levels of risk based on compliance history. For example, as shown in Table 5 (see page 19), which lists average compliance and major violations rates for 12 selected environmental programs, only 24 percent of facility inspections found no violations in the underground storage tank program, indicating that more than three-fourths of the inspections found violations. In contrast, 92 percent of facility inspections found no violations in the air major program, indicating that only 8 percent of the inspections found violations. Additionally, for the 12 programs listed in the table, when inspections found violations, the average rate of major violations ranged from 14 percent in the vehicle fleet emissions program to 69 percent in the hazardous waste program.

Department should use risk assessments to target inspections—Once the Department has completed its risk assessments in environmental programs where the Department and the EPA have developed a framework for implementing a risk-based inspections approach and for those programs where

[1] Examples of major violations include exceeding limits for emissions of air pollutants such as sulfur dioxide and distribution by a public water system of drinking water that exceeds the limits for nitrates.

Table 5: Average compliance and major violation rates for 12 selected environmental programs Fiscal years 2006 through 2011

Environmental program	Number of inspected places	Number of onsite inspections	Average compliance rate	Average major violation rate
Air major sources	55	553	92%	65%
Asbestos abatement	111	226	91	57
Aquifer protection individual permits	407	1117	90	57
Drinking water	1,397	2,837	88	42
AZPDES	218	727	86	57
Aquifer protection general permits	552	855	83	45
Solid waste	466	646	82	41
Vehicle fleet emissions	309	1,586	80	14
AZPDES stormwater	966	1,271	69	18
Air minor sources	351	817	66	47
Hazardous waste	331	484	52	69
Underground storage tank	2,582	5,057	24	18

Source: Auditor General staff analysis of department inspection and enforcement data for fiscal years 2006 through 2011.

there is no EPA oversight, it should target inspections by increasing the inspection frequency for facilities identified as higher risk and decreasing the inspection frequency on facilities identified as lower risk. In doing so, the Department could use the following approaches:

- **Targeting between environmental programs**—The Department could distinguish between low-risk and high-risk facilities between environmental programs and subject facilities in higher-risk programs to more frequent inspections while conducting less frequent inspections on facilities in the lower-risk programs. For example, because the air major program has a much higher average compliance rate than the air minor program (see Table 5), the Department could conduct more frequent inspections of facilities in the air minor program and decrease its inspections of facilities in the air major program. With EPA approval, the Virginia Department of Environmental Quality used this strategy in fiscal year 2012 when it postponed inspections at some air major facilities and instead conducted inspections at air minor facilities based on risk assessments conducted using its risk-based inspections strategy.

- **Targeting within an environmental program—**The Department could distinguish between low-risk and high-risk facilities or types of facilities within an environmental program, such as the hazardous waste program, and subject the high-risk facilities to more frequent inspections while conducting less frequent inspections on the low-risk facilities. For example, according to OECD, environmental regulators in the Netherlands classify facilities in an industrial sector as either high-risk, medium-risk, or low-risk. The medium-risk facilities then receive the standard inspection frequency, the high-risk facilities receive twice the standard number of inspections, and the low-risk facilities receive half the standard number of inspections.

Department should assess the effectiveness of its risk-based inspections approach—In order to assess the effectiveness of its risk-based inspections approach, the Department should develop and implement policies and procedures for measuring the impact of this new approach. Specifically, the Department should develop performance measures, such as compliance rate by environmental program, compliance rate among high-risk facilities, and compliance rate among low-risk facilities. The Department should also establish baselines for the performance measures and develop a system for tracking facility compliance performance against the measures. Finally, if needed, the Department should modify its risk-based inspections approach based on data from the performance measures.

Department should take additional steps to further enhance performance—In addition to moving to a risk-based, targeted inspection approach, the Department should take the following steps to enhance the effectiveness of its inspection and enforcement performance. Specifically:

- **Random inspections—**The Department should conduct a small number of random inspections of facilities in programs where it has reduced or eliminated routine inspections of compliant facilities, and take appropriate enforcement action when it discovers violations at these facilities (see Finding 2, pages 23 through 30, for a discussion of the Department's enforcement approach). According to INECE and literature on effective environmental regulation, these random inspections are an important complement to a targeted inspections approach to help ensure that the Department continues to provide deterrence to all regulated facilities while also monitoring for possible changes in violation behavior. However, according to some literature, inspections are more likely to provide deterrence when accompanied by appropriate enforcement.[1]

Random inspections are an important complement to a targeted inspections approach.

- **Self-monitoring information—**The Department should also use all available facility self-monitoring data to help assess the facilities' violations history. According to INECE, because facilities often collect and report this information more frequently than the Department conducts inspections, the information

[1] Gray, W.B., & Shimshack, J.P. (2011). The effectiveness of environmental monitoring and enforcement: A review of the empirical evidence. *Review of Environmental Economics and Policy*, 5(1), 3-24.

can provide a more detailed and timely compliance history than inspection results. The Department receives a variety of self-monitoring data from regulated entities. For example, public drinking water systems routinely provide the Department with detailed reports on the level of contaminants in their drinking water. Similarly, some facilities emitting pollutants into the air routinely monitor and report the emissions levels to the Department.

However, problems with a department database are hampering its efforts to assess compliance using self-monitoring data for its wastewater programs. The Department's Wastewater Compliance and Enforcement Tracking System database, which houses data for the AZPDES and aquifer protection programs, is designed to calculate exceedance of contaminant limits and violations from monitoring data provided by regulated facilities. This function is important because the Department receives a large amount of self-monitoring data and the rules governing the determination of violations can be very complex, making it difficult if not impossible for department staff to manually determine if violations have been committed. However the database has not been generating reliable violations reports since late 2010, according to department staff.

The Department indicated that fixing or replacing the database is a high priority, but it has not yet developed a timeline for completing this project. The Department should continue its efforts to fix or replace the Wastewater Compliance and Enforcement Tracking System database to ensure accurate violations reports are generated based on self-monitoring data in the wastewater programs.

- **Data reports**—Finally, the Department should develop standardized data reports from its compliance and enforcement data to assist staff in conducting risk assessments and tracking the impacts of targeting efforts. According to department staff, one impediment to implementing a risk-based, targeted inspection approach is that the Department's data on compliance and enforcement may not be easy to access and use. However, the Department tracks detailed compliance and enforcement data in its Inspections, Compliance and Enforcement system, including information on inspections, violations, and enforcement actions. Reports based on this data could assist department staff in assessing risk as well as the impact of targeting and other compliance and enforcement activities. These reports could be generated regularly and include compliance rates by facility and program; violation significance by facility and program; number of inspections conducted by program, division, and department-wide; number of significant violations identified by facility and program; and any other measures department staff deem necessary for assessing the impact of inspections and enforcement activities.

The Department should develop standardized reports to help staff conduct risk assessments.

Recommendations:

1.1 The Department should request that the EPA collaborate with it to develop a framework for implementing a risk-based inspections approach to ensure that such an approach meets the terms of its EPA agreements. The framework may vary by environmental program.

1.2 For environmental programs where the Department and the EPA have developed a framework for implementing a risk-based inspections approach, and for those programs where there is no EPA oversight, the Department should:

a. Develop standard criteria for assessing individual facility risk, and average risk by facility type and environmental program;

b. Increase the inspection frequency of facilities identified as higher risk and decrease the inspection frequency of facilities identified as lower risk; and

c. Develop and implement policies and procedures for assessing the effectiveness of the risk-based inspections approach, including developing and implementing performance measures, establishing baselines, tracking facility compliance performance against the measures over time, and modifying the risk-based inspections approach as needed.

1.3 In order to enhance its implementation of a risk-based inspections approach, the Department should:

a. Conduct a small number of random inspections of facilities that have had inspection frequencies reduced or eliminated to continue to provide deterrence and monitor for possible violations among these facilities;

b. Use all available facility self-monitoring data to help assess the facilities' violations history;

c. Continue its efforts to fix or replace the Wastewater Compliance and Enforcement Tracking System database to ensure accurate violations reports based on self-monitoring data in the wastewater programs; and

d. Develop standardized data reports from its compliance and enforcement data to assist department staff in assessing risk as well as measuring the impact of its inspections and enforcement activities.

FINDING 2

Department does not consistently take timely and effective enforcement actions

The Department of Environmental Quality (Department) inconsistently enforces compliance with environmental laws and regulations, and should take steps to strengthen its enforcement efforts. Although consistent, timely, and credible enforcement actions help to ensure compliance and deter violations, the Department has not consistently met its own time frames for issuing enforcement actions. Further, for 45 percent of the cases auditors analyzed, facilities did not come into compliance by the Department's deadlines. Additionally, department policy calls for escalating enforcement action when facilities miss deadlines, but it seldom does so. These breakdowns in ensuring effective corrective action potentially place the public's health and the environment at risk. The Department can strengthen its enforcement actions in four ways: notifying facilities in a timely manner about their violations and the actions they must take to resolve them; improving the assistance it provides to noncompliant facilities; identifying the root cause for small water systems' noncompliance and consulting with other states to develop a more effective approach in addressing these violations; and developing and adhering to more effective policies for escalating enforcement action.

Effective enforcement encompasses a variety of elements

The ultimate goal of enforcement is to help ensure compliance with regulations. This is achieved, in part, because effective enforcement measures deter or discourage facilities from violating regulations. Research literature and best practices on environmental regulation mention several elements that regulators should incorporate to effectively ensure compliance and deter violations, including the need to take consistent, timely, and credible enforcement actions.[1,2,3,4] Best practices also indicate that regulators should escalate enforcement for violations that continue over time without being resolved. For example, enforcement for a particular violation might begin at a low level by providing advice and compliance assistance. However, if the violation is not resolved in a timely manner or if the violation is repeated, the regulator can escalate enforcement to help deter noncompliance using more serious and stringent enforcement actions, such as issuing administrative notices, penalties, and ultimately prosecution if needed.

The Department's stated overarching enforcement approach mirrors the principles outlined in best practices. Specifically, the Department's *Compliance and Enforcement Handbook* (Handbook) emphasizes a commitment to ensuring compliance and responding appropriately, consistently, and in a timely manner to instances of noncompliance. In addition, as illustrated in Figure 3 (see page 24), the Handbook describes the Department's compliance assurance methods, including procedures for issuing informal and formal enforcement, enforcement timelines, the escalation of enforcement, the use of penalties, and the involvement of the Attorney General's Office for certain sanctions.[5]

1 International Network for Environmental Compliance and Enforcement. (2009). *Principles of environmental compliance and enforcement handbook*. Washington, DC: Author.

2 Foulon, J., Lanoie, P., & Laplante, B. (2002). Incentives for pollution control: Regulation or information? *Journal of Environmental Economics and Management*, 44, 169-187.

3 Shimshack, J.P., & Ward, M.B. (2008). Enforcement and over-compliance. *Journal of Environmental Economics and Management*, 55, 90-105.

4 Organisation for Economic Co-operation and Development. (2004). *Assuring environmental compliance: A toolkit for building better environmental inspectorates in Eastern Europe, Caucasus, and Central Asia.* Paris, France: Author.

5 The Department's environmental enforcement authorities are granted through Arizona Revised Statutes and Arizona Administrative Code.

Figure 3: Types of enforcement responses outlined in Handbook

Informal

Informal enforcement action advises facility about violations found, how to correct them, and deadlines for resolving the violations. Typical tools used include:

- **Notice of opportunity to correct (NOC)** when a minor violation is found.
- **Notice of violation (NOV)** when a significant violation is found.

Formal

Formal enforcement action is reserved for those violations that are particularly egregious, or for those circumstances where the responsible party is unwilling or unable to resolve a violation in a timely manner after receiving an informal compliance assurance response from the Department. These actions fall into three categories:

- **Administrative** enforcement orders are legal, enforceable orders issued directly by the Department, such as consent orders or license suspensions and revocations
- **Civil** enforcement actions are referrals made to the Attorney General's Office to initiate legal action, such as a temporary restraining order or a civil penalty
- **Criminal** enforcement actions are referrals made to the Attorney General's Office to address criminal violations, such as fraud against the Department and knowing performance of a prohibited act.

Source: The Department's *Compliance and Enforcement Handbook.*

Department falls short of effective enforcement

The Department's enforcement efforts do not consistently match its stated principles and policies with regard to (1) timeliness in issuing enforcement actions that notify facilities of their violations and the actions needed to resolve these violations, (2) monitoring of progress to ensure that facilities bring themselves into compliance by the specified deadline, and (3) escalating the severity of enforcement actions when facilities continue to operate outside of compliance. These deviations from stated policy contribute to delays in the enforcement process and potentially put human health and the environment at risk.

Enforcement actions are not always issued according to department timelines—The Department is not issuing enforcement actions in a timely manner in some programs. According to the Handbook, informal enforcement actions, which include NOCs and NOVs, should be issued within 45 calendar days of the inspection. However, some department programs are not consistently meeting this deadline, potentially delaying the enforcement process and prolonging the time that facilities remain out of compliance. For example, as shown in Table 6, the hazardous waste program issued 80 percent of its NOCs and NOVs more than 45 days after the inspection for enforcement notices issued in fiscal years 2006 through 2011. Specifically, the Department took a median of 78 days to issue these late enforcement notices. Similarly, more than half of the NOC and NOV enforcement actions were issued late for the air major, drinking water, and solid waste programs.

Table 6: NOCs and NOVs issued after required 45-day time frame for eight selected environmental programs Fiscal years 2006 through 2011

Environmental program	Number of notices issued	Number and percent of notices Issued more than 45 days after inspection		Median number of days to issue late notices
Air major sources	45	23	51%	107
Air minor sources	452	164	36	76
AZPDES stormwater	419	57	14	70
Drinking water	430	230	53	82
Hazardous waste	290	232	80	78
Solid waste	300	202	67	81
Underground storage tank	3,928	9	<1	61
Vehicle fleet emissions	234	13	6	54

[1] The eight programs in the table account for 6,089, or 87 percent, of the 6,983 total cases analyzed.

Source: Auditor General staff analysis of department enforcement data for fiscal years 2006 through 2011.

Department compliance managers indicated that a key reason for the delay in issuing many enforcement actions is the required multi-level review that must be completed before enforcement actions can be issued. Prior to issuance, enforcement notices typically go through various levels of review within the Department. For example, a NOV must be routed through the appropriate unit manager, then through the appropriate section manager to the appropriate division director for approval. Once approved by the division director, the NOV may be signed by the inspector and routed to the appropriate unit manager for his/her co-signature. Compliance managers indicated that this tiered review process can result in an undue amount of administrative time being spent on document creation and review and that the process is unnecessary for some programs that have a simple regulatory framework where an inspector can adequately assess compliance onsite, such as for regulations that involve basic labeling or reporting requirements.

In an effort to increase the efficiency of the enforcement process, department compliance managers are developing a streamlined process for issuing enforcement actions for some areas within the waste and air divisions, modeled after the review process in the underground storage tank program. This streamlined process will

The Department is developing a streamlined process to issue enforcement notices.

allow staff to issue inspection reports and informal notices of violation in the field during the course of an inspection without following the review process described above. The new process is similar to what is done in the underground storage tank program where the regulatory framework is less complex and violations are more easily identified as compared to some other programs. As a result of the simplified procedure, the underground storage tank program consistently issued NOCs and NOVs within the 45-day time frame (see Table 6, page 25). The new process will similarly allow staff to issue enforcement actions in the field for some additional waste and air quality areas, such as hazardous waste transporters and small quantity generators. The stated goal of this new process is to increase efficiency and uniformity while reducing compliance officers' administrative workload. Compliance managers also indicated that the new process would allow staff to use more of their time concentrating on helping facilities rectify violations. The Department anticipates implementing the process in the first few months of 2013. In order to initiate enforcement actions used to bring facilities back into compliance in a more timely manner, the Department should continue to assess which programs would benefit from the use of this streamlined process and implement the use of field-issued enforcement in those areas. In addition, the Department should update policies and procedures as appropriate to ensure the process is effectively implemented.

Department not ensuring that compliance deadlines are met—Although most of the Department's enforcement mechanisms specify deadlines by which violators are required to return to compliance, regulated facilities in Arizona are not consistently meeting these deadlines. Of the 5,840 enforcement cases auditors analyzed from fiscal years 2006 through 2011, 2,634 cases, or 45 percent, exceeded department deadlines for achieving compliance. Table 7 (see page 27) provides information on the number of cases that exceeded department deadlines to return to compliance within select environmental programs.[1] For example, 249, or 73 percent, of the 343 drinking water enforcement cases exceeded department deadlines to return to compliance. Additionally, for the 2,634 cases that did not achieve compliance within department deadlines, 25 percent of the cases exceeded their deadlines by 123 days or more. As a result of not meeting compliance time frames, facilities remain in noncompliance and may be continuing to violate environmental regulations, potentially posing risk to human health and the environment.

Of the 5,840 enforcement cases auditors analyzed from fiscal years 2006 through 2011, 45 percent exceeded department deadlines for achieving compliance.

According to the Department, reduced department staffing levels were a contributing factor to not being able to monitor facility efforts to meet the compliance deadlines. Specifically, reduced staffing levels limited the amount of attention and case management activities that would be devoted to a particular facility to help ensure it returned to compliance. This type of assistance and attention is important because the Department indicated that it relies heavily on

[1] The 5,840 enforcement cases included in the analysis were those where all of the corrective action required by the Department was completed. The analysis excluded enforcement cases where all the required corrective action had not been completed as of May 2012.

Table 7: Number of enforcement cases returned to compliance beyond department deadlines for eight selected environmental programs Fiscal years 2006 through 2011[1,2]

Environmental program	Number of cases	Number and percent of cases that exceeded deadline to return to compliance		Median number of days beyond deadline to achieve compliance
Air major sources	38	16	42%	17
Air minor sources	418	207	50	44
AZPDES stormwater	391	219	56	42
Drinking water	343	249	73	113
Hazardous waste	273	109	40	38
Solid waste	269	149	55	80
Underground storage tank	3,117	1,270	41	33
Vehicle fleet emissions	228	54	24	15

[1] The 5,840 enforcement cases included in the analysis were those where all of the corrective action the Department required was completed.

[2] The eight selected programs in the table account for 5,077, or 87 percent, of the 5,840 total enforcement cases analyzed.

Source: Auditor General staff analysis of department enforcement case data for fiscal years 2006 through 2011.

compliance assistance to resolve violations when they are discovered. Nevertheless, the Department should take necessary steps to ensure that noncompliant facilities address violations in a timely manner. Specifically, the Department should develop and implement a corrective action plan that addresses the main barriers to providing effective assistance to noncompliant facilities, including reduced staff resources, and identifies the types of assistance it can provide to noncompliant facilities given its limited resources.

The Department should develop and implement a corrective action plan to address the main barriers to providing effective assistance to noncompliant facilities.

Critical drinking water systems not meeting compliance deadlines—

One area of particular concern where the Department needs to be more effective in addressing noncompliance in a timely fashion is for drinking water systems. As part of its enforcement efforts for public water systems, the Department uses an Enforcement Targeting Tool (ETT) developed by the U.S. Environmental Protection Agency (EPA) to identify water systems with significant violations and return them to compliance within 6 months. This tool is designed to help bring public water systems into compliance with the Safe Drinking Water Act, which protects drinking water

against both naturally occurring and man-made contaminants. The ETT helps to prioritize and direct enforcement responses to those systems with the most systemic noncompliance by assigning each violation a "weight" based on a point system. Water systems that score beyond a certain threshold should be considered a priority for enforcement. However, auditors' analysis of the August 2012 ETT showed that 25 of the 79 water systems that scored above that threshold had not returned to compliance for more than 1 year. Further, 73 percent of the enforcement cases for drinking water exceeded their deadlines to return to compliance (see Table 7, page 27).

In some cases, the Department did not take any enforcement action to address the noncompliance, including a failure to assign an enforcement officer to some water systems that had been on the list for multiple months. In fact, one water system did not have an assigned case manager for more than 1 year and saw an increase in significant noncompliance related to arsenic and fluoride contamination. Department compliance managers indicated that staffing resources have been low, and it is difficult to assign an enforcement officer in a timely fashion to all of the water systems that show noncompliance. Although the Department concedes that noncompliance is an issue with many of the smaller drinking water systems, it indicated that simply issuing an enforcement action for some of the systems will not bring them back into compliance. Department staff reported that in some cases, the noncompliance is a result of the small water systems' not having enough funding to buy the proper equipment to treat the water. In those cases, department staff said a monetary penalty may put some of the small water systems out of business and jeopardize the water supply to those areas.

According to the EPA, noncompliance among small water systems is a nation-wide problem.

According to the EPA, noncompliance for small water systems is a nation-wide problem, although some states are starting to take steps to address the issue. For example, California is developing an approach to address some of the small community water systems that are in violation of drinking water standards. According to the California Department of Public Health, approximately 57,000 individuals in California are predominately served by small water systems in rural areas that fail one or more health-based standards and that have funding issues related to maintenance, repairs, and upgrades. Similar to the small water systems in Arizona, these small water systems present challenging compliance issues because of their lack of financial resources. California plans to target these small water systems and bring them back into compliance using a combination of funding, technical assistance, traditional enforcement and compliance measures, and collaboration with stakeholders. For example, one specific action item that California has identified is to ensure that all targeted water systems submit an application to funding sources that are available to ensure a safe and dependable supply of water. Although California's efforts are specifically tailored to address the issues of noncompliance it faces, the Department may benefit from taking a similar approach and should develop a method to identify and document the root cause for why water systems remain out of compliance in Arizona. In addition, the Department should consult with other states that face similar issues to help

develop a strategy which more effectively addresses small water system noncompliance.

Department infrequently escalates enforcement when compliance deadlines are not met—The Department infrequently escalates enforcement cases that did not meet the established deadlines to return to compliance. According to the Handbook, enforcement action should be escalated if the violations are not corrected within the established deadlines. For example, the Department may allow up to 180 calendar days for a facility to resolve an NOC, but if the violation is not corrected within the established deadline, the Handbook indicates the Department will escalate enforcement and issue an NOV. The process is similar for escalating from an NOV to formal enforcement.

However, auditors' analysis of department enforcement data for fiscal years 2006 through 2011 showed that cases were infrequently escalated. Specifically, this analysis identified 2,863 enforcement cases that exceeded department deadlines to return to compliance. Of these cases, 419, or 15 percent, had some action taken that indicated that the Department had taken or considered escalated enforcement action. For example, the Department escalated 92 enforcement cases from an NOC to an NOV. For the remaining 2,444 enforcement cases, the Department did not escalate enforcement.

According to department compliance managers, the decision to escalate enforcement is considered on a case-by-case basis, although escalation is rarely used. Specifically, the Department escalates enforcement primarily for those cases with serious violations because staffing shortages make it difficult to pursue escalated enforcement for every case that does not meet compliance deadlines. In addition, department compliance managers indicated that department policies and procedures for escalation are too rigid and do not allow staff to effectively use professional judgment in handling the escalation of enforcement. For example, the Handbook indicates that if a facility has not come into compliance by the deadline for a NOV, the Department should escalate the case to formal enforcement. However, compliance managers indicated that this approach may actually prolong the enforcement case in some situations because certain violations could be more easily resolved through compliance assistance and that formal enforcement actions can require lengthy negotiations with the violating entity and/or involve the court system. The Department reported that it has started to assess its policies and practices for enforcement, including escalated enforcement, and that it will likely make several changes to reflect what it believes is the best approach for enforcement.

As a result of the inconsistency in following policies and enforcing the deadlines it has established, including escalating of enforcement, the Department undermines its own credibility as a consistent and fair regulator and ultimately reduces its leverage in deterring noncompliance. Further, enforcing regulations without a consistent adherence to reasonable time frames may prolong certain enforcement cases and allow facilities to continue in noncompliance or repeat violations,

The Department undermines its own credibility by its inconsistency in following its enforcement policies.

potentially putting human health and the environment at risk (see textbox for case example). As part of its efforts in assessing its approach to enforcement, the Department should make a determination on how best to handle escalation in Arizona and align its policies and procedures with that strategy. Further, the Department should then consistently adhere to its policies and procedures for escalated enforcement to help return facilities to compliance in a timely fashion and help ensure that the public health and environment are protected.

Case example

In one enforcement case that auditors identified, an energy plant was found in violation of its air permit in November 2010. An inspection revealed that its hydrochloric acid emissions were 2.33 times the permitted rate. Hydrochloric acid is corrosive to the eyes, skin, and mucous membranes. Although the Department issued an NOV in October 2011, the facility did not meet the Department's deadline of January 2012 for correcting the condition and had still not taken sufficient corrective action to close the case as of November 2012. Further, the facility has a history of noncompliance, including a previous hydrochloric acid exceedance in 2008. More than 2 years have passed since the violation occurred, and the Department had not decided whether to escalate enforcement for the case as of November 2012.

Source: Auditor General staff summary of department interviews and case file information.

Recommendations:

2.1 The Department should continue to assess and expand the use of field-issued enforcement for programs that do not require a detailed review of violations in order to issue enforcement actions in a timely manner. In addition, the Department should update its policies and procedures to ensure the process is effectively implemented.

2.2 The Department should develop and implement a corrective action plan that addresses the main barriers to providing effective assistance to noncompliant facilities, including reduced staff resources, and identifies the types of assistance it can provide to better assist noncompliant facilities return to compliance.

2.3 The Department should identify the root cause of violations for the small water systems, consult with other states that face similar issues to determine how they are addressing noncompliance and if it is working, and develop an effective plan to address the noncompliance.

2.4 The Department should make a determination on how best to handle escalation in Arizona and align its policies and procedures with that strategy. Further, the Department should then consistently adhere to its policies and procedures for escalated enforcement to help return facilities to compliance in a timely fashion and help ensure that public health and the environment are protected.

APPENDIX A

Methodology

This appendix provides information on the methods auditors used to meet the audit objectives.

This performance audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The Auditor General and staff express appreciation to the Arizona Department of Environmental Quality (Department) Director and staff members for their cooperation and assistance throughout the audit.

Auditors used various methods to study the issues addressed in this report. Auditors interviewed department officials and staff, and reviewed department documents, including policies and procedures and organizational charts. Auditors also interviewed officials and staff of the U.S. Environmental Protection Agency (EPA) and reviewed federal laws, regulations and policies, state statutes and administrative rules, and state and department budget documents that were applicable to department administration and operations. Additionally, auditors reviewed literature regarding effective environmental regulation. Auditors also used the following specific methods to address the audit's objectives:

- To determine if the Department's inspection activities are efficiently and effectively identifying entities violating environmental laws and regulations and discouraging noncompliant behavior, auditors reviewed department agreements with the EPA documenting inspection frequency and coverage requirements; researched applicable literature and best practices on the efficiency and effectiveness of inspections as a mechanism to identify violating entities and discourage noncompliant behavior and identified alternative approaches that may more effectively achieve these goals; obtained and validated department automated inspection and enforcement data for fiscal years 2006 through 2011; analyzed the inspection and enforcement data to determine compliance rates, average number of inspections, and the ratio of major violations to minor violations for individual facilities as well as for selected environmental programs; interviewed department compliance staff and reviewed department policy manuals and other documents to determine how the Department targets and selects entities for inspections and assessed how these practices compare to effective practices identified in the literature; and interviewed department and EPA staff to determine potential causes of the Department's performance.

- To determine if the Department's enforcement activity is efficiently and effectively returning violating entities to compliance and discouraging subsequent noncompliance, auditors reviewed department agreements with the EPA documenting the authorities, tools, and processes available to the Department for enforcing environmental laws and regulations; researched applicable literature on enforcement practices; obtained and validated department automated inspection and enforcement data for fiscal years 2006 through 2011; analyzed the inspection and enforcement data to determine how quickly the Department notified facilities when department inspections identified violations, whether facilities were addressing/correcting the violations within the deadlines set by the Department, and whether the Department was escalating enforcement

action against facilities that did not addressing their violations within department deadlines; and interviewed staff to determine potential causes of the Department's performance.

- Auditors' work on internal controls focused on reviewing department processes and written policies and procedures for monitoring regulated facilities' compliance with environmental laws and regulations. Auditors also reviewed prior EPA reviews of the Department's compliance and enforcement performance. Auditors' conclusions on internal controls are reported in Findings 1 and 2 of the report.

- To assess the reliability of the Department's automated inspection and enforcement data, auditors examined department controls over the data by reviewing department system help files and prior EPA reviews, and interviewing department management and staff knowledgeable about the data. Auditors also performed various electronic tests on the data to determine if the data was complete and if the values entered were appropriate/logical. Although auditors found some invalid dates, auditors determined that the data was sufficiently reliable for the purposes of this report.

- To develop information for the report's Introduction section, auditors compiled unaudited department-prepared financial information for fiscal years 2011 through 2013, unaudited compliance full-time equivalent staff information for fiscal year 2012, and department-wide inspection and enforcement actions for fiscal years 2006 through 2012; and reviewed federal and state laws, organization charts, the Department's 2010 annual report, the Department's Web site, and other agency-provided documents.

AGENCY RESPONSE

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov

Janice K. Brewer
Governor

Henry R. Darwin
Director

March 15, 2013

Debra K. Davenport
Auditor General
2910 N. 44th Street, Ste. 410
Phoenix, AZ 85018

Dear Ms. Davenport:

This letter provides the Arizona Department of Environmental Quality's response to the March 8, 2013 revised preliminary report draft of the Compliance Management performance audit. We appreciate the diligence and hard work of the Auditor General's staff in completing this performance audit and their consideration of our feedback on the previous draft.

1.1 The Department should request that the EPA collaborate with it to develop a framework for implementing a risk-based inspections approach to ensure that such an approach meets the terms of its EPA agreements. The framework may vary by environmental program.

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

1.2 For environmental programs where the Department and the EPA have developed a framework for implementing a risk-based inspections approach, and for those programs where there is no EPA oversight, the Department should:

a. Develop standard criteria for assessing individual facility risk, and average risk by facility type and environmental program;

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

b. Increase the inspection frequency of facilities identified as higher risk and decrease the inspection frequency of facilities identified as lower risk;

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

c. Develop and implement policies and procedures for assessing the effectiveness of the risk-based inspections approach, including developing and implementing performance measures, establishing baselines, tracking facility compliance performance against the measures over time, and modifying the risk-based inspections approach as needed.

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

1.3 In order to enhance its implementation of a risk-based inspections approach, the Department should:

a. Conduct a small number of random inspections of facilities that have had inspection frequencies reduced or eliminated to continue to provide deterrence and monitor for possible violations among these facilities;

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

b. Use all available facility self-monitoring data to help assess the facilities' violations history;

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

c. Continue its efforts to fix or replace the Wastewater Compliance and Enforcement Tracking System database to ensure accurate violations reports based on self-monitoring data in the wastewater programs;

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

d. Develop standardized data reports from its compliance and enforcement data to assist department staff in assessing risk as well as measuring the impact of its inspections and enforcement activities.

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

2.1 The Department should continue to assess and expand the use of field issued enforcement for programs that do not require a detailed review of violations in order to issue enforcement actions in a timely manner. In addition, the Department should update its policies and procedures to ensure the process is effectively implemented.

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

2.2 The Department should develop and implement a corrective action plan that addresses the main barriers to providing effective assistance to noncompliant facilities, including reduced staff resources, and identifies the types of assistance it can provide to better assist noncompliant facilities return to compliance.

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

2.3 The Department should identify the root cause of violations for the small water systems, consult with other states that face similar issues to determine how they are addressing noncompliance and if it is working, and develop an effective plan to address the non-compliance.

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

2.4 The Department should make a determination as how to best handle escalation in Arizona and align its policies and procedures with that strategy. Further, the Department should then consistently adhere to its policies and procedures for escalated enforcement to help return facilities to compliance in a timely fashion and help ensure that public health and the environment are protected.

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

On behalf of ADEQ, we appreciate the opportunity to respond and look forward to continue working productively with the Auditor General's staff on completion of the Department's remaining performance audits.

Sincerely,

Henry R. Darwin
Director

Performance Audit Division reports issued within the last 24 months

11-01 Department of Public Safety—Followup on Specific Recommendations from Previous Audits and Sunset Factors
11-02 Arizona State Board of Nursing
11-03 Arizona Department of Veterans' Services—Fiduciary Program
11-04 Arizona Medical Board
11-05 Pinal County Transportation Excise Tax
11-06 Arizona Department of Veterans' Services—Veteran Home
11-07 Department of Corrections—Oversight of Security Operations
11-08 Department of Corrections—Sunset Factors
11-09 Arizona Department of Veterans' Services—Veterans' Donations and Military Family Relief Funds
11-10 Arizona Department of Veterans' Services and Arizona Veterans' Service Advisory Commission—Sunset Factors
11-11 Arizona Board of Regents—Tuition Setting for Arizona Universities
11-12 Arizona Board of Regents—Sunset Factors
11-13 Department of Fire, Building and Life Safety
11-14 Arizona Game and Fish Commission Heritage Fund
12-01 Arizona Health Care Cost Containment System—Coordination of Benefits
12-02 Arizona Health Care Cost Containment System—Medicaid Eligibility Determination
12-03 Arizona Board of Behavioral Health Examiners
12-04 Arizona State Parks Board
12-05 Arizona State Schools for the Deaf and the Blind
12-06 Arizona Health Care Cost Containment System—Medicaid Fraud and Abuse Prevention, Detection, Investigation, and Recovery Processes
12-07 Arizona Health Care Cost Containment System—Sunset Factors

Future Performance Audit Division reports

Arizona Board of Appraisal

Registrar of Contractors