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A Guide for Developing and Implementing a Small Community Environmental Protection Plan (SCEPP)



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Contact [ADEQ's Community Liaisons](#) for more information on the **Small Communities Environmental Compliance Assistance Program**.

Northwestern Arizona: (928) 779-0313

Northeastern Arizona: (928) 337-3565

Southwestern Arizona: (928) 373-9432

Southeastern Arizona: (928) 348-4040



Arizona Department
of Environmental Quality

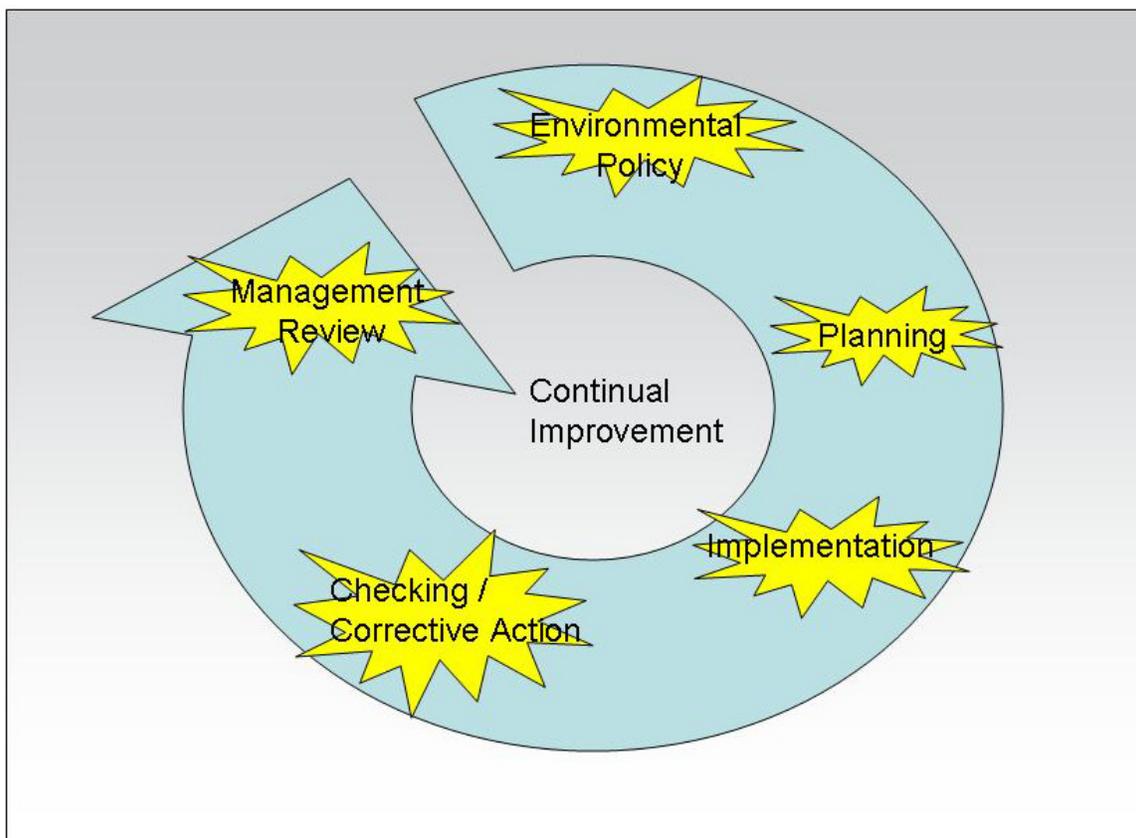
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An Implementation Guide for a
**Small Community Environmental
Protection Plan**

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Section 1



SECTION 1

Resources: Small Community Environmental Prevention Plan (SCEPP)

This guidance was prepared by the [Arizona Department of Environmental Quality \(ADEQ\)](#) under Agreements with the [Environmental Council of States \(ECOS\)](#) and the [U.S. EPA Environmental Policy and State Innovation Grant](#). This guidance was financed in part by funds provided by ECOS and EPA. This guidance was developed using resources created by the [Environmental Protection Agency \(EPA\)](#) and other state environmental agencies and the nonprofit [National Environmental Services Center at West Virginia University](#).

We encourage you to review the following resources for detailed information on understanding and developing your community's SCEPP.

Trilogy Environmental Software

Trilogy was created by the Department of Agricultural and Biological Engineering of Purdue University in conjunction with the Environmental Protection Agency for Region V (MN, WI, IL, MI, IN, OH.) This EPA program offers a complete one-stop introduction to a wide range of environmental issues and decisions that affect small to medium-sized communities. It offers communities the chance to judge their own needs and preferences, and to make informed decisions on their own.

Major sections cover:

1. Environmental laws and regulations
2. Self-assessment
3. Planning and comparative risk analysis
4. Financial tools and financial self-analysis
5. Case studies
6. Contact and information directory

Limitations under the copyright, which allows for free reproduction and distribution of the software, can be found on the program's title page at <http://www.epa.gov/seahome/trilogy.html>

Sample EMS Manual

The Environmental Management System (EMS) Model Manual Specific to Pennsylvania Municipal Operations was prepared for the Pennsylvania Department of Environmental Protection by Five Winds International.

<http://164.156.71.80/VWRQ.asp?docid=0442d740780d0000000080f0000080f&context=2&backlink=WXOD.aspx%3ffs%3d0442d740780d00008000080200000802%26ft%3d1>

EMS Implementation Guide for Small and Medium Sized Communities

Voluntary Environmental Management System /ISO 14001/Publications. In December 2000, the U.S. EPA, in cooperation with NSF International, completed a revised version of this guide entitled "**Environmental Management Systems: An Implementation Guide for Small and Medium Sized Organizations**". This revision replaces the original Guide, published in 1996. Like its predecessor, the revised Guide is intended to offer a plain English, common sense guide to organizations interested in implementing an EMS, using the basic Plan-Do-Check-Act model. The revised guide includes a number of updated examples and can be used by organizations of all sizes. We encourage you to take advantage of this easy to read guide and share it with your colleagues. In 2001 EPA made bound copies of the Guide available through its Water Resource Center. The number for the Water Resource Center is (202) 566-1735. When calling the Center, you will receive a voice message. Please respond to the message and refer to the Guide by name. You can view the complete guide online or download the guide at <http://www.epa.gov/owm/iso14001/wm046200.htm#guide1>



Self-Assessment Tool for Small Decision Makers

West Virginia University – National Environmental Services Center at http://www.nesc.wvu.edu/netcsc/Self_Assmnt/SelfAssessment.pdf

Purpose

The Arizona Department of Environmental Quality (ADEQ) [Small Community Policy](#) recognizes the limited financial, technical, and administrative resources available to small communities for environmental compliance. This guidance and *self-assessment questionnaires* are designed to promote the development and implementation of a **Small Community Environmental Protection Plan (SCEPP)**.

Special Penalty Considerations

This self-assessment guidance is designed to be used in identifying, prioritizing, correcting, and preventing future environmental compliance problems. ADEQ will make special penalty considerations for small communities and special districts willing to work with ADEQ to achieve these goals. ADEQ will be available to assist in the development of the SCEPP necessary to achieve and maintain compliance with the focus on ADEQ's compliance assistance efforts on the comprehensive evaluations of compliance with all environmental statutes, rules and regulations that apply to a small community's or special districts' operations. Once the requirements have been met, a small community or special district will qualify for a significant reduction or waiver of penalties that might otherwise be imposed for environmental violations.

This self-assessment guide is designed to be used by decision makers in small communities and special districts in identifying areas where improvements can be made in the management of environmental services and regulatory compliance. It is intended to guide decision makers in the development and implementation of a SCEPP. The self-assessment questionnaires focus on regulatory compliance, system operations, finances, administration and environmental stewardship.

This self-assessment guide will address all levels of environmental services that a small community or special district *may provide* whether through direct service or through contracts. Questions will focus on all major areas of municipal services including drinking water, wastewater, permits and landfills. Questions will also focus on regulatory compliance relating to general operation and maintenance and the handling and disposal of hazardous wastes as well as above ground and underground storage tanks.

Self-assessment questions will require simple **Yes, No, Don't Know, or Not Applicable** responses indicating areas where training or additional information may be needed to improve services, ensure regulatory compliance and promote continuous improvement.

This guide does **not** cover every federal, ADEQ or local environmental requirement. Contact your [ADEQ Environmental Compliance Community Liaison](#) for information on specific federal, ADEQ or local environmental statutes, rules and regulations.

Small Community Environmental Protection Plan (SCEPP) Manual

The community or special district must develop a SCEPP Manual that includes the relevant elements listed below. ADEQ has provided a "template" in this guidance to assist in the development of the SCEPP Manual.

The SCEPP must include the following:

Environmental Policy

A policy statement that asserts a commitment to environmental excellence; compliance with all environmental requirements; and to the use of the policy statement as a framework for planning and action.

Operational and Maintenance Procedures

Documented procedures established for all operations and activities including routine maintenance; and roles, responsibilities and authorities for regulatory compliance.

Environmental Aspects

Identify all operations/activities under municipal control or over which it is expected to have influence (contract vendors); determine which aspects may have a significant impact on the environment; and a procedure for semi-annual review and for revisions due to new or changed operations/activities to consider.

Legal and Other Requirements

Documented procedures established to ensure compliance with all environmental regulatory requirements; identification of relevant requirements, provisions by which the relevant requirements are accessed and communicated to all personnel; reviewed at least once a year; and a review of current federal, state and local legal requirements to ensure ongoing compliance.

Objectives and Targets

Documented environmental objectives and targets to set performance improvement goals for aspects that have significant environmental impacts; legal and other requirements, technical and financial achievability; commitments in the environmental policy; and operational requirements.

Training Awareness and Competence

Documented procedures established to implement training for personnel on general awareness and competency. Awareness training ensures all personnel are familiar with the environmental policy and the relevance of the SCEPP, including the potential significant environmental impacts of their work and activities. Competency training focuses on environmental procedures that are specific to personnel work activities. Appropriate training is based on a procedure that matches training requirements with personnel job descriptions and work activities.

Communications

Documented procedures established to include programs addressing both internal and external parties. Internal communications will ensure environmental information is disseminated to all personnel. External communications with individuals, groups, other government entities, and local businesses will provide insight into your community's environmental operational performance.

Document Control and Records

Documented procedures established to effectively manage SCEPP documents relating to environmental activities including compliance with records retention requirements. Document control procedures are implemented to ensure that all personnel have access to appropriate SCEPP documentation and that out-dated documents are replaced so the SCEPP remains current and up-to-date.

Operational Control

Documented procedures established to identify, plan and manage operations consistent with its objectives and targets. Operational control procedures direct personnel work activities and stipulate operating criteria to ensure operations and activities are carried out appropriately.

Emergency Preparedness and Response

Emergency preparedness and response plans that identify the potential for and the response to environmental accidents and emergency situations. An Emergency Operations Plan (EOP) includes the prevention and mitigation of environmental accidents when they do occur.

Noncompliance and Corrective and Preventive Action

Documented procedures established to conduct a management level review and investigation of noncompliance with the SCEPP. Define roles, responsibilities and investigative authority including taking action to mitigate significant environmental impacts, and initiating and completing corrective and preventive actions. Document that all changes in procedures resulting from corrective and preventive actions are implemented and recorded.

Environmental Compliance Audit

Documented procedures established to conduct an annual assessment of compliance with environmental rules and regulations. ADEQ will make available facility-specific inspection checklists it uses to evaluate compliance upon request.

SCEPP Audit

Documented procedures established to conduct an internal annual comprehensive review of adherence to the SCEPP documented in a written report to be presented to the governing body and made available to the public and to ADEQ upon request including an independent third-party audit of the SCEPP within three years of submitting the SCEPP to ADEQ. ADEQ will be available to conduct this audit upon request.

Management Review

Documented procedures established to ensure that the governing body will conduct an annual review all elements of the SCEPP. Management review will ensure the adequacy, effectiveness and compliance with the SCEPP as defined in the operation control procedures.

Guidance documents prepared by ADEQ and/or EPA may be used for assistance in preparing a SCEPP.

Environmental Regulations – Small Communities and Special Districts

Mandated Requirements

This reference guide is provided to help decision makers become familiar with requirements that may apply to your community. The level of services provided by a community will vary. This guidance is designed to address all levels of infrastructure including landfills, power plants, permits, drinking water and wastewater systems. If your community depends on county or special districts for some services, this guide will help in understanding what these entities should be doing. This review of environmental regulations will assist decision makers in responding to the Self-Assessment Questionnaires and the development of a SCEPP.



SECTION 2



SAFE DRINKING WATER ACT (SDWA)



BACKGROUND

The [Safe Drinking Water Act \(SDWA\)](#) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. SDWA does not regulate *private wells* which serve fewer than 25 individuals.

Originally, the SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach ensures the quality of drinking water by protecting it from source to tap.

Does your community provide water for consumptive uses (e.g. drinking, cooking, cleaning, bathing)?

Yes No Don't Know Not Applicable

If you provide [potable water](#) or you do not know, review this section and answer the remaining self-assessment question numbers [1 through 50](#) at the end of this section. If you do not provide potable water skip to [Section 3](#).

National Primary Drinking Water Regulations

U.S. EPA sets national standards for drinking water based on sound science to protect against health risks, considering available technology and costs. These [National Primary Drinking Water Regulations](#) set enforceable [maximum contaminant levels](#) (MCL) for particular contaminants in drinking water or required ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water to make sure standards are achieved. EPA has delegated compliance and enforcement responsibility to ADEQ.



ADEQ has adopted maximum contaminant levels established by EPA for two different categories of harmful contaminants based on the exposure required to cause health effects. Acute contaminants are those that have health effects that occur within hours or days of exposure. In other words, they can make people sick very quickly. These include [microbial contaminants](#), [nitrates](#) and [nitrites](#). Non-acute contaminants are those which may result in health effects over time after prolonged exposure. An [Overview of Monitored Contaminants Subject to Safe Drinking Water Requirements can be found on page 3 of this section](#).

EPA and ADEQ regulations apply to regulated [Public Water Systems](#), namely those water providers having 15 or more service connections (hook ups) or serving 25 or more persons. Most small communities own and operate regulated public water systems and are subject to these regulations.

ADEQ Compliance Assistance

ADEQ offers regularly scheduled drinking water and wastewater [workshops](#) to help public water system owners and operators understand compliance requirements. Notification of these events is available on ADEQ's website. The agency's rural representatives called "[Community Liaisons](#)" are also available to assist Arizona's rural communities.

Drinking Water and Your Health

Almost all drinking water contains some impurities, whether natural such as minerals or man made such as chlorine or other disinfectant additives. Some of these impurities, while referred to as contaminants, are often beneficial to human health in trace amounts.

In Arizona, drinking water comes from two major sources: surface water such as lakes, rivers, and reservoirs, and groundwater, which is pumped from wells. Sometimes these sources are close to a community, but water can also be transported long distances by canals or pipelines.

In Arizona, many communities get their drinking water from sources managed by the [Salt River Project](#) or the [Central Arizona Project](#) . These companies do not supply drinking water directly to consumers, but they provide most of the water used by public water systems in the Phoenix metropolitan area. Many others in the state's smaller and rural communities depend on local surface water and ground water sources.

Because of its exposure to the environment and the potential for contamination, surface water requires both filtration and disinfection to reach drinking water quality standards. Groundwater can also become contaminated requiring filtration and disinfection to meet drinking water standards.

ADEQ Monitoring Assistance Program (MAP)

All public water systems serving less than 10,000 people are required to participate in the [Monitoring Assistance Program](#) which conducts most, but not all, of the drinking water monitoring required by the SDWA. Each system is charged a modest base fee and a small amount per service connection. These monies are deposited into a fund which is then used to hire a private contractor through the state procurement bid process to collect, transport, analyze and report results of baseline samples to the systems and ADEQ. The fee fund allows the water systems to gain economies of scale when contracting for large volumes of sampling and ensures the proper water quality monitoring is conducted.



The program samples for regulated [volatile organic chemicals \(VOC\)](#), regulated [synthetic organic chemicals \(SOC\)](#), and regulated [inorganic chemicals \(IOC\)](#). Because of the efficiency of the program and the cost-effectiveness of the economies of scale involved, the program was expanded in recent years to include asbestos, radionuclides, nitrite, sulfate and nickel.

MAP does **not** monitor for [total coliform bacteria](#), [lead](#) and [copper](#), [surface water treatment rule requirements](#), [disinfectant and disinfection byproducts \(TTHMs, HAA5 and maximum residual disinfectant levels - MRDLs\)](#). Testing for these contaminants remains the responsibility of public water systems. Individual systems are also responsible for any increased monitoring that may be necessary.

Nitrate Monitoring Requirements

ADEQ is now monitoring nitrate levels as part of MAP for Community water systems and Nontransient Noncommunity water systems. Individual systems are responsible for any increased monitoring that may be necessary.



Transient Noncommunity (TN) Water Systems

Transient Noncommunity water systems are currently **not** required to participate in MAP. However, in the near future, ADEQ will also be phasing in responsibility for monitoring both nitrate and nitrite for TN water systems as part of MAP. Until notified by ADEQ, Transient Noncommunity public water system owners and operators remain responsible for nitrate and nitrite monitoring and reporting.

MOST COMMON DRINKING WATER VIOLATIONS



Failure to:

- Conduct required monitoring (sampling) and reporting for those contaminants **not** covered by MAP; (e.g. Total Coliform, Lead & Copper, Disinfectants and Disinfection Byproducts and compliance with the Surface Water Treatment Rule).
- Report analytical results to ADEQ on approved laboratory forms.
- Provide public notice of violations to all water customers.
- Provide ADEQ with a copy and an Affidavit (notarized written statement) as proof that public notice was issued to customers.
- Use certified operators of the appropriate grade level for drinking water collection treatment and distribution.
- Provide Backflow prevention.
- Annual backflow prevention assembly testing.
- Develop and update a written Microbiological Site Sampling Plan (MSSP) for the collection of total coliform samples.
- Develop and update a written [Emergency Operations Plan \(EOP\)](#).
- Use additives, materials and equipment certified for potable water.
- Obtain ADEQ approvals to construct before beginning any new construction and/or modifications to an existing public water system including a new source.
- Obtain ADEQ approvals of construction prior to operation of any completed new construction and/or modification of an existing public water system including a new source.
- Use Best Available Technology (BAT) to resolve ongoing maximum contaminant level (MCL) violations.
- Provide an annual [Consumer Confidence Report \(CCR\)](#) to all water customer.
- Provide a copy of the annual CCR to ADEQ.

<u>Overview of Safe Drinking Water Requirements</u>		
Total Coliform	Fluorides	Nitrate
Disinfectants	Lead Material Ban	Nitrite
Disinfection By-Products	Lead and Copper	Public Notification
Inorganic Chemicals (IOC)	Arsenic	Consumer Confidence Reports
Synthetic Organic Chemicals (SOC)	Radionuclides (Radiochemicals)	Source Water Protection
Volatile Organic Chemicals (VOC)	Asbestos	Certified Operator
Surface Water Treatment	Sulfates	Construction Approvals

For more information, please contact the [Safe Drinking Water Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

TOTAL COLIFORM RULE (TCR) – [See Table 1 for Sampling Frequency]

All regulated public water systems (PWS) must comply with the [TCR](#), including all water systems participating in MAP. Owners and operators are responsible to comply with the TCR. MAP does **not** collect total coliform samples.



BACKGROUND

The TCR was implemented to improve public health by reducing fecal pathogens to minimal levels through control of [total coliform bacteria](#), including [fecal coliforms](#) and [Escherichia coli \(E. coli\)](#). The MCL is based on the presence or absence of total coliform including testing for fecal coliforms and *E. coli* when sample results are positive for the presence of total coliform.

ROUTINE MONTHLY Total Coliform Monitoring and Reporting Requirements

Monthly total coliform monitoring and reporting requires the use of a **written** Microbiological Site Sampling Plan (MSSP) that is subject to review and approval by ADEQ. The number of required monthly samples is based on the total population served. [\[See Table 1\]](#)

All total coliform samples **must** be representative of water throughout the distribution system according to the **written** MSSP.

If any **ROUTINE** monthly sample is total coliform positive, **REPEAT** samples must be collected.

REPEAT Total Coliform Sampling Requirements [See Table 1]

Within 24 hours of learning of a total coliform positive **ROUTINE** sample result, the water supplier must:

- Notify ADEQ of positive results.
- Collect **REPEAT** total coliform samples as follows.
 1. If a PWS collects a minimum of one routine sample per month or per quarter, at least **four** repeat samples for each total coliform positive routine sample found **must** be taken.
 2. If a PWS collects more than one routine sample per month, at least **three** repeat samples for each total coliform positive routine sample found must be taken.
 - a) Collect One REPEAT sample from the sample tap where the original total coliform positive sample was collected.
 - b) Collect One REPEAT sample from a tap located within five service connections upstream of the sampling site where the total coliform positive routine sample was collected.
 - c) Collect One REPEAT sample from a tap located within five service connections downstream of the sampling site where the total coliform positive routine sample was collected.
 - d) If a PWS is required to take **four** REPEAT samples, the fourth sample may be collected from any sampling site in the distribution system.
- If any REPEAT sample is total coliform positive the PWS must collect an additional set of REPEAT samples until total coliforms are not detected in one complete set of REPEAT samples **or** an MCL for total coliforms is violated.
- ADEQ and the public **must** be notified of all total coliform violations..

Additional ROUTINE Total Coliform Sample Requirements

A positive **ROUTINE** or **REPEAT** total coliform result requires that a minimum of **five** **ROUTINE** or **FOLLOW-UP** total coliform samples **must** be collected during the **next month** the system provides water to the public.

Table 1 Total Coliform Monitoring & Reporting Frequency			
Population Served	Minimum Routine Monthly Samples	Repeat Samples Within 24 Hours of Notification	Follow-up Samples Including Monthly Routine Sample
5 to 1,000 ¹	1	4	Minimum of 5
1,001 - 2,500	2	3	Minimum of 5
2,501 - 3,300	3	3	Minimum of 5
3,301 - 4,100	4	3	Minimum of 5
4,101 - 4,900	5	3	No Additional Samples
4,901 - 5,800	6	3	No Additional Samples
5,801 - 6,700	7	3	No Additional Samples
6,701 - 7,600	8	3	No Additional Samples
7,601 - 8,500	9	3	No Additional Samples
8,501 - 12,900	10	3	No Additional Samples
12,901 - 17,200	15	3	No Additional Samples
17,201 - 21,500 ²	20	3	No Additional Samples

¹ Includes public water systems that have at least 15 service connections, but serve fewer than 25 persons.

² PWS serving between 21,501 to more than 3,960, 001 per month, should contact ADEQ Drinking Water Section for the number of monthly total coliform samples required.

How is Compliance Determined?

- Compliance is based on the presence or absence of total coliforms.
- Compliance is determined each calendar month that water is served to the public.



How is a Total Coliform MCL Triggered?

Non-Acute MCL Violation

1. A PWS that collects fewer than 40 ROUTINE and REPEAT samples per month, no more than ONE sample may be total coliform positive.
2. A PWS that collects 40 or more ROUTINE and REPEAT samples per month, no more than 5% of the samples may be total coliform positive.

ACUTE MCL Violation – Public Notice must be issued within 24 Hours

1. Any fecal coliform positive REPEAT sample or *Escherichia coli* (*E. coli*) positive REPEAT sample is an acute violation.
2. Any total coliform REPEAT sample following a fecal coliform positive or *E. coli* positive ROUTINE sample is an acute violation.

Public Notice Requirements

- Public Notice must be issued for all non-acute and acute total coliform MCL violations.
- The type of Public Notice and how it must be issued is determined by the category of the violation.
- Failure to comply with any monitoring and reporting requirement including the failure to collect required samples is a violation and Public Notice must be issued.

Copies of Public Notice to ADEQ

Within 10 days after the date of issuing notice of a violation to the public, a PWS must submit a representative copy to ADEQ of each type of public notice required that is distributed,

published, posted, or made available to persons served by the public water system or to the media **and** an AFFIDAVIT that describes how the public notice was provided (a notarized statement).

LEAD (Pb) and COPPER (Cu) RULE

One of the most common violations is the failure to conduct Lead (Pb) and Copper (Cu) monitoring and reporting.



BACKGROUND

The Lead and Copper Rule was developed to protect the public health by minimizing lead and copper levels in drinking water by identifying residences or sampling locations with lead service lines, lead interior plumbing, or copper pipes with lead solder. If water is too corrosive, it can cause lead and copper to leach out of the plumbing materials and fixtures and enter the drinking water.

Children are especially susceptible to high levels of lead which can cause damage to the brain, red blood cells, and kidneys. Exposure to low levels of lead can cause low IQ, hearing impairment, reduced attention span and poor classroom performance. High exposure to copper can cause stomach and intestinal distress, liver and kidney damage, and complications from Wilson's disease in genetically predisposed people.

High lead levels in adults have been linked to high blood pressure. Pregnant women and their fetuses are especially vulnerable to lead exposure that can significantly harm the fetus, causing low birth weight and slowing down normal mental and physical development.



Overview of Lead (Pb) & Copper (Cu) Monitoring & Reporting	
General Description	Establishes an Action Level of 0.015 mg/L for lead (Pb) and 1.3 mg/L for copper (Cu) based on the 90 th percentile level of tap water samples. An Action Alert exceedance is <i>not</i> a violation but can <i>trigger</i> other requirements including water quality parameter (WQP) monitoring, corrosion control treatment (CCT), source water monitoring and treatment, public education, and lead service line replacement. Samples <i>must</i> be analyzed by a laboratory using EPA approved methods. <i>Failure to conduct lead and copper tap water sampling is a violation.</i>
Who Must Sample	ALL community water systems (CWS) and Non-transient, Non-community water systems (NTNCWS). The number of samples is based on the system size and population served [See Table 1.]
Taking A Sample	A first-draw sample may be collected by the <i>PWS or by a resident</i> after providing instructions to the resident on proper sampling procedures.
First Draw Sample	Pb and Cu samples are one liter in volume and <i>must</i> be collected <i>after</i> water has been motionless for <i>at least 6 hours</i> from an <i>interior</i> kitchen or bathroom tap. NO samples can be collected from taps with point-of-entry or point-of-use devices or from outside hose bibs. (A.A.C. R18-4-310(D))
Non-First Draw Sample	If non-first draw samples are collected in place of first-draw samples, the sample shall be one liter in volume and shall be collected at an <i>interior</i> tap from which water is typically drawn for consumption. The PWS <i>must report non-first draw samples to ADEQ</i> and identify of all non-first-draw sample sites selected by the PWS and the length of the standing time for each substitute sample collected. (A.A.C. R18-4-310(D) (3))
90 th Percentile Calculation	The laboratory that analyzes the compliance samples will calculate the 90 th percentile. However, the Drinking Water Rules do provide detailed instruction on calculating the 90 th percentile. (A.A.C. R18-4-308.) ADEQ staff will also provide compliance assistance.



Step 1. Materials Survey	
<p>A PWS shall complete a materials survey of its distribution system to identify a pool of sampling sites that is sufficiently large enough to ensure that the PWS can collect the required number of tap water samples. A PWS shall identify whether any of the following construction materials are present in its distribution system when conducting a materials survey:</p> <ol style="list-style-type: none"> a. Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing; b. Copper from piping and alloys, service lines, and home plumbing; c. Galvanized piping, service lines, and home plumbing; d. Ferrous piping materials, such as cast iron and steel; e. Asbestos cement pipes; f. Vinyl lined asbestos cement pipe; and g. Coal tar-lined pipes and tanks. <p>Each site from which a first-draw sample is collected shall be selected from the pool of sampling sites with the <i>highest potential for lead and copper to leach into drinking water.</i></p>	

STEP 2. Targeting Sampling Sites Based on Materials Survey	
<p>Community Water System (CWS) Sample Sites - samples should be collected from Tier 1 Sites. If a sufficient number of Tier 1 sampling sites do not exist or are inaccessible, then a CWS shall collect the remaining number of tap water samples from Tier 2 sampling sites. If a sufficient number of Tier 2 sites do not exist or are inaccessible, then the remaining number of samples may collected from Tier 3 sites.</p>	
Tier 1	<ol style="list-style-type: none"> 1. Single-family structures that meet <i>any</i> of the following requirements: contain lead pipes; contain copper pipes with lead solder that were installed <i>after</i> 1982; or are served by a lead service line. 2. If multiple-family residences comprise at least 20 percent of the structures served by a PWS, they may be included in the sampling pool as Tier 1 sampling sites based on the materials survey.
Tier 2	Buildings and multiple-family residences that meet <i>any</i> of the following requirements: contain lead pipes; contain copper pipes with lead solder that were installed <i>after</i> 1982; or are served by a lead service line.
Tier 3	Single-family structures that contain copper pipes with lead solder that were installed <i>before</i> 1983.
<p>Nontransient Noncommunity Water System (NTNCWS or NN) Sample Sites - samples should be collected from Tier 1 Sites. If a sufficient number of Tier 1 sampling sites do not exist or are inaccessible, then a NTNCWS shall collect the remaining number of tap water samples from Tier 2 sampling sites.</p>	
Tier 1	Buildings that meet <i>any</i> of the following requirements: contain lead pipes; contain copper pipes with lead solder that were installed <i>after</i> 1982; or are served by lead service lines.
Tier 2	Buildings that contain copper pipes with lead solder that were installed <i>before</i> 1983.
NTNCWS	A representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the NTNCWS.

STEP 3.	Tap Water Lead & Copper Sampling See Table 1 for the required number of samples to be taken.
Initial	Take 2 consecutive 6 month tap water samples (January–June and July–December) for lead and copper from the same sampling sites identified in the materials survey.
Annual	If a water system does not exceed the action level for lead and the action level for copper in 2 consecutive 6 month monitoring periods the water system may <i>reduce</i> the frequency of tap water monitoring to <i>once per year</i> . Samples <i>must</i> be taken from the <i>same initial sampling sites</i> during the months of June, July, August or September unless ADEQ approves an alternate schedule.
Triennial	If the water system does <i>not</i> exceed the action level for lead and the action level for copper for <i>three consecutive years</i> of monitoring, it may <i>further reduce</i> the frequency of tap water monitoring for lead and copper to <i>once every three years</i> . No exceedance for three consecutive years includes the first year of 2 consecutive 6 month samples plus 2 annual samples.
Reduced Monitoring Sites	A water system that conducts <i>reduced</i> monitoring shall select the sampling sites from the <i>same initial sampling sites</i> used to collect the initial 2 consecutive tap water samples.

Accelerated Reduced Monitoring	
Small & Medium Water Systems	A water system that demonstrates for <u>two consecutive six-month monitoring periods</u> that the 90th percentile tap water lead level is <i>less than or equal to 0.005 mg/L</i> and the 90th percentile tap water copper level is <i>less than or equal to 0.65 mg/L</i> may <i>reduce</i> the frequency of tap water monitoring for lead and copper to <i>once every three years</i> and will <i>not</i> be required to take 2 annual samples. A water system that conducts <i>reduced</i> monitoring shall use the <i>reduced</i> number of sites taken from the initial tap water sampling pool and follow the sampling requirements.

TABLE 1		Number Of Samples Required	
PWS Size	Population Served	Number of Tap Water Sampling Sites	
		Initial Samples Standard	Reduced
Medium	10,001 – 50,000	60	30
	3,301 – 50,000	40	20
Small	501 – 3,300	20	10
	101 – 500	10	5
	≤ 100	5	5



SURFACE WATER TREATMENT RULE (SWTR)



Another common violation is the failure to comply with filtration and disinfection and the monitoring and reporting requirements of the [SWTR](#).

The SWTR applies to the following PWS:

- Use Surface Water: All water which is open to the atmosphere and subject to runoff including rivers, lakes and reservoirs.
- Use **Groundwater** that has been determined to be [under the direct influence of surface water](#).
- Use both Surface Water and Groundwater.

BACKGROUND

The SWTR became effective December 31, 1990. The rule seeks to prevent waterborne diseases caused by fecal coliform and *E. coli* bacteria and viruses such as [Legionella](#), [Giardia lamblia](#) and [Cryptosporidium](#). These disease causing microbes are present at varying concentrations in surface water. Surface water is particularly susceptible to microbial contamination from sewage treatment plant discharges and runoff from stormwater. These sources often contain high levels of fecal microbes that originated in livestock and septic systems.

Health Effects:

- **Coliform Bacteria**
[Coliform](#) are common in the environment and are generally not harmful. However, the presence of these bacteria in drinking water is usually a result of a problem with the treatment system or the pipes which distribute water, and indicates that the water may be contaminated with germs that can cause disease.

Fecal Coliform and *E. coli*

- [Fecal Coliform](#) and [E coli](#) are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms.
- [Turbidity](#)
Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
- [Cryptosporidium](#)
Cryptosporidium is a parasite that enters lakes and rivers through sewage and animal waste. It causes cryptosporidiosis, a mild gastrointestinal disease. However, the disease can be severe or fatal for people with severely weakened immune systems. EPA and the CDC have prepared [advice for those with severely compromised immune systems](#) who are concerned about *Cryptosporidium*.
- [Giardia lamblia](#)
Giardia lamblia is a parasite that enters lakes and rivers through sewage and animal waste. It causes gastrointestinal illness (e.g. diarrhea, vomiting, and cramps).

PWS using Convention or Direct Filtration are encouraged to contact ADEQ [Drinking Water Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SURFACE WATER TREATMENT RULE REQUIREMENTS

SWTR: All systems using surface water and/or groundwater under the direct influence of surface water **must** provide:

1. **Filtration and Disinfection**
 - at least a 99% (2-log) **removal** of *Cryptosporidium*
 - at least a 99.9% (3-log) combined removal and inactivation of *Giardia*
 - at least a 99.9% (4-log) inactivation and removal of viruses

2. **Turbidity**
 - Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms including bacteria, viruses and parasites.
 - The adequacy of the filtration and disinfection process is established by measuring Turbidity (measuring the amount of particles in the treated water) and determining if the water meets EPA's performance standards

3. **Continuous Disinfection**
 - To assure adequate microbial protection in the distribution system, a PWS is also required to provide continuous disinfection of the drinking water entering the distribution system.



Surface Water Treatment Rules (SWTR) Summary	
SWTR 1989	<p>Surface Water Treatment Rule: Focused on reducing the risk of contamination from <i>Giardia Lamblia</i> and viruses.</p>
IESWTR 1998	<p>Interim Enhanced Surface Water Treatment Rule:</p> <ul style="list-style-type: none"> • Broaden regulatory focus with the goal of optimizing treatment reliability and to enhance physical removal efficiencies to minimize <i>Cryptosporidium</i> in finished water. • Disinfection benchmark provisions to ensure continued levels of microbial protection while systems take the necessary steps to comply with Stage 1 Disinfection By-Products Rule standards. [<i>See Disinfectant and Disinfection By-Products requirements below</i>] • Applies to water systems serving <i>more than</i> 10,000 persons.
LT1ESWTR 2002	<p>Long-Term 1 Enhanced Surface Water Treatment Rule:</p> <ul style="list-style-type: none"> • Contains provisions similar to IESWTR • Applies to water systems serving <i>less than</i> 10,000 persons.
LT2ESWTR 2006	<p>Long-Term 2 Enhanced Surface Water Treatment Rule:</p> <ul style="list-style-type: none"> • Provide additional health protection from microbial pathogens, especially <i>Cryptosporidium</i> based on new scientific data. • Builds on existing surface water treatment rules by focusing on high risk systems: <ul style="list-style-type: none"> • Filtered systems with high source water contamination • All UNFILTERED systems • Applies to all water systems • Requires initial source water monitoring for <i>Cryptosporidium</i> and <i>E. coli</i> • Monitoring results determine if any additional treatment is required beyond IESWTR and LT1ESWTR • Disinfection profiling required for all systems • All finished water reservoirs must be covered • <u>Applicability</u> <ul style="list-style-type: none"> • Surface Water or Groundwater Under the Direct Influence of Surface Water (GUDI) • Community Water Systems (CWS) • Nontransient Noncommunity Water Systems (NN) • Transient Noncommunity Water Systems (TN) • Wholesale suppliers who provide finished water to other systems must comply based on population served of the largest system in the combined distribution system and must meet all initial source water monitoring requirements <ul style="list-style-type: none"> • All filtered and unfiltered systems • Do NOT have to comply with all original initial source water monitoring requirement except wholesale suppliers of finished water to other systems. • All MUST comply with: <ul style="list-style-type: none"> • Uncovered storage requirements • Profiling and benchmarking requirements • Sanitary Survey requirements (Inspection of the entire PWS)
ADEQ Compliance Assistance	<p><u>Please Contact ADEQ Drinking Water Section Staff:</u> Monitoring and Reporting requirements under the SWTR is specific to the type of water filtration and disinfection technology used by a PWS. ADEQ <u>encourages</u> PWS to contact staff for assistance in determining the required monitoring and reporting to ensure compliance with the SWTR.</p>



FILTER BACKWASH RECYCLING RULE (FBRR)

In June 2001, EPA established the [Filter Backwash Recycling Rule](#) to improve public health by assessing and changing, where needed, recycle practices for improved contaminant control, particularly microbial contaminants. The FBRR requires systems that recycle to return specific recycle flows through all processes of the system’s existing conventional or direct filtration system or an alternate location approved by the state.

Does the FBRR rule apply to your community?

- Yes No Don't Know Not Applicable

The FBRR applies to all PWS that use surface water or groundwater under the direct influence of surface water who use:

- Conventional Filtration
Conventional filtration is the most common type of filtration. It is a series of processes including coagulation, flocculation, sedimentation and filtration resulting in substantial particulate removal.
- Direct Filtration
Direct filtration is a series of processes including coagulation and filtration, but excluding sedimentation, resulting in substantial particulate removal. Direct filtration can only be used with high-quality raw water that has low levels of turbidity and suspended solids.
- Recycle Spent Filter Backwash Water
Spent filter backwash is a stream containing particles that are dislodged from filter media when water is forced back through a filter (backwash) to clean the filter.
- Recycle Thickener Supernatant
Thickener supernatant is a stream containing the decant from a sedimentation basin, clarifier or other unit that is used to treat water, solids or semi-solids from the primary treatment process.
- Recycle Liquids from the Dewatering Process
A stream containing liquids generated from a unit used to concentrate solids for disposal.

Critical Deadlines and Requirements

The FBRR requirements will be phased in over time.



CONSTRUCTION APPROVALS

All regulated public water systems (PWS) including Community Water Systems (CWS), Nontransient Noncommunity Water Systems (NN) and Transient Noncommunity Water Systems (TN) **must** obtain ADEQ approval to construct and/or modify an existing PWS **before** beginning construction. This includes: adding a new source, water treatment and storage capacity as well as line extensions, blending plans or other additions, extensions and modifications.

ADEQ approval of construction **must** be obtained **prior** to operation.

DISINFECTANT AND DISINFECTION BY- PRODUCTS RULE (DBPR)

BACKGROUND

Disinfection By-Products are formed when disinfectants used in water treatment react to *bromide* and/or other natural organic matter (decaying vegetation) present in source water. Different disinfectants produce different types of amounts of disinfection by-products. Regulations have been established for disinfection by-products identified in drinking water including [trihalomethanes](#) and [total trihalomethanes \(TTHM\)](#), [haloacetic acids \(HAA5\)](#), [bromate](#) and [chlorite](#).



The [Disinfectant and Disinfection By-Products Rule](#) applies to **ALL** surface water PWS and groundwater PWS which add a chemical disinfectant to the water.

- **Trihalomethanes (THM) and Total Trihalomethanes (TTHM)**

A group of four chemicals that are formed along with disinfection by-products when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. EPA established standards in the [Stage 1 Disinfectants/Disinfection By-Products Rule](#) to regulate total *trihalomethanes* (TTHM) at a maximum allowable annual average of 80 parts per billion, down from the previous standard of 100 parts per billion. The new standard was effective December 2001 for large surface water PWS and December 2003 for small surface water and all groundwater systems.

- **Haloacetic Acids (HAA5)**

A group of chemicals that are formed along with other disinfection by-products when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The five regulated haloacetic acids known as HAA5 are:

- Monochloroacetic Acid
- Dichloroacetic Acid
- Trichloroacetic Acid
- Monobromoacetic Acid
- Dibromoacetic Acid

EPA established standards in the *Stage 1 Disinfectants/Disinfection By-Products Rule* to regulate *haloacetic acids (HAA5)* at an annual average of 60 parts per billion effective December 2001 for large surface water PWS and December 2003 for small surface water systems and all groundwater systems.

- **Bromate**

A chemical that is formed when ozone is used to disinfect drinking water and reacts with naturally occurring bromide found in source water. EPA established standards in the *Stage 1 Disinfectants/Disinfection By-Products Rule* to regulate *bromate* at an annual average of 10 parts per billion effective December 2001 for large PWS and December 2003 for small surface water systems and all groundwater systems.

- **Chlorite**

A by-product formed when chlorine dioxide is used to disinfect water. EPA established standards in the *Stage 1 Disinfectants/Disinfection By-Products Rule* to regulate chlorite at a monthly average level of 1 part per million effective December 2001 for large surface water PWS and December 2003 for small surface water systems and all groundwater systems.

HEALTH EFFECTS:

Since the discovery of chlorinating byproducts in drinking water in 1974, numerous toxicological studies (studies on the health effects from exposure to high dosage contaminants usually involving animals in a lab) have been conducted. These studies have shown several [disinfection byproducts](#) to be carcinogenic in laboratory animals (including [bromate](#), certain [trihalomethanes](#) and [haloacetic acids](#)). Some disinfection byproducts have also been shown to cause adverse reproductive or developmental effects in laboratory animals (e.g., [chlorite](#) and certain [trihalomethanes](#) and [haloacetic acids](#)). However, there is considerable uncertainty involving the results of high doses in toxicological studies of some byproducts occurring in disinfected drinking water to estimate the risk to humans from chronic exposure to low doses of these and other byproducts.

Stage 1 Disinfectants and Disinfection Byproducts Rule

In December 1998, EPA established the [Stage 1 Disinfectants/Disinfection Byproducts Rule](#), which was considered the best course of action to reduce potential risks from disinfection byproducts in the near term.



Stage 2 Disinfectants and Disinfection Byproducts Rule

[The Stage 2 DBP rule was published in the Federal Register on January 4, 2006.](#) The *Stage 2 Disinfectants and Disinfectant Byproducts Rule* builds upon earlier rules that addressed disinfection byproducts to improve drinking water quality and provide additional public health protection from disinfection byproducts.



Disinfectant and Disinfection By-Products (DBP) Rule Summary	
<p>Stage 1 DBP Rule 1998</p>	<p>Stage 1 Disinfectant and Disinfection By-Products Rule: Updates and supersedes the 1979 regulations for <i>total trihalomethanes</i>. Focus is on reducing exposure to three disinfectants and many disinfection by-products.</p> <ul style="list-style-type: none"> • Applies to ALL Community and Nontransient Noncommunity water systems • Established maximum residual disinfectant level goals (MRDLG) and maximum residual disinfectant levels (MRDL) for three chemicals: <ul style="list-style-type: none"> • <i>Chlorine, Chloramine and Chlorine Dioxide</i> • Established maximum contaminant level goals (MCLG) for <ul style="list-style-type: none"> • <i>Total Trihalomethanes (TTHM), Haloacetic Acids (HAA5), Chlorite and Bromate</i> • <u>Conventional Filtration Treatment and Total Organic Carbon (TOC)</u> <ul style="list-style-type: none"> • Surface water systems and groundwater systems under the direct influence of surface water and use conventional filtration treatment are required to remove a specified percentage of organic matter measured as <u>Total Organic Carbon (TOC)</u> that may react with disinfectants to form DBP. • Removal to be achieved through treatment technique (enhanced coagulation or enhances softening) unless an alternative removal system meets alternative criteria. • Scheduling is based on source water type and population served. • Monitoring is based on source water type, population served and the number of treatment plants.
<p>Stage 2 DBP Rule March 2006</p>	<p>Stage 2 Disinfectant and Disinfection By-Products Rule: Intended to reduce potential cancer and reproductive and developmental health risks from DPB.</p> <ul style="list-style-type: none"> • Stage 2 builds incrementally on existing DBP rules and will be phased in over the next several years. • Applies to all Community and Nontransient Noncommunity PWS that add a chemical disinfectant other than UV or delivers water that has been treated with chemical disinfectants other than UV. • Focus is on monitoring TTHM and HAA5 based on a Locational Running Annual Average (LRAA). • Takes a risk based-targeted approach to require treatment changes by <u>ONLY</u> those PWS that are identified as having the greatest risk. This process will be phased in over the next several years. • <u>Step 1</u>: A multi-year process for PWS to determine where higher levels of DBP are likely to occur in their distribution systems. These will become the PWS new monitoring sites. • <u>Step 2</u>: If the DPB levels at these high risk sites exceed the MCL, the system must take corrective actions. • <u>Step 3</u>: Corrective actions will require planning, obtaining funding and permits to construct, designing and finally construction.
<p>ADEQ Compliance Assistance Please Contact ADEQ Drinking Water Section Staff: Compliance under the DBP Rule involves many variables. ADEQ <i>encourages</i> PWS to contact staff for assistance in determining the assessment and monitoring and reporting requirements to ensure compliance with the DBP Rules.</p>	



CONSUMER CONFIDENCE REPORT (CCR)

Community water systems (CWS) throughout the country are required to provide an annual water quality report, known as a [Consumer Confidence Report](#), to their customers. The [CCR Report \(download template\)](#) is prepared by the water system owner or operator and made available annually to water customers by July 1. The CCR provides information on your local drinking water, including the water's source, the contaminants found in the water, and how water customers can get involved in protecting drinking water.



A copy of the annual CCR report ***must*** also be provided to ADEQ.

The goal of the CCR is to help consumers make health-based decisions regarding their drinking water. Many municipal water systems place these reports online at the city or town website. Consumers with questions should contact their water company to request a copy of the report.

For more information, please contact the [Drinking Water Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

GRANTS AND BELOW MARKET INTEREST LOANS

See [Section 14 Mini Capital Improvements for Small Communities](#) for information on the grants and below market interest loans for water improvement projects and information about Arizona's [Water Infrastructure Finance Authority \(WIFA\)](#).

SOURCE WATER PROTECTION

BACKGROUND

Source water is untreated water from streams, rivers, lakes or underground aquifers which is used to supply private wells and public drinking water. Initially, the 1986 Amendments to the *Safe Drinking Water Act* called upon each state to develop a (ground water) [Wellhead Protection \(WHP\) Program](#). This legislation established a nation-wide program to encourage states to develop systematic and comprehensive programs within their jurisdictions to protect public water supply (PWS) wells and well fields from contamination.

The 1996 Amendments to that act expanded the focus from groundwater alone to all sources and required each state to develop standards for a [Source Water Assessment Program \(SWAP\)](#). These assessments were to be completed for every public water system by May 2003.

Arizona's Source Water Protection Program (SWPP)

The [SWPP](#) is designed to protect drinking water sources from becoming contaminated in the future. ADEQ evaluated each water source used by PWS in Arizona. These evaluations assess the hydrogeology of drinking water sources to determine the quality of groundwater being drawn into wells; evaluated the watersheds supplying surface water; and surveyed land use activities occurring near drinking water sources.

This information is now used to determine the degree to which a public drinking water source is protected from, or at risk of, contamination. It is used to assist local communities in implementing source water protection measures.

Actions your community should be taking:

ADEQ administers this program to assist PWS, local officials and utilities in developing and implementing plans to protect surface and groundwater resources by actively coordinating local pollution prevention efforts with existing state programs. ADEQ provides assistance with program development and technical resources.

At a minimum, each **Source Water Protection Program (SWPP)** must:

- Delineate the source water protection area (SWPA) for each system.
- Identify and inventory potential sources of contaminants within each source water protection area.
- Determine the susceptibility of the PWS to contaminant sources within the source water protection area.
- Notify and involve the public about threats identified.
- Develop and implement management approaches to protect the water supply within source water protection areas from such contaminants.
- Develop contingency planning strategies for each public water supply system to respond to source contamination or emergencies that could lead to contamination.

Primary Benefits to the Community

Establishing a SWPP will help to assure reliable, safe sources of drinking water and to reduce long term costs. Protecting the quality of the drinking water resource can produce significant cost savings by:

- Reducing the need to develop new drinking water sources.
- Reducing the costs for treatment of the drinking water supply to meet acceptable water quality standards.

The most successful source water protection programs involve public participation throughout the development of the program. ADEQ is available to provide guidance and technical assistance to the community in developing an effective program.

For more information, please contact the [Water Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Drinking Water System Self-Assessment Questionnaire

1. Does your community participate in the ADEQ drinking water Monitoring Assistance Program (MAP)?
 Yes No Don't Know Not Applicable

2. Do you know when the last regulatory inspection was conducted for your public water system?
 Yes No Don't Know Not Applicable

3. Do you know the regulatory compliance status of your water system?
 Yes No Don't Know Not Applicable

4. Has the water system received any *Notices of Opportunity to Correct (NOC)*, *Notices of Violation (NOV)* or *Administrative Orders* in the past three years?
 Yes No Don't Know Not Applicable

5. Are plans in place to correct violations?
 Yes No Don't Know Not Applicable

6. Do you employ a licensed certified operator(s) of the proper grade and type required to operate the water system?
 Yes No Don't Know Not Applicable

7. Do you have written policies in place to ensure that certified operators have adequate opportunities for training and maintaining license certification? (*License Renewal Hours Training*)
 Yes No Don't Know Not Applicable

8. Do you know the source of the community's drinking water?
 Yes No Don't Know Not Applicable

9. Has a source water assessment been completed and made available to the public?
 Yes No Don't Know Not Applicable

10. Is a source water protection program (SWPP) been established?
 Yes No Don't Know Not Applicable

11. Have you established appropriate protection zones around wells and springs?
 Yes No Don't Know Not Applicable

12. Do you have written policies and procedures that document the regulatory requirements for water quality monitoring and reporting for the water system?
 Yes No Don't Know Not Applicable

13. Are procedures in place to ensure water managers and operators are aware of all compliance deadlines?
 Yes No Don't Know Not Applicable

14. Do you have written policies and procedures that document the regulatory requirements for the operation and maintenance of the potable water system?
 Yes No Don't Know Not Applicable

15. Do you have written policies and procedures that govern the operation and maintenance of the water system?
 Yes No Don't Know Not Applicable

16. Do you have written policies and procedures that define roles and responsibilities for the operation and maintenance of the water system?
 Yes No Don't Know Not Applicable

17. Do you have written policies and procedures that define the role of water system personnel that includes a job description, benefits, and performance standards?
 Yes No Don't Know Not Applicable

18. Can water system personnel describe their day-to-day duties and responsibilities?
 Yes No Don't Know Not Applicable
19. Do you have an inventory of the water system assets and their location and condition?
 Yes No Don't Know Not Applicable
20. Is the condition of the water system regularly assessed to determine its operational capability?
 Yes No Don't Know Not Applicable
21. Have you conducted a materials survey to determine what types of pipe materials are used in the distribution system that may cause lead and copper to leach into the drinking water?
 Yes No Don't Know Not Applicable
22. Does the water system management and operator have a copy of the water system drawings of the distribution system and any treatment facility?
 Yes No Don't Know Not Applicable
23. Do you have regularly scheduled meetings to discuss water system issues and needs?
 Yes No Don't Know Not Applicable
24. Does the water system have the required written Microbiological Site Sampling Plan (MSSP)?
 Yes No Don't Know Not Applicable
25. Is the water system in compliance with the total coliform monitoring and reporting requirements?
 Yes No Don't Know Not Applicable
26. Is the water system in compliance with lead and copper monitoring and reporting requirements?
 Yes No Don't Know Not Applicable
27. Is the water system in compliance with the Consumer Confidence Reporting (CCR) requirements over the past three years?
 Yes No Don't Know Not Applicable
28. Does the water system have the required written Emergency Operations Plan (EOP)?
 Yes No Don't Know Not Applicable
29. Do you have the required backflow prevention plan?
 Yes No Don't Know Not Applicable

30. Have you identified each business, industry or government facility which has a cross connection to your system?
- Yes No Don't Know Not Applicable
31. Is each cross connection in your system protected by a backflow prevention assembly?
- Yes No Don't Know Not Applicable
32. Is each backflow prevention assembly tested annually?
- Yes No Don't Know Not Applicable
33. Have water users complained about the taste and/or odor of the water over the past three years?
- Yes No Don't Know Not Applicable
34. Does the source have a written a wellhead protection plan (WHP)?
- Yes No Don't Know Not Applicable
35. Does the water system have a written Risk Management and Safety Policies document?
- Yes No Don't Know Not Applicable
36. Do you have a written policy and procedure to ensure the security of your water system?
- Yes No Don't Know Not Applicable
37. Does the water system have an annual budget?
- Yes No Don't Know Not Applicable
38. Are the governing board and water personnel both involved in developing the annual budget?
- Yes No Don't Know Not Applicable
39. Does the annual budget include financial resources to cover routine water quality monitoring and reporting, maintenance and the cost of repairing and/or replacement of worn out equipment or unforeseen emergencies?
- Yes No Don't Know Not Applicable
40. Do you have a Capital Improvement Plan (CIP) for the water system?
- Yes No Don't Know Not Applicable
41. Do you have a written annual financial report for the water system?
- Yes No Don't Know Not Applicable

42. Has the water system been certified to have adequate capacity and pressure to provide fire protection for your community?
- Yes No Don't Know Not Applicable
43. Have you evaluated the capacity of your water system to accommodate future growth over the next 10 years?
- Yes No Don't Know Not Applicable
44. Do you have written plans in place to ensure the financial viability of your water system over the next 10 years?
- Yes No Don't Know Not Applicable
45. Is the water system metered?
- Yes No Don't Know Not Applicable
46. Do you have written policies and procedures for establishing and reviewing water user rates?
- Yes No Don't Know Not Applicable
47. Are water rates set at a level to ensure long-term viability of the system?
- Yes No Don't Know Not Applicable
48. Are revenues from user fees dedicated to the water system as opposed to being used as general revenue for the community?
- Yes No Don't Know Not Applicable
49. Are you currently paying back a water system improvement debt? (Loan)
- Yes No Don't Know Not Applicable
50. Do you have a written process for dealing with past due bills and delinquent water accounts?
- Yes No Don't Know Not Applicable

SECTION 3

WASTEWATER SYSTEM & WATER QUALITY PROTECTION PERMITS

BACKGROUND

The 1972 [Clean Water Act \(CWA\)](#) focused on identifiable sources (point-source) of pollution of waters of the United States. Amendments to the CWA in 1977 and 1987 addressed unidentifiable sources (non-point) of pollution. General and individual permits are used to safeguard surface and groundwater quality by controlling discharges.



A few examples of activities that may require a [permit](#) include: municipal/domestic wastewater treatment plants, pre-treatment treatment of wastewater, disposal of sewage sledge (biosolids), drinking water treatment plants, stormwater run-off from construction activities, stormwater discharges to drywells, industrial facilities that dispose of their waste in publicly owned treatment works (POTW - sewer system), on-site sewage disposal systems, septic tanks, direct use of reclaimed water, and mining operations.

Reduced levels of funding for wastewater collection, treatment and disposal means small communities and special districts and their technical consultants must identify appropriate technology resources to substantially reduce capital project costs and operating expenses, if wastewater collection, treatment and disposal is to be affordable and effective in protecting our water supply.

Does your community own or operate any of the facilities and/or are involved in any of the activities listed above that require a water quality permit?

- Yes
 No
 Don't Know
 Not Applicable

If you own and operate any of the facilities or are involved in any of the activities listed above, or you do not know, review this section and answer the self-assessments questions numbers [1 through 59](#) at the end of this section. If you do not own or operate any of these facilities or are involved in any of the activities listed above, skip to [Section 4](#).

SUMMARY OF WASTEWATER PERMITTING REQUIREMENTS



Aquifer Protection Permit (APP)

An [APP](#) must be in place to operate a wastewater treatment plant. APP amendments are required for corrections or changes to a permit.

Reclaimed Water Permit

Reclaimed water permits are required for reuse of treated effluent and are normally obtained by the end user of the water. A facility's [APP](#) must specify the class of effluent generated by a facility (e.g. Class A, B or C) and associated effluent sampling requirements for the reuse activities. An APP amendment may be necessary for this purpose.

AZPDES Permit

An *Arizona Pollutant Discharge Elimination System* ([AZPDES](#)) permit is required prior to any discharge to surface water **including dry washes**.

AZPDES Stormwater Permit

Coverage under a [stormwater](#) general permit must be obtained for wastewater treatment plants with design flows of one million gallons per day or more, and for any construction projects which will disturb at least one acre.

208 Water Quality Management Plan

The [208 Water Quality Management Plan](#) is a consistency review required for NEW facilities, AZDPES permits and certain modifications.

Sewage Sludge (a.k.a. biosolids)

[Sludge or biosolids](#) treatment storage and disposal requirements will be included in the APP or AZPDES discharge permit.

Air Quality Permit

Electrical generators for treatment facilities; lift stations and other purposes; which are equal to or greater than 325 horsepower need an [Air Quality Permit](#).



General Permit Requirements

Wastewater Collection Systems & Lift Stations:*



1. Construction Authorization and Discharge Authorization
 - Approvals must be obtained for new collection systems and **prior approval** for the expansion of existing collection systems involving new construction.
 - ADEQ must first review the design for a new sewage collection system.
 - When a Construction Authorization is issued, construction may begin.
 - After construction is completed, a Discharge Authorization must be applied for and obtained **prior to use of the new system or expanded system**.
2. * Lift Stations – Air Quality Permits
 - Electrical generators for treatment plants, lift stations and other purposes, which are equal to or greater than 325 horsepower need an Air Quality Permit.
3. Capacity, Management, Operations and Maintenance (CMOM) General Permit
 - ADEQ encourages sewer providers to apply for general permit coverage to manage, operate and maintain a sewage collection system under the terms of a CMOM plan.
 - A CMOM will aid in preventing sanitary overflows and reduce the level of enforcement when spills and leaks occur from the collection system.

AQUIFER PROTECTION PERMIT (APP)

Arizona established [Aquifer Protection Water Quality Standards \(AWQS\)](#) for a variety of contaminants and the [Aquifer Protection Permit \(APP\)](#) program for facilities discharging chemicals that may affect groundwater or degrade water quality below AWQS standards.

The key objective of the APP permitting process is to protect groundwater supplies through [Best Available Demonstrated Control Technology \(BADCT\)](#).

An APP is required if your community owns or operates a facility that discharges a pollutant either directly to an aquifer or to the land surface or vadose zone (the area between an aquifer and the land surface) in such a manner that there is a reasonable probability that the pollution will reach the aquifer.

The following facilities are considered to be “discharging” and require permits, unless exempted, or the director determines that the facility will be designed, constructed and operated so there will be no migration of pollutants directly to the aquifer or the vadose zone:

1. Surface impoundments, pits, ponds and lagoons.
2. Solid waste disposal facilities, except mining overburden and wall rock that has not been subjected to mine leaching operations.
3. Injection wells.
4. Land treatment facilities.
5. Facilities adding pollutants to a salt dome, salt beds, or salt formations, drywells* or underground caves or mines.
6. Mine tailings piles and ponds.
7. Mine leaching operations.
8. Septic tank systems.
9. Underground storage facilities (if wastewater-effluent is used).
10. Point source discharges to navigable waters (including dry washes, streams and river beds).
11. Sewage or wastewater treatment plants.

* All existing and proposed **drywells must be registered** with ADEQ. Any vadose injection wells, including drywells that receive stormwater mixed with reclaimed wastewater or groundwater, or both from manmade bodies of water associated with golf courses, parks and residential areas must be registered and a general or individual permit may be required,

If your community has an APP, become familiar with the permit and its obligations including monitoring and reporting requirements.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES)

BACKGROUND

In December 2002, ADEQ was granted authority by EPA to administer the [National Pollutant Discharge Elimination System](#) program under the Clean Water Act through the [Arizona Pollutant Discharge Elimination System program](#) and the [Pretreatment](#) program covering point-source discharges from industrial sources discharging to publicly owned treatment works (POTW) in all areas within Arizona *except* for Indian lands.

Any facility that discharges a pollutant from a known identifiable point source to “navigable” waters is required to obtain an AZPDES permit.

Pollutant is broadly defined but generally includes:

- Chemical waste
- Biological waste
- Any constituents discharged to receiving waters



Examples:

- Bacteria from wastewater discharges
- Sediments from construction projects
- Chlorine from well development

- Groundwater redirected to a river which could include nitrates or metals
- Discharging to a dry wash

“Navigable” Waters

Navigable Waters is a term used to describe waters of the United States. It includes not only oceans, streams, lakes, and rivers but also includes playas, wetlands, intermittent streams and ephemeral washes – that is water flows in them only in response to a storm event – otherwise these washes remain dry most of the time but are connected to other bodies of waters of the United States. **Discharging to these dry washes requires a permit.**



Systems that have an existing NPDES permit that has **not** expired do not have to apply for an AZPDES permit. However, if the NPDES permit is **modified**, ADEQ may revise the format to reflect an AZDPES permit. When an existing NPDES permit comes up for **renewal**, it will be changed to an AZDPES permit. EPA has delegated ADEQ as the implementing agency and enforcement agency for NPDES permits.



TYPES OF AZPDES PERMITS:

Publicly Owned Treatment Works (POTW)

POTW are public wastewater treatment facilities that receive wastewater, usually through a pipe system, from facilities using toxic chemicals and for publicly owned and/or any treatment works that treat domestic sewage and currently discharges, is permitted to discharge, or proposes to discharge treated wastewater to waters of the United States. (*Example: Ina Road Water Pollution Control Facility, owned and operated by Pima County.*)

Some small communities may own or operate a publicly owned treatment works (POTW) or may be planning to develop a POTW as their community grows. Maximum achievable control technologies (*MACT*) standards have been established for POTW which treat wastewater received from residential, commercial and industrial sources. POTW can release air toxics in the form of volatile organic compounds in wastewater.

ADEQ has developed **AZPDES** forms for most application types. They are very similar to the federal forms that have been in place for the NPDES program and have the same names.

- POTWs and Domestic Wastewater Treatment Works Forms
This form is used for publicly-owned or any other treatment works that treats domestic sewage and currently discharges, is permitted to discharge, or proposes to discharge treated wastewater to waters of the United States.
 - [AZPDES Application Form 2A](#)
 - [AZPDES Application Instructions Form 2A](#)

[Also see Section 9 Toxic Air Pollutants]

To determine if your existing POTW is regulated, please contact the ADEQ [Water Quality Permits Section](#) and/or the [Air Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Facilities That Treat Sewage Sludge (Biosolids)

Used for all POTW and other facilities that treat domestic wastewater and for facilities that do not treat domestic wastewater but treat or dispose of sewage sludge (biosolids).

Initial Application for AZPDES Permits for Industrial and Commercial Operations that will discharge.

Non-domestic Wastewater

Used for private and government owners of facilities that propose to discharge wastewater other than domestic wastewater (new sources and new dischargers) to waters of the United States. This includes discharges from water treatment plants, groundwater remediation efforts, mining and silvicultural operations.

Renewal Application for AZPDES Permits for Industrial and Commercial Operations that will discharge Non-domestic Wastewater

Used for private and government owners of facilities who currently discharge wastewater other than domestic wastewater to waters of the United States. This includes discharges from water treatment plants, groundwater remediation efforts, mining and silvicultural operations.

Concentrated Animal Feeding Operations (CAFO) & Aquatic Animal Production

Used for CAFO and aquatic animal production facilities that currently discharge, or propose to discharge wastewater to waters of the United States.

Facilities That Do Not Discharge Process Wastewater

This includes car washes, prisons, convenience stores, shopping centers, swimming pools, schools, parks, water treatment plant residues, discharges of remediated groundwater, etc.

Dischargers of Stormwater Associated with Industrial Activity

Used for facilities whose discharges are composed of stormwater and non-stormwater.

ADEQ PERMIT COMPLIANCE ASSISTANCE

ADEQ Water Permits Section issues *Aquifer Protection Permits (APP)*, *Reclaimed Water Permits* and *Arizona Pollutant Discharge Elimination System Permits (AZPDES)* including renewal of existing NPDES permits.

ADEQ staff will help you determine if your facility requires a permit or qualifies for an exemption. This section also authorizes discharges under general permits, registers drywells and certifies issuance of federal permits.

Permit Assistance:

1. All general and individual permits
2. Industrial Wastewater
3. Residential Wastewater (Septic Tanks)
4. Municipal/Domestic Wastewater including Pretreatment
5. Sewage Collection Systems
6. Mines
7. Subdivisions
8. Reclaimed Water Use
9. AZPDES and renewal of NPDES
10. Stormwater
11. Biosolids
12. Operation Certification

Please contact the ADEQ [Water Quality Permits Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

[Download AZPDES Publications, Forms and Guidance](#)



PRETREATMENT REQUIREMENTS

BACKGROUND

"[Pretreatment](#)" refers to measures industry takes to prevent toxic pollutants from sources other than domestic wastewater from entering the wastewater system. Pretreatment is the treatment of a waste before it is discharged into the sanitary sewer. A pretreatment program includes ordinances, education, permits, inspections, monitoring and enforcement.



Pretreatment requirements control pollutants which are incompatible or will interfere with the treatment process, or that will pass through the treatment plant and cause problems in the receiving stream or lake. In addition, pretreatment requirements will improve opportunities to recycle and reclaim domestic and industrial wastewaters and sludge.

Does the pretreatment requirement apply to my community?

This rule applies only to discharges to sanitary sewer collection systems that ultimately reach a publicly owned treatment works (POTW). If the community has non-domestic users (for example, food processing plants or metal finishers) discharging pollutants that could pass through your treatment plant untreated or interfere with operations, you may have to implement a pretreatment program to satisfy AZPDES requirements. [\[See the NPDES and AZPDES section for more information on this topic.\]](#)

Your current NPDES or AZPDES permit may contain requirements for you to regulate non-domestic discharges into your collection system. These pretreatment requirements are designed to ensure that you protect your treatment plant.

Actions your community should be taking if this rule applies to your community

You may be required to establish a pretreatment program. You will need to establish local ordinances and other procedures to carry out the pretreatment requirements as well as identify personnel responsible for ensuring the program is administered and enforced.

If your community wants to establish a local pretreatment program, even though it may **not** be required to do so through an AZPDES permit, contact ADEQ [Water Quality Permits Section](#) for assistance.

If you suspect a problem with the operation of your community wastewater system is caused by a non-domestic wastewater contributor, notify your treatment works operator, county sanitarian, ADEQ and the U.S. Environmental Protection Agency.

Actions your community should be taking:

If your wastewater treatment plant discharges to waters of the United States, the first step is to find out if you have or need an [APP](#) or [AZPDES](#) to discharge to waters of the United States (such as streams, lakes, wetlands, including dry stream beds, washes, etc.).

The permit will specify effluent (liquid that comes out of a treatment plant after completion of the treatment process), limitations and monitoring requirements.

Like other violations of Arizona's pollution control laws including APP and AZPDES, if your treatment works cannot meet the effluent limitations specified in the permit, you may be subject to an enforcement action. In addition, it may be necessary to upgrade the treatment facility, review operational improvements, and/or improve the sewer collection system to correct excess inflow/infiltration problems.

Please contact the ADEQ [Water Quality Permits Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

WASTEWATER SLUDGE/BIOSOLIDS USE AND DISPOSAL

BACKGROUND

[Wastewater sludge or biosolids](#) are by-products of the wastewater treatment process. Federal and state regulations ensure that sewage sludge is handled properly and is of sufficient quality either for use as a (1) soil conditioner or fertilizer, or (2) for disposal in a landfill, other surface disposal site or incinerator. For example, many small towns use biosolids as a fertilizer for parks, golf courses, etc. Monitoring, recordkeeping, and reporting are required under the biosolids regulations.



Does this rule apply to your community?

This rule applies if the wastewater treatment system includes any form of central wastewater treatment or mechanical plant, including a lagoon, which produces biosolids that are either periodically removed or remain on-site for more than two years.

Actions your community should be taking:

Be aware of restrictions covering proper use of the sewage biosolids if applied on land (both agricultural and non-agricultural); distribution for land application; and, disposal restrictions (landfills, incineration, and surface disposal). Contaminated biosolids or poor disposal practices can pose a threat to public health and the environment and are subject to enforcement action.

Please contact the ADEQ [Water Quality Permits Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

STORM WATER

BACKGROUND

[Stormwater](#) runoff flows over parking lots and other areas, collects in street gutters and storm drains, and can eventually flow to water bodies with little or no treatment. Dumping used motor oil, unused paint, pesticides and other household chemicals on the ground or in the street can severely impact nearby surface water.



AZPDES Stormwater Permits and Multi-Sector General Permits (MSGP) Requirements

Permits are required for certain small community owned facilities including landfills, airports, equipment maintenance facilities and wastewater treatment plants with design flows of one million gallons per day or more, and for any construction project which will disturb more than one acre of land.

Actions your community should be taking:

Find out if the landfill, airport, power plant, construction activity, wastewater or other facilities owned or operated by your community require a permit. ADEQ staff will be able to assist you in determining which facilities need permits and how to apply for them.

Develop an information and education program for community residents to increase awareness of the relationship between the stormwater and/or sewer system and local lakes, streams, rivers, estuaries, or other water bodies. You should also consider establishing local ordinances controlling the improper disposal or discharge of pollutants to the municipal stormwater drainage and/ or sewer system.

Educate citizens so they can play a role in improving the quality of the streams and lakes in your area.

MOST COMMON WASTEWATER VIOLATIONS



Failure to:

- Apply for a permit.
- Read and understand permit terms and conditions which result in violations.
- Obtain approval for wastewater collection extensions *prior* to construction and operation.
- Amend permits when the system is modified or expanded.
- Comply with contingency procedures following exceedance of permit limits.
- Require businesses to comply with pretreatment ordinances.
- Adhere to the permit compliance schedule for monitoring and reporting.
- Keep the system in proper operating condition according to an operation and maintenance manual.
- Notify ADEQ of facility changes, including ownership.

How can small communities assure compliance with monitoring and reporting requirements?

Complete and accurate monitoring results ***must*** be reported to ADEQ at a frequency specified in the permit.

- ADEQ provides [self-monitoring reporting forms \(SMRFs\)](#) that must be used for APP reporting.
- ADEQ provides [discharge monitoring report \(DMR\)](#) forms for each AZDPES permit.

Steps owners and operators can take to avoid common permit monitoring and reporting violations:

- Read and understand the permit monitoring and reporting requirements.
- Carefully review the permit monitoring tables, including the footnotes.
- Keep a detailed log book of inspection and monitoring activities.
- Plan ahead for sampling events to ensure:
 - 1) Analytical methods will meet permit requirements.
 - 2) Detection limits are below permit limits.
 - 3) Samples will be properly collected and preserved.
- Sample from collection points, as specified in the permit.
- Purge groundwater monitoring wells according to permit specifications.
- Track sludge (biosolids) volume, quality and disposal destinations, and submit annual report forms by February 19 of each year.
- Convert data to the proper units for comparison with permit limits.

For more information, contact the ADEQ [Water Quality Permits Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

WATER AND WETLANDS PROTECTION

BACKGROUND

The United States has lost over half of its original wetlands. These areas provide important habitats, flood and storm protection and water quality benefits. It is extremely important to protect, restore and maintain the chemical, physical and biological integrity of our waters and wetlands to ensure that we do not lose the benefits these resources provide. Congress has recognized this and has passed a number of laws to protect U.S. waters and wetlands. U.S. waters include lakes, streams, rivers, wetlands, and coastal waters. Wetlands include saturated or flooded areas where there is a prevalence of aquatic or hydrophytic plants (those that grow in, or are adapted to water, or that require a very wet environment). Many of these plants can be found in swamps, marshes, bogs, and other similar areas.

Because of the congressional mandate to protect waters and wetlands, many activities that affect these areas **could** require a regulatory review before the activity begins.

It is extremely important that local officials become familiar with these regulations because violation of these and related environmental protection laws can cause environmental damage and flooding of nearby areas and involve penalties, including fines, requirements to restore the area, and/or imprisonment for intentional violations.

Actions your community should be taking:

Many local governments may wish to assist their citizens, especially those seeking local construction permits or zoning approval, to determine whether in addition to local approval, state or federal authorization is also required.

Check before you act!



The agencies most frequently involved are:

- Arizona Department of Environmental Quality – Water Quality Division
- U.S. Department of Defense, Army Corps of Engineers
- U.S. Department of Interior, Fish and Wildlife Service
- U.S. Environmental Protection Agency

Contact each of these agencies before you start any activities that might affect the chemical, physical, or biological health of any U.S. waters or wetlands.

Please contact the ADEQ [Water Quality Permits Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Wastewater System Self-Assessment Questionnaire

1. Do you own or operate a wastewater treatment facility?
 Yes No Don't Know Not Applicable
2. Does your community have records of the last regulatory inspection conducted for your wastewater treatment facility?
 Yes No Don't Know Not Applicable
3. Is your community's wastewater treatment facility in compliance with environmental requirements?
 Yes No Don't Know Not Applicable
4. Has the wastewater system received any *Notices of Opportunity to Correct (NOC)*, *Notices of Violation (NOV)* or *Administrative Orders* in the past three years?
 Yes No Don't Know Not Applicable
5. Are plans in place to correct violations?
 Yes No Don't Know Not Applicable
6. Does the pretreatment rule requirement apply to your community?
 Yes No Don't Know Not Applicable
7. Do you have a pretreatment program in place to prevent disruption of the treatment process?
 Yes No Don't Know Not Applicable
8. Are there any commercial or industrial facilities that discharge into the wastewater collection system that have the potential to negatively affect the treatment processes of your plant?
 Yes No Don't Know Not Applicable
9. Do roof drains and/or storm drains connect to the sanitary sewer?
 Yes No Don't Know Not Applicable
10. Is inflow and infiltration a problem for your wastewater system?
 Yes No Don't Know Not Applicable
11. Are any homes or businesses served by onsite septic systems?
 Yes No Don't Know Not Applicable
12. Are there areas in your community with no wastewater treatment?
 Yes No Don't Know Not Applicable

13. Are there any indications that septic systems are failing either by surfacing of wastewater or pollution of groundwater?
 - Yes No Don't Know Not Applicable
14. Have public health officials identified areas in your community where septic systems are failing or with no wastewater treatment?
 - Yes No Don't Know Not Applicable
15. Are there conditions in your area that limit the applicability of conventional septic systems, such as high groundwater table, poor soil characteristics, or shallow bedrock?
 - Yes No Don't Know Not Applicable
16. Has your community considered some form of management or required maintenance for onsite septic systems?
 - Yes No Don't Know Not Applicable
17. Does your wastewater treatment discharge to navigable waters of the U.S.?
 - Yes No Don't Know Not Applicable
18. Do you own or operate a drinking water treatment facility that discharges water?
 - Yes No Don't Know Not Applicable
19. Does your drinking water treatment facility discharge to navigable waters of the U.S.?
 - Yes No Don't Know Not Applicable
20. Do you know how and when your community's treated wastewater is disposed?
 - Yes No Don't Know Not Applicable
21. Are there any natural resources that are potentially threatened by wastewater discharges such as groundwater aquifers, lakes, streams or washes?
 - Yes No Don't Know Not Applicable
22. Do you have an Aquifer Protection Permit (APP)?
 - Yes No Don't Know Not Applicable
23. Do you know the compliance status of your APP?
 - Yes No Don't Know Not Applicable
24. Do you have a *National or Arizona Pollutant Discharge Elimination System (NPDES or AZPDES)* Permit?
 - Yes No Don't Know Not Applicable
25. So you know the compliance status of your NPDES or AZPDES permit?
 - Yes No Don't Know Not Applicable

26. Does the wastewater biosolids rule apply to your community?
 Yes No Don't Know Not Applicable
27. Do you have difficulty disposing of sludge/biosolids from the treatment plant?
 Yes No Don't Know Not Applicable
28. Does the stormwater permit rule apply to your community facilities and activities?
 Yes No Don't Know Not Applicable
29. Do you have an inventory of the wastewater system assets and their location and condition?
 Yes No Don't Know Not Applicable
30. Have you conducted a materials survey to determine the size and types of pipe used in the collection system?
 Yes No Don't Know Not Applicable
31. Is the condition of the wastewater system regularly assessed to determine its operational capability?
 Yes No Don't Know Not Applicable
33. Do you have written policies and procedures that govern the operation and maintenance of the wastewater system?
 Yes No Don't Know Not Applicable
34. Do you have written policies and procedures that define roles and responsibilities for the operation and maintenance of the wastewater system?
 Yes No Don't Know Not Applicable
35. Do you have written policies and procedures that define the role of wastewater system personnel that includes a job description, benefits, and performance standards?
 Yes No Don't Know Not Applicable
36. Do you have written policies and procedures that document the regulatory requirements for the operation and maintenance of the wastewater system?
 Yes No Don't Know Not Applicable
37. Do you have written policies and procedures that document the regulatory requirements for wastewater permit monitoring and reporting?
 Yes No Don't Know Not Applicable
38. Can wastewater system personnel describe their day-to-day duties and responsibilities?
 Yes No Don't Know Not Applicable

39. Do you employ a licensed certified operator(s) of the proper grade and type required to operate the wastewater system?
- Yes No Don't Know Not Applicable
40. Do you have written policies in place to ensure that certified operators have adequate opportunities for training and maintaining license certification? (*License Certification Renewal Hours Training*)
- Yes No Don't Know Not Applicable
41. Are procedures in place to ensure wastewater managers and operators are aware of all compliance deadlines?
- Yes No Don't Know Not Applicable
42. Do you have regularly scheduled meetings to discuss wastewater system issues and needs?
- Yes No Don't Know Not Applicable
43. Does the wastewater system management and operator have a copy of the wastewater collection system and treatment facility drawings?
- Yes No Don't Know Not Applicable
44. Have you received complaints about the quality of service or about odor coming from your wastewater facility over the past three years?
- Yes No Don't Know Not Applicable
45. Do you have an Emergency Operations Plan (EOP) for the wastewater system?
- Yes No Don't Know Not Applicable
46. Do you have a written policy and procedure to ensure the security of your wastewater system?
- Yes No Don't Know Not Applicable
47. Have you evaluated the capacity of your wastewater system to accommodate future growth over the next 10 years?
- Yes No Don't Know Not Applicable
48. Do you have written plans in place to ensure the financial viability of your wastewater system over the next 10 years?
- Yes No Don't Know Not Applicable
49. Do you have written policies and procedures for establishing and reviewing wastewater rates?
- Yes No Don't Know Not Applicable
50. Are wastewater rates set at a level to ensure long-term viability of the system?
- Yes No Don't Know Not Applicable

51. Are revenues from user fees dedicated to the wastewater system as opposed to being used as general revenue for the community?
- Yes No Don't Know Not Applicable
52. Are you currently paying back a wastewater system improvement debt? (Loan)
- Yes No Don't Know Not Applicable
53. Do you have a written process for dealing with past due bills and delinquent wastewater accounts?
- Yes No Don't Know Not Applicable
54. Does the wastewater system have an annual budget?
- Yes No Don't Know Not Applicable
55. Are the governing board and wastewater personnel both involved in developing the annual budget?
- Yes No Don't Know Not Applicable
56. Does the annual budget include financial resources to cover routine maintenance and the cost of repairing and/or replacement of worn out equipment or unforeseen emergencies?
- Yes No Don't Know Not Applicable
57. Do you have a Capital Improvement Plan (CIP) for the wastewater system?
- Yes No Don't Know Not Applicable
58. Do you have a written annual financial report for the wastewater system?
- Yes No Don't Know Not Applicable
59. Does your community understand the regulatory requirements for water and wetlands protection?
- Yes No Don't Know Not Applicable

If you have any questions please contact ADEQ [Water Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SECTION 4

HAZARDOUS WASTE *and* MUNICIPAL SOLID WASTE



HAZARDOUS WASTE

BACKGROUND

Many waste materials can be dangerous to human health and the environment if they are not properly treated, stored, transported, disposed of or otherwise managed. “Hazardous” wastes, as defined by the [Resource Conservation and Recovery Act \(RCRA\)](#), can pose fire hazards; are highly reactive; corrosive or explosive; and/or can result in exposure to toxic chemicals resulting in sickness or injury.

In 1976, Congress enacted a law to make sure that hazardous waste is properly managed from the time it is created to the time it is disposed of or destroyed. This law is called the *Resource Conservation and Recovery Act (RCRA)*, and it establishes a set of rules for dealing with hazardous and non-hazardous wastes. These rules (called RCRA requirements) define which hazardous wastes are subject to regulation. RCRA also identifies responsibilities for anyone who generates, transports, stores, treats, disposes of, or otherwise manages them.



Hazardous wastes can be generated through many activities including those of governments, businesses, schools, hospitals, maintenance facilities and airports. People or operations that generate hazardous waste are called “*hazardous waste generators*.” Households also generate hazardous waste but at this time, waste generated by individual households is not subject to RCRA waste requirements.

Categories of Hazardous Waste Generators: [See Tables 1 and 2](#)

Large Quantity Generators (LQG): A Large Quantity Generator is a facility which generates more than 1,000 kilograms per month (2,200 pounds) of any hazardous waste or more than one kilogram (2.2 pounds) of any “acute” hazardous waste. Large Quantity Generators are subject to all RCRA requirements.

Small Quantity Generators (SQG): A Small Quantity Generator is a facility which generates more than 100 kilograms and less than or equal to 1000 kilograms a month of any hazardous waste. Small Quantity Generators that store hazardous waste on-site must also comply with some technical requirements, although they are not as stringent as those for LQG.

Conditionally Exempt Small Quantity Generator (CESQG): Facilities that generate no more than 100 kilograms a month of any hazardous waste are conditionally exempt from RCRA regulations. Conditionally Exempt Small Quantity Generators must still (1) identify the waste to determine if it is hazardous, (2) treat or dispose of the waste in either a municipal solid waste landfill, a recycling facility or permitted hazardous waste facility, and (3) not accumulate more than 1,000 kilograms of hazardous waste on-site at any given time.

Table 1. Hazardous Waste Accumulation Limits			
Facility Size	Kilograms (kg)	Pounds (lb)	Gallons (gal)
LGQ	More than 1,000	More than 2,200	More than 300
SGQ	More than 100 to Less than or equal to 1,000	More than 220 to Less than or equal to 2,200	More than 25 to Less than or equal to 300
CESQG	Less than or equal to 100	Less than or equal to 220	Less than or equal to 25

Table 2. Hazardous Waste Storage Limits				
Facility Size	Kilograms (kg)	Pounds (lb)	Gallons (gal)	Storage Time Limits
LQG	Any Quantity	Any Quantity	Any Quantity	Up to 90 days
SQG	Less than 6,000	13,200	1,800	Up to 180 days OR 270 days if waste is transported over 200 miles
CESQG	Less than 1,000	Less than 220	Less than 300	No Time Limit

Does this rule apply to your community?

YES

 No

 Don't Know

 Not Applicable



Hazardous waste regulations apply to **all** communities.

You need to know how to identify [hazardous waste](#) and how to treat or dispose of it. In addition, some types of hazardous waste may be generated by your community facility operations themselves.

Because hazardous waste includes things like solvents, corrosives and materials containing heavy metals (e.g. chromium, cadmium and lead), vehicle maintenance shops often generate hazardous waste that may be subject to RCRA requirements. Any discarded material must be evaluated to determine if it has been listed by EPA as hazardous waste and whether it can cause explosions, fires, corrosive destruction of materials, chemical reactions, and/or can result in exposure to toxic chemicals resulting in sickness or injury.

In addition to used materials which might be considered hazardous waste, you must also be careful with your management of products that you wish to discard. Leftover pesticides from grounds-keeping operations, old paint thinner, etc, must be fully evaluated before you determine what to do with it. EPA has identified several hundred chemical products which, if disposed of, would also be considered "listed hazardous waste."

Trash Collection and Landfills

Another area of possible concern for your community would be the operation of a trash collection system and/or a landfill. [Household hazardous wastes](#) are currently exempt from hazardous waste regulation but your landfill would be regulated under [RCRA Subtitle D](#) which describes EPA's "Municipal Solid Waste Landfill Criteria." This program is intended to ensure proper management of [municipal landfills](#). However, the addition of commercial hazardous

waste materials collected and/or co-disposed with the household materials might necessitate that the entire facility be treated as a hazardous waste facility.

For more information contact ADEQ [Hazardous Waste Inspections and Compliance Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Timetable

Different timetables and responsibilities apply to the various activities. As long as you comply with requirements and accumulation restrictions outlined in [Table 1 and 2](#), a storage permit is generally not required. If you accumulate waste for periods beyond those shown in Table 2, for LQG and SQG, you will have to secure a permit authorizing the treatment, storage or disposal of hazardous waste, which is a very expensive and lengthy process. Case by case extensions for accumulation times is available for Small Quantity Generators.

Obtain Required EPA Identification Number (RCRA)

If you determine that you are a LQG or SQG, you must obtain an [EPA Identification Number](#) from ADEQ.



Actions your community should be taking:

- Become familiar with the kinds of waste materials that are subject to hazardous waste regulations.
- Become familiar with industrial facilities in or near your community. Understand how they are managing their hazardous waste.
- Make sure you are handling hazardous materials properly and are meeting RCRA requirements.
- Identify ways to reduce or recycle discarded chemicals.
- Find non-toxic substitute products for hazardous waste chemicals.
- Buy the right amount of chemicals you need.
- Try to find someone to use the unwanted, unused chemicals rather than throwing them away.

For more information contact ADEQ [Hazardous Waste Inspections and Compliance Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

MUNICIPAL SOLID WASTE DISPOSAL

BACKGROUND

Many communities in America are faced with a garbage disposal problem. In 2000, Americans generated an estimated 220 million tons of municipal solid waste. At the same time, fewer landfills are operating, partly because few people want to live near a landfill.

To protect communities located near landfills and to make our waste disposal system work better, federal, state and local governments have adopted a new approach to waste management involving a mix of three management techniques:

1. Decreasing the amount of waste that must be disposed of.
2. Increasing incentives for recycling.
3. Improving the design and management of incinerators and landfills so they will have increased capacity and operate safely.

The challenge is to make landfills safe in order to protect our communities and our environment. The municipal solid waste disposal regulations greatly reduce the possibility that

landfills will become sources of pollution. These regulations describe measures that must be taken to guard against groundwater contamination and they describe the kinds of areas where landfills may not be built.

Does your community own or operate a municipal solid waste (i.e. household waste) or construction and demolition debris (C&D) landfill?

Yes No Don't Know Not Applicable

Does your community own or operate a solid waste transfer station?

Yes No Don't Know Not Applicable

Does your community own or operate a solid waste collection system?

Yes No Don't Know Not Applicable

If your community does ***not*** own or operate a landfill, transfer station or solid waste collection system (garbage and trash); skip to the [Self Assessment Questionnaire](#) at the end of this section.

If your community owns or operates a landfill, ADEQ regulations apply. ADEQ has an EPA-approved permitting program and is required by law to make sure landfill owners and operators meet federal and state requirements.



Small Landfill Exemptions

Owners and operators of new [Municipal Solid Waste Landfill Facility \(MSWLF\)](#) units, existing MSWLF units, and lateral expansion of existing units are generally exempt from certain landfill regulations if the following qualifications are met:

- The landfill receives less than 20 tons of waste per day (yearly average).
- The landfill shows no evidence of groundwater contamination.
- The landfill receives less than 25 inches of rainfall per year.
- There is no practicable waste management disposal alternative.

Extremely remote communities that have no ready access to other disposal sites for an extended period of time (three months of surface transportation interruptions) are likely eligible for an exemption.

For more information on [exemptions](#) contact ADEQ [Solid Waste Plan Review Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Who is covered?

[RCRA Subtitle D](#) regulations apply to [landfills](#) that accept household waste including garbage, trash and sanitary waste in septic tanks from “households, (single and multiple residences, hotels, motels, bunkhouses, ranger stations, campgrounds, picnic grounds and day-use recreation areas). Other requirements may apply to construction and demolition debris (C&D) landfills, surface impoundments, waste piles, land application units or units accepting only industrial nonhazardous waste.

What is the timetable?

Any municipal solid waste landfill unit that accepted waste after October 1993 must comply with the landfill regulations.

Landfill Regulations Effective October 1993:

- Location restrictions.
- Operating criteria.
- Design criteria (new and lateral expansion only).
- Closure and Post-Closure Care.

Landfill Regulations Effective October 1994 to October 1996:

- Groundwater monitoring and corrective action.

Actions your community should be taking:

If your community owns or operates a landfill or is considering developing a landfill, local officials are encouraged to contact ADEQ staff for assistance in understanding the compliance requirements. Local officials should be aware that citizens have the right to sue landfill owners and operators in court who do not comply with the federal and state regulations.

The following is a brief explanation of the regulations:

LOCATION STANDARDS:

Airport Safety

Because landfills attract birds that can interfere with aircraft operation, owners and operators of sites near airports must show that birds are not a danger to aircraft. This restriction applies to new, existing and laterally expanding landfills.



Floodplains

Landfills *cannot* be located in *areas that are prone to flooding* unless owners and operators can prove the landfill is designed to withstand flooding and prevent the waste from washing out. This restriction applies to new, existing and laterally expanding landfills.

Wetlands

Since wetlands are important ecological resources, new landfills and laterally expanding landfills *cannot* be built in wetlands unless the owner/operator can demonstrate that they meet certain requirements.

Fault Areas and Seismic Zones

In order to prevent damage to municipal solid waste landfills, new and laterally expanding landfills *cannot* be built in areas prone to earthquakes or other kinds of earth movement unless a demonstration can be made that the unit has been designed to withstand the effects of faults and seismic impact.

Unstable Areas

Landfills *cannot* be located in areas that are subject to mass movement including fissures, soilfluction, subsidence, landslides, mudslides or sinkholes, or near wetlands unless the owner/operator can demonstrate that they meet certain requirements.

OPERATION CRITERIA:



Keeping Out Hazardous Waste

[EPA](#) and [Arizona](#) have developed regulations specifically covering the disposal of hazardous wastes in special landfills. Owners and operators of municipal landfills must develop screening programs to keep these regulated hazardous wastes out of their landfills.

Cover Materials and Disease-Vector Control

In general, each day's waste must be covered with soil to prevent the spread of diseases by rats, flies, mosquitoes and other animals that are naturally attracted to landfills. In addition, adequate daily cover controls windblown litter.

Controlling Explosive Gases

[Methane gas](#), which occurs naturally in landfills, must be routinely monitored. If emission levels in the landfill are over a certain limit, the proper authorities must be notified and a plan must be developed and put in place to solve the problem.

Restricting Access

Owners and operators must restrict access to their landfills to prevent illegal dumping and other unauthorized intrusions.

Controlling Stormwater and Protecting Surface Water

To prevent pollutants from being swept into lakes, rivers or streams, landfills must be built with ditches and berms to keep stormwater from flooding their active areas and to collect and control stormwater runoff.

Restricting Liquids

Landfills cannot accept bulk or non-containerized liquid waste, such as waste from tank trucks and 55 gallon drums. This helps reduce both the amount of liquid leaching from the landfill and the concentrations of materials contained in the liquid.

Controlling Air Emissions

Landfills must be operated so they do not violate clean air laws and regulations. This includes no burning of wastes.

Personnel Training

Staff must be properly trained to ensure landfill operations are conducted correctly and according to the facility plan.



DESIGN CRITERIA:

Regulations require new and expanding landfills to be designed to protect groundwater by making sure that contaminant levels remain below maximum limits for [safe drinking water](#).

Groundwater Monitoring and Corrective Action

Landfills must install monitoring systems to detect groundwater contamination. Sampling and analysis must be conducted based on the permit schedule.

If groundwater becomes contaminated, *owners/operators* must clean it up to levels specified.

Closure and Post-Closure Care (30 Years)

When a landfill stops accepting waste, it must be closed in a way that will prevent problems later. A final cover must be designed to keep liquids away from the buried waste. After closure, the owner and operator must continue to maintain the final cover; continue groundwater monitoring to ensure that the landfill is not leaking; and perform other maintenance activities for 30 years.

Financial Assurance

To ensure that monies are available to correct possible environmental problems, landfill owners and operators are required to show that they have the financial means to cover expenses for site closure, post-closure maintenance, and cleanups. The regulations spell out ways to meet this requirement including, but not limited to, surety bonds, insurance and letters of credit.

Owners/operators of municipal solid waste landfills must obtain solid waste facility plan approval from ADEQ prior to construction and prior to implementing certain facility changes.

For more information contact ADEQ [Solid Waste Plan Review Unit](#) and [Solid Waste Inspections and Compliance Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

OTHER SOLID WASTE FACILITIES:



NON-MUNICIPAL SOLID WASTE LANDFILLS

Does your community have any other types of non-municipal solid waste landfills such as construction and demolition (C&D) landfills, private landfills or soil treatment facilities?

- Yes No Don't Know Not Applicable

Specific design and operational rules may apply to each of these types of land disposal facilities. These facilities are, at a minimum, subject to [Aquifer Protection Permits \(APP\)](#) regulations.

Construction & Debris (C&D) Landfills – A solid waste facility accepting only solid waste derived from constructing, repairing or remodeling of buildings or other structures and/or demolishing buildings or other structures.

Private Landfills – A solid waste facility that only accepts waste generated on-site.

Soil Treatment Facilities – A facility where soil contaminated with metals and other contaminants are treated to reduce or eliminate leachability and/or total concentrations of the contaminants so the treated soils are considered inert or unregulated and the soils are reused as road base and other beneficial purposes.

SOLID WASTE TRANSFER STATIONS



Does your community own or operate any solid waste transfer station?

- Yes No Don't Know Not Applicable

A transfer station is a site used for the handling or storing for 90 days or less of solid waste that was generated off-site for the primary purpose of transporting that solid waste.

Transfer stations that have a throughput of 180 cubic yards are subject to self-certification and must submit notice to ADEQ.

Transfer stations having a throughput of less than 180 cubic yards are subject to *best management practices* and must submit notice to ADEQ.

SOLID WASTE STORAGE FACILITIES

- A facility at which solid waste is stored for more than 90 days are solid waste storage facilities.
- Solid waste facilities at which any waste is stored for 90 days or less are transfer stations (see above).

- Solid waste storage facilities are subject to self-certification and must submit notice to ADEQ.



SPECIAL WASTE FACILITIES

Wastes from shredding motor vehicles and wastes containing *petroleum contaminated soils (PCS)* are defined as special waste. Special waste facilities are facilities where special waste is treated, recycled, sorted, stored or disposed.

- Special waste facilities must obtain Special Waste Identification Numbers and are subject to annual reporting requirements.

WASTE TIRE COLLECTION FACILITIES AND SITES

Waste tires are categorized by the number of tires stored on a site.

- A waste tire "facility" means a solid waste facility at which 5,000 or more waste tires are stored outdoors on any day. Waste tire facilities are subject to self-certification and must submit a notice to ADEQ.
- A waste tire "collection site" means a solid waste facility at which more than 500 tires are stored outdoors on any day. Waste tire collection sites are subject to best management practices and must submit a notice to ADEQ.

OTHER WASTE TIRE SITES

Waste tire sites that store more than 100 used tires outside must comply with [A.R.S. 44-1304.01. Storage, disposal, discard or abandonment of used motor vehicle tires; violation; classification; exception.](#)

COMPOSTING FACILITIES

Composting facilities must obtain file a notice with ADEQ and may be subject to plan approval. In addition, composting facilities may be subject to [Aquifer Protection Permit \(APP\)](#) requirements, if there is a potential for discharge of pollutants to the groundwater. Composting facilities must operate according to minimum operating standards.

BIOHAZARDOUS MEDICAL WASTE FACILITIES

Medical Waste means any solid waste that is generated in diagnosing, treating or immunizing a human being or animal or in any research relating to that diagnosis, treatment or immunization and includes discarded drugs.

[Biohazardous Medical Waste](#) means medical waste that is composed of one or more of the following:

1. Cultures and stocks.
2. Human blood and blood products.
3. Human pathologic waste.
4. Medical sharps.
5. Research animal waste.



Medical waste collection, transportation, treatment and disposal activities are regulated by ADEQ.

RECYCLING FACILITIES

A recycling facility is defined as a solid waste facility that is owned, operated or used for storing, treating or processing of recyclable solid waste and handles waste that has a potential for significant adverse effect on the environment.

Recycling facilities are subject to best management practices and must submit notice to ADEQ.

For more information contact ADEQ [Solid Waste Inspections and Compliance Unit](#) or [Solid Waste Plan Review Unit](#) for facilities requiring plan approval at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

BIOSOLID (SLUDGE) PROCESSING FACILITIES

"Biosolids" are defined as sewage sludge. Biosolids facilities are facilities that process biosolids (i.e., composting facilities, etc). [\[Also see Section 9 Toxic Air Pollutants\]](#)

Biosolid facilities must submit notice and obtain an [Aquifer Protection Permit \(APP\)](#) from ADEQ and must operate according to minimum standards. [\[See Permits: AZPDES: Other Programs Affecting AZPDES Sewage sludge\]](#) and [\[See Permits: Biosolids Sewage/Sludge\]](#)

For more information contact the ADEQ [Water Quality Permits Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

HAZARDOUS WASTE & MUNICIPAL SOLID WASTE

SELF-ASSESSMENT QUESTIONNAIRE

Hazardous Waste

1. Do you have an EPA (RCRA) ID Number?
 Yes No Don't Know Not Applicable

2. Do you have a written Hazardous Waste Management Plan?
 Yes No Don't Know Not Applicable

3. Do you know which of your government's departments generate, store and ship hazardous waste?
 Yes No Don't Know Not Applicable

4. Do you know how your government's departments dispose of hazardous waste?
 Yes No Don't Know Not Applicable

5. Do you have written policies and procedures that document the regulatory requirements for the Resource Conservation and Recovery Act (RCRA)?
 Yes No Don't Know Not Applicable

6. Do you have written policies and procedures that govern the handling, storage and disposal of hazardous waste?
 Yes No Don't Know Not Applicable

7. Do you have written policies and procedures that define roles of hazardous waste system personnel that include a job description, benefits and performance standards?
 Yes No Don't Know Not Applicable

8. Do you have written policies and procedures to ensure that hazardous waste personnel are properly trained?

Yes No Don't Know Not Applicable
9. Do you have written policies addressing the protection of health and prevention of injuries for hazardous waste personnel?

Yes No Don't Know Not Applicable
10. Does your community have any special hazardous waste problems (illegal dumping)?

Yes No Don't Know Not Applicable
11. Does your community have a program in place to address illegal dumping to determine if it is hazardous waste and to properly dispose of the hazardous waste?

Yes No Don't Know Not Applicable
12. Does your community sponsor special household hazardous waste collection events?

Yes No Don't Know Not Applicable
13. Do you have a program in place to encourage your community to reduce the amount of hazardous waste generated?

Yes No Don't Know Not Applicable
14. Have you measured the effectiveness of your current hazardous waste reduction program?

Yes No Don't Know Not Applicable
15. Does hazardous waste management staff have regular meetings open to the public?

Yes No Don't Know Not Applicable
16. Does your community have a program to involve citizens in helping to provide input on hazardous waste management policies?

Yes No Don't Know Not Applicable

Municipal Solid Waste

17. Do you own or operate a solid waste landfill?

Yes No Don't Know Not Applicable
18. Do you have any outstanding liabilities or responsibilities for the closure and maintenance of a former municipal solid waste landfill?

Yes No Don't Know Not Applicable
19. Do you have a written policy in place to deal with closure and maintenance of a former landfill?

Yes No Don't Know Not Applicable

20. Do you know where solid waste from your community is disposed?
 Yes No Don't Know Not Applicable
21. If your community owns or operates a solid waste landfill, do you know the compliance status?
 Yes No Don't Know Not Applicable
22. If your community owns or operates a landfill to dispose of your community's solid waste do you know the estimated remaining life-span of your landfill?
 Yes No Don't Know Not Applicable
23. If you *do not* own and operate a landfill to dispose of your community's solid waste, do you know the estimated remaining life-span of the landfill currently in use?
 Yes No Don't Know Not Applicable
24. Do you own or operate a construction and demolition debris (C&D) landfill?
 Yes No Don't Know Not Applicable
25. If your community owns or operates a C&D landfill, do you know the compliance status?
 Yes No Don't Know Not Applicable
26. Do you own or operate a solid waste collection system (garbage or trash collection)?
 Yes No Don't Know Not Applicable
27. Is solid waste hauled directly to a landfill in collection vehicles?
 Yes No Don't Know Not Applicable
28. Do you own or operate a solid waste transfer station?
 Yes No Don't Know Not Applicable
29. Is solid waste hauled to a solid waste transfer station in collection vehicles?
 Yes No Don't Know Not Applicable
30. If solid waste is hauled to a transfer station, is that transfer station in compliance with ADEQ notification requirements?
 Yes No Don't Know Not Applicable
31. Are illegal dumping and littering a major issue in your community?
 Yes No Don't Know Not Applicable
32. Do you have a program in place to address illegal dumping and littering?
 Yes No Don't Know Not Applicable

33. Do you have written policies and procedures that document the regulatory requirements for solid waste?
- Yes No Don't Know Not Applicable
34. Do you have a written Solid Waste Management Plan?
- Yes No Don't Know Not Applicable
35. Has your community conducted a cost comparison evaluating the use of transfer stations versus direct hauling to a municipal solid waste landfill?
- Yes No Don't Know Not Applicable
36. Have you ever conducted a waste stream analysis characterization?
- Yes No Don't Know Not Applicable
37. Does solid waste management staff have regular meetings open to the public?
- Yes No Don't Know Not Applicable
38. Does your community have a program to involve citizens in helping to provide input on solid waste management policy?
- Yes No Don't Know Not Applicable
39. Do you have written policies and procedures that govern the handling, storage and disposal of solid wastes?
- Yes No Don't Know Not Applicable
40. Do you have written policies and procedures that define roles of solid waste system personnel that include a job description, benefits and performance standards?
- Yes No Don't Know Not Applicable
41. Do you have written policies and procedures to ensure that solid waste personnel have opportunities for training?
- Yes No Don't Know Not Applicable
42. Do you have written policies addressing the protection of health and prevention of injuries for solid waste personnel?
- Yes No Don't Know Not Applicable
43. Does your community have a recycling program?
- Yes No Don't Know Not Applicable
44. Do you have a program in place to encourage your community to reduce the amount of solid waste it generates?
- Yes No Don't Know Not Applicable

45. Have you measured the effectiveness of your current solid waste reduction program?
 Yes No Don't Know Not Applicable
46. Do you know what your community's goal is for the percentage of municipal solid waste to be recycled?
 Yes No Don't Know Not Applicable
47. Do you know what percentage of your community's solid waste is recycled?
 Yes No Don't Know Not Applicable
48. Are there any commercial, industrial, or institutional groups that generate a large amount of recyclable or reusable materials such as corrugated cardboard or shipping pallets that are currently not being recycled or reused?
 Yes No Don't Know Not Applicable
49. Are these groups or materials targeted as part of a recycling program?
 Yes No Don't Know Not Applicable
50. Are yard trimmings and tree limbs banned from your landfill?
 Yes No Don't Know Not Applicable
51. Do you have a program in place to compost yard wastes and chip woody materials or other wastes?
 Yes No Don't Know Not Applicable
52. If you have a program to compost yard wastes, chip woody materials or other waste, have you complied with ADEQ notification requirements?
 Yes No Don't Know Not Applicable
53. Do you have any special solid waste problems such as illegal dumping of construction and debris (C&D) waste?
 Yes No Don't Know Not Applicable
54. Do you have special events that generate large amounts of solid waste in a short period of time such as fairs, outdoor concerts or sporting events?
 Yes No Don't Know Not Applicable
55. Do you have plans in place to recycle solid waste from special events?
 Yes No Don't Know Not Applicable
56. Does your municipal solid waste program have an annual budget?
 Yes No Don't Know Not Applicable
57. Do you have an inventory of the municipal solid waste system assets and know its location?
 Yes No Don't Know Not Applicable

58. Is your solid waste system equipment regularly assessed to determine its condition such as collection vehicles (garbage or trash collection trucks)?
- Yes No Don't Know Not Applicable
59. Do you have an equipment replacement plan?
- Yes No Don't Know Not Applicable
60. Are the governing board and solid waste personnel both involved in developing the annual budget?
- Yes No Don't Know Not Applicable
61. Does your annual budget include financial resources to cover routine maintenance and the cost of repairing and/or replacing worn out equipment or unforeseen emergencies?
- Yes No Don't Know Not Applicable
62. Do you have a Capital Improvement Plan for the solid waste system?
- Yes No Don't Know Not Applicable
63. Do you have a written annual financial report for the solid waste system?
- Yes No Don't Know Not Applicable
64. Do you know how solid waste disposal fees are set and what they are?
- Yes No Don't Know Not Applicable
65. Are user fees set at a level to ensure long-term viability of the system?
- Yes No Don't Know Not Applicable
66. Are revenues from user fees dedicated to the solid waste system as opposed to being used in the general revenue for the community?
- Yes No Don't Know Not Applicable
67. Have you considered a variable rate disposal fee (*pay as you throw*) in which individuals pay a higher fee to dispose of higher volumes or weights of solid waste?
- Yes No Don't Know Not Applicable
68. Have you evaluated your collection strategy: point of collection, frequency of collection container requirements and crew size?
- Yes No Don't Know Not Applicable
69. Do you have a written process for dealing with past-due bills and delinquent accounts?
- Yes No Don't Know Not Applicable

For more information on [Hazardous Waste](#) or [Municipal Solid Waste](#) contact ADEQ at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SECTION 5

CONTINGENCY PLANS (RCRA)

BACKGROUND



Whenever a facility manages a waste, there is a danger that the waste could spill, catch fire, or cause another type of emergency. This is particularly true when the waste is hazardous. For this reason, the [Resource Conservation and Recovery Act \(RCRA\)](#) requires facilities managing a hazardous waste ([See Section 4](#)) to develop a *Contingency Plan* to assist facility employees in responding to an emergency.

RCRA Contingency Plans serve to "minimize hazards to human health and the environment in the event of fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste to air, soil, or surface water" by ensuring that each regulated facility has developed a concrete plan for dealing with those types of emergencies.

Does the RCRA rule apply to your community?

- Yes
 No
 Don't Know
 Not Applicable

Does your community handle hazardous waste?

- Yes
 No
 Don't Know
 Not Applicable

If your community does **not** handle hazardous waste in any amount, skip to [Section 6](#).

Full *RCRA Contingency Plans* must be prepared and implemented by all [Large Quantity Generators \(LQG\)](#) facilities generating more than 1,000 kilograms of hazardous waste per month, which accumulate hazardous waste on-site for 90 days or less and all owners and operators of [hazardous waste treatment, storage, and disposal \(TSD\)](#) facilities.



[Small Quantity Generators \(SQG\)](#) facilities generating more than 100 kilograms but less than 1000 kilograms of hazardous waste per month, are **not** required to develop formal, written *Contingency Plans*. However, these facilities must nevertheless comply with a reduced set of requirements pertaining to contingency and emergency procedures and have this information available for on-site inspections.

Except for certain instances and as long as other requirements are met, [Conditionally Exempt Small Quantity Generators \(CESQG\)](#) are not subject to regulations under RCRA and, therefore, are **not** required to comply with the Contingency Plan requirements.

[See Section 4 Hazardous Waste Tables 1 and 2 for details on LQG, SQG & CESQG.](#)

Actions your community should be taking:

Large Quantity Generator/TSD Requirements

If your community owns or operates a Treatment, Storage, Disposal (TSD) or recycling facility (TSDR), you are responsible for complying with the full RCRA Contingency Plan requirements. Your Contingency Plan must include, at the minimum, the following elements:

- A list of the facility's emergency coordinators.
- A list of the facility's emergency equipment.
- An evacuation plan adequate to ensure the safety of all facility personnel.
- A description of the planned response to emergencies at the facility.
- Details of any arrangements that have been made with local and state agencies to provide emergency response support, where needed.

At least one copy of the Contingency Plan **must** be retained on-site at the facility, one copy must be sent to ADEQ, and one copy must be sent to your Local Emergency Response Commission, including fire and police departments, hospitals, and state and local emergency response teams.

Small Quantity Generator Requirements

If your local government is a Small Quantity Generator (SQG) you must ensure that:



- All employees who handle waste are thoroughly familiar with proper waste handling and emergency procedures.
- A list of emergency information is posted by the facility phone.
- One designated individual is available at all times to respond to an emergency at the facility.
- The emergency coordinator responds appropriately to any emergencies that arise.

Small quantity generators need **not** prepare and submit a written Contingency Plan, but they must have a comparable plan available for on-site inspection.

For more information, contact the ADEQ [Hazardous Waste Inspections and Compliance Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SELF-ASSESSMENT QUESTIONNAIRE

- Does your community meet the definition of a LQG?
 - Yes No Don't Know Not Applicable
- If your community is a LQG, does your community have a written, complete Contingency Plan that meets RCRA regulatory requirements?
 - Yes No Don't Know Not Applicable
- Does your community meet the definition of a SQG?
 - Yes No Don't Know Not Applicable
- If your community is a SQG, is your community in compliance with the RCRA regulatory requirements for SQG?
 - Yes No Don't Know Not Applicable

SECTION 6



EMERGENCY PLANNING

BACKGROUND

These regulations have two purposes: to encourage and support emergency planning for responding to chemical accidents, and to provide local governments and the public with timely and comprehensive information about possible chemical hazards in their communities.

The law, called "SARA Title III" or the [Emergency Planning and Community Right-to-Know Act \(EPCRA\)](#), requires governors to establish state [Emergency Response Commissions \(SERCs\)](#). Each SERC shall divide its state into local emergency planning districts and appoint a [Local Emergency Planning Committee \(LEPC\)](#) for each district. In Arizona, each county serves as an LEPC.

Do EPCRA regulations apply to your community?

- YES No Don't Know Not Applicable



The ***Emergency Planning and Community Right-to-Know Act, (EPCRA)*** applies to all communities. Hazardous substances are not only found at large chemical plants, they are also routinely used in many manufacturing, transportation, small business and public works operations. These chemicals are not necessarily hazardous in normal practice, but are of concern if stored or used improperly, or during an emergency situation such as a fire.

Examples of facilities subject to EPCRA include:

- Chemical product producers and distributors.
- Electronic equipment manufacturing.
- Mining.
- Truck and fleet fueling stations.
- Your local government, if it stores hazardous chemicals for water treatment or other purposes.

Does the [Annual Tier II Chemical Inventory reporting](#) requirement apply to your community?

- Yes No Don't Know Not Applicable

Reporting Requirements to Arizona State Emergency Response Commission (AZSERC)

For purposes of assisting the Local Emergency Planning Committee (LEPC) to prepare an emergency response plan, each facility in your community, where certain EPA listed chemicals are present above threshold quantities, ***must report*** to the [Arizona State Emergency Response Commission \(AZSERC\)](#), the [Local Emergency Planning Committee \(LEPC\)](#), and the [local fire department](#). Facilities ***must submit*** an [Annual Tier II Chemical Inventory](#) form with the amount and location where each of these chemicals are stored or handled at the facility.



In most cases this can be done on-line with the [AZSERC](#) or call (602) 231-6346. This chemical inventory information can be provided to your community by contacting [AZSERC](#).

Because the fire department, which is represented on the *LEPC* and receives chemical inventory information, is often the first to respond to a chemical emergency, it must be involved in every aspect of *emergency planning and community-right-to-know*. Having access to this information will help a fire department know which chemicals to expect at a chemical emergency scene, as well as chemical quantities and locations.

Reporting Requirements for Chemical Accidents

If a chemical accident occurs at a facility that produces, uses, or stores any of the EPA listed chemicals, and emergency assistance is needed, call your local fire department or 911. The facility *must immediately notify* the [Arizona Department of Environmental Quality \(ADEQ\)](#), the [National Response Center](#), and the [Local Emergency Planning Committee](#). Follow-up written reports are also required.



Reporting Requirements for Routine Releases

The *EPCRA* law also requires certain large facilities to report the quantity of regulated chemicals released to air, water bodies, landfills and other sites where these chemicals are treated, recycled or disposed. This includes chemicals released in normal processing and accidental spills. The U.S. EPA makes this **Toxic Release Inventory** data available to the public on its national [TRI](#) website.



The law provides stiff penalties for facilities that do not comply, and it allows citizens to file lawsuits to force them to obey the law.

Actions your community should be taking:

As a local official, you should find out who is on your [LEPC](#). The *LEPC* representative for each county is listed at the [AZSERC](#) website. The members consist of representatives of all of the following groups: elected state and local officials, law enforcement, civil defense, firefighting, first aid, health, media, community groups, and industry. Because the *LEPC* represents the community, its members should be familiar with the factors that affect public safety, the environment, and the economy of its districts. Make sure your community's needs are represented by participating fully in your local Committee.

Using the information received to analyze the hazards, your *LEPC* has developed an emergency response plan that lays out potential local hazards, response capabilities and procedures to follow in an emergency. The Local Emergency Planning Committee must conduct at least a bi-annual exercise of the plan.

It is important that you become familiar with the ***Emergency Planning and Community Right-to-Know Act, (EPCRA)*** so you will know how you can better assess and manage the risks present in your community. The more each of us learns about, understands, and participates in managing chemical hazards, the safer our communities will be for everyone.

Are facility emergency plans, chemical inventories, and release reports available for your community to review and included in your emergency planning and training exercises and actual emergency response?

- Yes No Don't Know Not Applicable

REIMBURSEMENT TO LOCAL GOVERNMENTS

BACKGROUND

On October 17, 1986, the President signed into law the [Superfund Amendments and Reauthorization Act of 1986 \(SARA\)](#). Section 123 of the law authorizes the U.S. Environmental Protection Agency (EPA) to reimburse local governments for up to \$25,000 for their expenses in carrying out temporary emergency measures in response to hazardous substance releases. The final regulation for reimbursing local governments became effective on October 14, 1992.

The intent of the reimbursement program is to alleviate extraordinary financial burdens on local governments resulting from the temporary emergency measures they have taken in responding to hazardous substance releases. Such measures may include activities like erecting security fencing to limit access, costs of responding to fires and explosions not otherwise provided for in the applicant's operating budget, and other actions that require immediate response at the local level. EPA will distribute the reimbursement money to those who demonstrate the greatest financial burden.

Arizona Reimbursement Programs

In Arizona, two additional and similar reimbursement programs are available for local governments that respond to chemical emergency incidents. These programs are operated by the *Arizona State Emergency Response Commission (AZSERC)* and the *Arizona Department of Environmental Quality (ADEQ)*. These state programs should be contacted first before submitting an application to EPA.

Does this program apply to your community?

YES No Don't Know Not Applicable

Any general purpose unit of local government that has expenses resulting from performing emergency cleanup and disposal measures in response to releases of hazardous substances or pollutants or contaminants may apply for reimbursement. Reimbursement is available only to local governments (e.g., a county, parish, city, municipality, township, or federally recognized Indian tribe). States are not eligible for reimbursement for temporary emergency measures, and no state may request reimbursement on its own behalf or on the behalf of political subdivisions within the state. There are other chemical emergency funding and reimbursement mechanisms available for states and state agencies.

For Federal Reimbursement Only

One request for reimbursement will be accepted for each hazardous substance release or threat requiring immediate response at the local level. When more than one local agency has participated in such a response, those agencies must determine which single agency or jurisdiction will submit the request on behalf of them all. Since funds for this program are limited, EPA may not be able to reimburse local governments for all responses that may qualify.

Federal and State Reimbursement Timetable

Reimbursement requests must be received by EPA or the state within one year of the date of completion of the response for which reimbursement is being requested. If, however, a cost recovery action is pending, EPA may waive this deadline. Applications should be submitted as soon as possible after completion of the response, since response information and reconstruction of records becomes more difficult as time progresses.

What Costs Are Reimbursable?

All costs for which a local government is seeking reimbursement must be consistent with the [Comprehensive Environmental Response Compensation and Liability Act \(CERCLA\)](#), the [National Oil and Hazardous Substances Pollution Contingency Plan](#), and federal cost principles outlined by the Office of Management and Budget. In general reimbursement can include the costs of such items as disposable materials and supplies used during a specific response, rental or leasing of equipment used for a specific response, special technical services and laboratory costs, and, services and supplies purchased for a specific evacuation. Reimbursement, however, must not take the place of the money the local government would normally provide for emergency response. All reimbursement applications must be accompanied by cost documentation such as invoices, sales receipts or leasing agreements. This documentation, supporting attempts to recover cost, is essential. No reimbursements will be made unless the request includes evidence of efforts to recover costs from parties responsible for the release, if these parties have been identified and are financially capable.

How will Reimbursement Requests Be Evaluated?

After receiving completed applications from local governments, EPA or the state will screen each application for compliance with basic reimbursement criteria and filing procedures. Requests for reimbursement must demonstrate that responses comply with federal law, the *National Oil and Hazardous Substances Pollution Contingency Plan* and, where applicable, the local comprehensive emergency response plan completed under the *Emergency Planning and Community Right-to-Know Act of 1986*.

Each application will be evaluated on its own merit and in comparison to the financial burden demonstrated by other requests. EPA will ensure that costs for which reimbursement is being sought are allowable and do not supplant local funds normally provided for emergency response. Further guidance on evaluation of reimbursement questions can be found in section 310.60 of the final regulation in the *Code of Federal Regulations* (Title 40 Code of Federal Regulations Part 310.60).

How Much Can Be Reimbursed?

Reimbursement is limited by law to \$25,000 per single response for reimbursements from EPA. State reimbursement funds do not have set limits.

Actions your community should be taking:

If you think that you qualify for a reimbursement, you can get an application package by contacting the RCRA Superfund Hotline at EPA Headquarters. The toll-free telephone number for the [Superfund & EPCRA Call Center](#): **1-800-424-9346**. The application package contains detailed, line-by-line instructions for completing the application.

Requests for Reimbursement from the State Contact:

- 1) [Arizona State Emergency Response Commission \(AZSERC\)](#) at **602-231-6346**, or
- 2) [Arizona Department of Environmental Quality Emergency Response Unit](#) at **(602) 771-2300** or toll free at **(800) 234-5677**, **press 0 to speak to the receptionist who will direct your call.**

EPA Reimbursement Forms are available at:

[U.S. EPA Local Government Reimbursement Program](#)

SECTION 7

COMPREHENSIVE ENVIRONMENTAL RESPONSE

BACKGROUND

The [Comprehensive Environmental Response Compensation and Liability Act \(CERCLA\)](#) was enacted in 1980 in response to public outcry over the problems at hazardous waste dumps such as Love Canal. With the passage of *CERCLA*, Congress provided EPA with a vehicle for responding to releases and threatened releases of hazardous substances from waste disposal sites. A taxpayer-supported fund was created from which EPA could finance such cleanups where no responsible party is available or solvent -- hence *CERCLA*'s common nickname "Superfund".

In 1986, *CERCLA* was amended by the [Superfund Amendments and Reauthorization Act \(SARA\)](#). *SARA* added many provisions which clarified *CERCLA*, increased the size of the Superfund, and created new reporting schemes. These new reporting requirements are found in *SARA Title III*, and have taken on independent significance as the *Emergency Planning and Community Right-To-Know Act (EPCRA)*. [\[See Section 6 EPCRA\]](#)

Arizona Water Quality Assurance Revolving Fund (WQARF)

The State of Arizona has adopted a similar program administered by ADEQ. This program is called the [Water Quality Assurance Revolving Fund \(WQARF\)](#).



For more information on *CERCLA* and *WQARF*, contact [ADEQ Remedial Projects Unit at \(602\) 771-2300](#) or toll free at [\(800\) 234-5677](#), press 0 to speak to the receptionist who will direct your call.

Does the CERCLA and WQARF laws apply to your community?

- Yes
 No
 Don't Know
 Not Applicable

This law applies if your local government owns or operates any facility using hazardous substances or ever owned or operated such a facility in the past. It also applies if you purchase a property that has releases of hazardous substances from past owners or operations. Local governments can be held responsible for hazardous substances spilled on local government property.

Actions your community should be taking:

Cleanup Provisions

If your local government ever owned or operated a facility that released any type of hazardous substance, you may be subject to the cleanup provisions of *CERCLA* and *WQARF*. *CERCLA* and *WQARF* respond to hazardous waste sites that are already in existence and currently pose severe threats to human health and the environment. Many of those sites were created long before modern-day environmental laws were enacted. *CERCLA* and *WQARF* establish a scheme for cleanup of such sites and provides a mechanism for the government to recover cleanup costs from responsible parties, so as not to deplete the State or federal "Superfund".



The statutes impose strict, joint, and several liability on all parties potentially responsible for creation of the site. That means that even if you alone did not create the hazardous waste site, you may nevertheless be held responsible for the entire cost of cleanup. There are differences between how the State and Federal laws designate liability. Both offer some degree of protection for innocent landowners, but each law has its own definitions and criteria.

Hazardous waste sites may develop from a wide variety of activities, including the operation of municipal landfills or other government activities. If your community once owned or operated a hazardous waste site that now poses a threat to human health and the environment, your community may be liable for the entire cost of cleanup. A significant exception to this liability is if your community did not voluntarily own or operate the site, but rather acquired the property involuntarily, through foreclosure or some other exercise of sovereign power.

Reporting Requirements

Local governments are required to immediately report to the **National Response Center (NRC) and ADEQ**, any hazardous substance spills over reportable quantities which their departments or operations make. In addition to cleanup provisions, *CERCLA* and *WQARF* include mandatory release reporting requirements that apply to all facilities managing hazardous substances.

These requirements provide that any person in charge of a facility must notify *NRC* and *ADEQ* whenever there is a release of any hazardous substance equal to or above the reportable quantity for that substance. EPA and *ADEQ* have established threshold limits for a number of hazardous substances; these threshold limits are called "reportable quantities". If, within a 24-hour period, a facility releases an amount of a regulated hazardous substance in excess of the reportable quantity for that substance, the person in charge of the facility must report that release to the *NRC* and *ADEQ*, unless the release was a federally or State permitted discharge.

If your community currently owns or operates a facility that generates a hazardous waste, a vehicle maintenance shop for example, you will have to be aware of the *CERCLA* and *WQARF* reporting requirements and report any spills or releases above the threshold reportable quantities.

You must take all necessary steps to comply with the *CERCLA* and *WQARF* reporting requirements that apply to the wastes your local government manages. You must be sure to determine which wastes are regulated under the *CERCLA* and *WQARF* reporting requirements, what the threshold quantities for those substances are, and the steps to be taken in case of a spill or other emergency.

Reporting Hazardous Substance Spills and Reportable Quantities

- [National Response Center \(NRC\)](#) at 800-424-8802, **and**
- [ADEQ Emergency Response Unit](#) at 771-2330 or Toll Free at 800-234-5677, extension 771-2330 for more information, **and**
- [Local Emergency Planning Committee \(LPEC\)](#). Reporting contacts for your community are available from the Arizona State Emergency Response Commission (AZSERC) or by calling (602) 231-6346.





SECTION 8

UNDERGROUND and ABOVEGROUND STORAGE TANKS

UNDERGROUND STORAGE TANKS (UST) TECHNICAL REQUIREMENTS

BACKGROUND

EPA has written regulations for many of the nation's underground storage tank systems. This section briefly describes the new technical requirements for these systems, which include tanks and piping. The regulations contain detailed performance standards and operating requirements. The use of different methods and technologies is often conditional (e.g. based on specific tank conditions). Properly managed underground storage tank systems (UST) will not threaten our health or our environment. In small communities such tanks may be in service stations, agricultural supply stores, public works yards, etc.

[ADEQ Tank Programs](#)

Several million underground storage tank systems in the United States contain petroleum or hazardous substances. Tens of thousands of these UST, including their piping, are currently leaking. Many more are expected to leak in the future. Leaking UST can cause fires or explosions that threaten human safety and they can contaminate nearby groundwater. Because many of us depend on groundwater for the water we drink, federal legislation seeks to safeguard our nation's groundwater resources. Owners and operators of UST must also meet financial responsibility requirements.

Does this rule apply to your community?

This rule applies if your community has one or more storage tanks that have at least 10 percent of their volume underground, (including underground piping connected to the tank) and that store either petroleum or certain hazardous substances. Generally, many of the requirements for petroleum and hazardous substance UST are very similar. The additional requirements for tanks storing hazardous substances are discussed in the section, "For Hazardous Substance USTs Only."

Some kinds of tanks are not covered by these regulations include:

- Farm and residential tanks holding 1,100 gallons or less of motor fuel used for noncommercial purposes.
- Tanks storing heating oil used on the premises where it is stored.
- Tanks on or above the floor of underground areas, such as basements or tunnels.
- Septic tanks and systems for collecting storm water and wastewater.
- Flow-through process tanks.
- Tanks holding 110 gallons or less.
- Emergency spill and overfill tanks.



Other storage areas, such as Surface Impoundments and Pits are also excluded. Some tanks, such as field-constructed tanks, have been deferred from most of the regulations.

1. Does your community own or operate Underground Storage Tanks (UST)?

- Yes
 No
 Don't Know
 Not Applicable

2. Does the UST rule apply to your community?
 - Yes No Don't Know Not Applicable
3. Do you store hazardous substances in UST?
 - Yes No Don't Know Not Applicable
4. Do you store hazardous substances in Aboveground Storage Tanks (AST)?
 - Yes No Don't Know Not Applicable
5. Do the UST Financial Responsibility Requirements apply to your community?
 - Yes No Don't Know Not Applicable

If **any** of the UST or AST questions apply to your community or you do not know, review this section. If **none** of the UST or AST questions apply to your community, skip to [Section 9](#).

Actions your community should be taking:

For new tanks that store either petroleum or hazardous substances (those for which installation began after December 22, 1988):

- You must certify that the tank and piping are installed properly according to industry codes.
- You must equip the tank and piping with devices that prevent spills and overfills. Also, you must follow correct tank filling practices.
- You must protect the tank and piping from corrosion.
- You must employ a method of leak detection for both the tank and piping.

For existing tanks (those for which installation began on or before December 22, 1988) that store either petroleum or hazardous substances, you were required to upgrade your tanks to meet the new tank standards by December 22, 1998. You must meet requirements for leak detection, corrosion protection and spill/overfill prevention. The Leak Detection schedule, included in this guidance makes sure that the older tanks, which are more likely to leak, have leak detection first.

Tank Leak Detection Testing Alternatives

You must check your tanks at least once a month to determine if they are leaking. You must use one (or a combination) of the following monthly monitoring methods described below:

- Automatic tank gauging.
- Manual tank gauging.
- Inventory control with tank tightness testing.
- Monitoring for vapors in the soil.
- Interstitial (between the walls) monitoring.
- Monitoring for liquids on the ground water.
- Other approved methods.

There are some exceptions to the monthly monitoring requirement described below:

Tanks up to 1000 gallons

You may use manual gauging as the sole method of leak detection. This method involves keeping the tank undisturbed for at least 36 hours, during which time you measure the tank's contents each week, twice at the beginning and twice at the end of the test period in the manner required by the regulations.

Tanks between 1001 and 2000 gallons

You may use the manual gauging method (which involves weekly testing), but only in combination with tank tightness testing at least every five years or annually, depending upon whether the tank has been upgraded or meets new tank standards. This combined method can only be used during the first ten years following tank installation or upgrade, or until December 22, 1998, whichever is later (for upgraded/new tanks).

Tanks that meet new tank performance standards or that have been upgraded

You can combine monthly inventory control with tank tightness testing every 5 years. This choice however, can only be used for 10 years after adding corrosion protection or internally lining the tank (or until December 1998, whichever is later). After this time, you must use one of the monthly monitoring methods listed above.

You have a leak detection advantage if your UST has been "upgraded" with corrosion protection and devices to prevent spills and overfills. For 10 years after "upgrading" you can use a leak detection method that will be less costly and easier to apply than most other leak detection methods.

Piping Leak Detection Alternatives

You have two basic choices for leak detection for piping depending upon the type of piping you use.

Pressurized Piping

By December 1990, existing pressurized piping must have met the leak detection requirements for new pressurized piping. The piping must have devices to automatically shut off or restrict flow, or have an alarm that indicates a leak. You must either conduct an annual tightness test of the piping or use one of the following appropriate monthly methods noted above for tanks: vapor monitoring, groundwater monitoring, interstitial (between the walls) monitoring, or other approved monthly methods.

Suction piping

Existing suction piping must meet the following requirements for new suction piping at the same time the tank meets the above leak detection schedule. The most commonly used suction piping requires either monthly monitoring (using one of the four monthly methods noted above for use on pressurized piping) or tightness testing of the piping every three years. Another kind of suction piping is safer and does not require leak detection. This safer method has two main characteristics. If your piping meets the following characteristics and it can be readily determined that it does so, leak detection may not be required:

- Below-grade piping is sloped so that the piping's contents will drain back into the storage tank if the suction is released.
- Only one check valve is included in each suction line and is located directly below the suction pump.

Leaks and spills from hazardous substance and petroleum USTs

Your response to confirmed leaks and spills (including over-fills) comes in two stages: short-term and long-term.

Note: Owners/operators must confirm all suspected releases.



Short-Term Actions

Take immediate action to stop and contain the leak or spill.

Notify ADEQ within 24 hours that there is a leak or spill. However, petroleum spills and overfills of less than 25 gallons that can be cleaned up within 24 hours or other period designated by the implementing agency, do not have to be reported if you immediately contain

and clean up these releases. In some circumstances you must begin corrective action.

Make sure the leak or spill poses no immediate hazard to human health and safety by identifying and mitigating explosions, vapors, and fire hazards. Your fire department should be able to help or advise you with this task. You must also make sure you handle contaminated soil properly so that it poses no hazard (for example, from vapors or direct contact).

Find out how far the tank contents have moved and prevent further migration of the leaked petroleum (such as product floating on the water table).

Report your progress and any information you have collected to ADEQ no later than 20 days, or within another reasonable time period determined by ADEQ, after you have confirmed a leak or spill.

Investigate to determine if the leak has damaged or might damage the environment. You must report to ADEQ what you have learned from an investigation of your site within 45 days of confirming a leak or spill. At the same time, you must also submit a report explaining how you plan to remove the leaked substance and if you have found contaminated groundwater. Additional site studies may be required if certain conditions exist.

Some leaks and spills will require additional, long-term attention to correct the problem.

Long-Term Actions

Based on the information you have provided, ADEQ will decide if you must take further actions at your site. You may need to take two more actions:

Develop and submit a *Corrective Action Plan* that shows how you will meet requirements established for your site by ADEQ. Make sure you meet the requirements approved by ADEQ for your site.

Closing USTs

You can close your UST permanently or temporarily.

Contact the [ADEQ Tanks Program](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call for details on how to properly close your tank.

Reporting and Recordkeeping

In general, you will only need to report to ADEQ at the beginning and end of your UST system's operating life: When you install a UST, you ***must*** complete a notification form available from ADEQ. You should have already used this form to identify your existing UST. If you have not yet done so, be sure you do so now.



- You must report suspected releases to ADEQ.
- You must report confirmed releases to ADEQ.
- You must also report follow-up actions you plan to take or have taken to correct the damage caused by your UST.
- You must notify ADEQ 30 days before you permanently close your UST.
- You should check with ADEQ about the particular reporting requirements.

For Hazardous Substance UST Only

Note: The following section applies only to UST that store hazardous substances.



Substances included in these regulations

Several hundred substances are designated as "hazardous" under federal regulations. If your underground storage tank stores any of these hazardous substances, it is subject to the regulations. (For information on what hazardous substances are designated as "hazardous," contact the RCRA/CERCLA hotline at 1-800424-9346, or 202-382-3000.)

For information on what hazardous substances are designated as "hazardous," contact the RCRA/CERCLA Hotline at 1-800- 424-9346, or 202-382-3000.

For more information contact the ADEQ Tanks Program at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Requirements for new hazardous substance

New UST systems are those that are installed after December, 1988. They must meet the same requirements as new petroleum UST concerning correct installation, corrosion protection, spill and overfill prevention, corrective action, and closure. However, they must also have secondary containment and interstitial monitoring as described below.

Secondary Containment

All new hazardous substance underground storage tanks must have secondary containment. A single-walled tank is the first or "primary" containment. Using only primary containment, a leak can escape into the environment, but by enclosing the tank within a second wall, leaks can be contained and detected quickly before harming the environment. There are several ways to construct secondary containment.

These include:

- Placing one tank inside another tank or one pipe inside another pipe (making them double-walled systems).
- Placing the underground storage tank system inside a concrete vault.
- Lining the excavation zone around the underground storage tank system with a liner that cannot be penetrated by the chemical.
- Placing an internally fitted flexible liner inside a UST.

Interstitial Monitoring

The hazardous substance underground storage tank must have a leak detection system that can indicate the presence of a leak in the confined space between the first and the second wall. Several devices are available to monitor this confined or "*interstitial*" space. The regulations describe these various methods and the requirements for proper use.

Variances

You can apply for an exception, called a variance, from the requirement for secondary containment and interstitial monitoring. You will have to convince ADEQ that your alternative leak detection method will work effectively by providing detailed studies of your site.

"Existing" hazardous substance

UST Hazardous substance underground storage tanks installed before December 1988 are defined as "existing" tanks. If you have an existing hazardous substance underground storage tank, by December 1998, you must have:

- Used tank filling procedures and devices that prevent spills and overfills.
- Protected the tank from corrosion.



Leak detection

Leak detection requirements are the same as for existing underground petroleum storage tanks, and are also being phased in for existing hazardous substance underground storage tanks, depending on their age:

If the tank was installed December:	It must have had leak detection by:
<i>before</i> 1965 or unknown	1989
1965-1969	1990
1970-1974	1991
1975-1979	1992
1980-December 1988	1993

This schedule makes sure that the older tanks, which are more likely to leak, have leak detection first.

Pressurized piping

By December, 1990, existing pressurized piping must have met the requirements for new pressurized piping described for petroleum underground storage tanks.

Choosing leak detection methods for existing hazardous substance UST

You can meet the leak detection requirements in one of the following ways:

- After December, 1998, your UST must meet the same requirements for secondary containment and interstitial monitoring that apply to new hazardous substance UST.
- After December, 1998, a variance can be granted if you meet the same requirements described above for getting a variance for a new hazardous substance UST.
- After December, 1998, you must either use secondary containment and interstitial monitoring, or get a variance.

Note: No matter which leak detection method you use for tanks and piping, they must be working by the deadlines described above. If not, you must close your UST or replace it with a new UST.

UST FINANCIAL RESPONSIBILITY REQUIREMENTS

BACKGROUND

Undetected leaks and accidental spills can lead to very expensive cleanup and liability costs. Federal and state regulations now require that UST owners and/or operators demonstrate their financial ability to take corrective action and to compensate third parties for bodily injury and property damage.



If you cannot meet the financial responsibility requirements, you are required to shut down your tanks. See the section on *Underground Storage Tank Technical Requirements* for tank closure requirements.

Is your community in compliance with the UST Financial Responsibility Requirements?

- Yes
 No
 Don't Know
 Not Applicable

The federal UST regulations establish separate compliance requirements and schedules for different sizes and classifications of owners and operators. Most small communities will have to show responsibility for \$500,000 per occurrence, and \$1 million aggregate. The following chart explains these categories:

Volume of Liquid Going Through The Facility	Per-Occurrence Coverage	Aggregate Coverage
10,000 gallons or less monthly	\$ 500 000	\$1 million if you have 100 or fewer tanks
More than 10,000 gallons monthly	\$1 million	\$2 million if you have more than 100 tanks

In other words, the dividing line between \$500,000 and \$1 million in per occurrence coverage is 10,000 gallons moving through your facility monthly. Aggregate coverage is determined by the number of tanks you own or operate.

Actions your community should be taking:

Federal regulations list a number of ways to establish your ability to pay the required minimum amount for cleanup costs and liability claims. These mechanisms include self insurance tests related to a local government's net worth, bond rating and other financial indicators that establish the ability to pay. Many of the options are based on the principle that most municipalities can cover the required costs without purchasing insurance.

EPA's list of allowable mechanisms to demonstrate financial capability includes the following self insurance mechanisms for local governments:

- Bond rating test
- Work sheet test
- Fund balance test
- Intergovernmental guarantee



You can also use private insurance, letter of credit, and surety bond.

Note: UST Releases reported *after* June 30, 2006, will **not** be eligible for any coverage by the Arizona State Assurance Fund (SAF)

The compliance date for local governments for this regulation was February 18, 1994.

For more information see ADEQ's [UST and SAF Bulletin Underground Storage Tank Financial Responsibility Bulletin](#).

Be sure to contact the ADEQ Tanks Program to see if you are already covered under Arizona's UST fund at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

ABOVE GROUND STORAGE TANKS (AST)

ADEQ does **not** have jurisdiction over AST and does not regulate the installation, operation, maintenance or closure. There are some situations where an AST may be regulated.



Example:

If a drywell drains an area that includes an AST, it may be necessary to obtain an [Aquifer Protection Permit \(APP\)](#) from ADEQ.

Other Agencies Responsible for AST

- 1) AST related fire and explosion issues are handled by the [local fire authority](#) or the [State Fire Marshall](#).
- 2) [Maricopa County Air Quality](#) and [Pima County Air Quality](#) may require air emissions permits.
- 3) [EPA Oil Pollution Prevention Rule](#) requires a [Spill Prevention Control and Countermeasure Plan \(SPCC\)](#) if it is possible a release from an AST impacts a “navigable water” of the United States.

For more information, see ADEQ’s [Above Ground Storage Tanks Bulletin](#) and [Section 12](#) of this manual.

SECTION 9

CLEAN AIR ACT and AMENDMENTS

- [Air Quality](#)
- [Asbestos](#)
- [Toxic Air Pollutants](#)

AIR QUALITY

Air contaminants are emitted into the outdoor air by a variety of sources within Arizona, and also are transported into and out of Arizona from neighboring states and Mexico. Sources of air contaminants include stationary point sources (industrial stacks), non-point area sources (land grading/clearing, controlled burning, forest fires), mobile sources (motor vehicles) and portable sources (rock crushing and screening plants). Depending upon the concentration and duration of emitted contaminants, local topography, atmospheric chemistry, degree of atmospheric mixing, and emitted air contaminants can result in air pollution. Air pollution can diminish visibility, reduce crop yields, deteriorate building materials, harm lung tissue, and cause cancer or other serious human health effects.

A SUMMARY of AIR QUALITY REGULATION IN ARIZONA

Since the 1970's Arizona has promulgated and enforced a series of its own state air quality statutes and rules to control existing sources of air contaminants which have historically caused or contributed to air pollution in Arizona. These rules control emissions of specific air contaminants from *stationary point sources* such as sand blasting, spray painting, dry cleaning, incinerators, boilers, copper smelters, cotton gins, paper and steel mills; and *portable sources* such as generating engines, hot mix asphalt plants and rock mining, crushing and screening facilities. Additional state rules limit dust emissions from *non-point sources* such as any operation of vehicles or machinery in open areas, dry washes, river beds, dirt roads, and from material storage piles and mineral tailings piles. Arizona's existing air quality rules also set limits for controlling smoke emissions from off-road mobile sources such as trucks, graders, scrapers, locomotive engines, heater-planer units, and roadway and site cleaning machinery, and asphalt kettles.



The [Clean Air Act \(CAA\)](#) was first established in 1963 and the *National Clean Air* program was established in 1970. The CAA has been amended several times, most recently in 1990. One major focus of the CAA and Amendments was to set primary [National Ambient Air Quality Standards \(NAAQS\)](#) to protect public health with an adequate margin of safety for certain criteria pollutants, and to establish secondary standards to protect against environmental and property damage for these same pollutants. The CAA set primary NAAQS, which are human-health based inhalation standards for six criteria air contaminants: carbon monoxide, nitrogen dioxide, particulate matter, ozone, sulfur dioxide, and lead. ADEQ currently monitors for compliance with the NAAQS by sampling and analyzing criteria contaminants in the ambient air throughout the state. Locations with air contaminants in concentrations above the NAAQS are designated as *non-attainment areas*. ADEQ is responsible for developing and implementing plans for bringing *non-attainment areas* into compliance and maintaining those areas in compliance. These include enforceable specific requirements to control emissions from point, non-point and mobile sources including factories, power plants, commercial businesses, government facilities, cars, trucks and construction equipment. Sources located within non-attainment areas may be subject to more stringent regulations than sources located within attainment areas.

Since the 1980's, Arizona has adopted and incorporated into state rules, other portions of the CAA and its Amendments. These include federal [New Source Performance Standards \(NSPS\)](#) and [National Emission Standards for Hazardous Air Pollutants \(NESHAP\)](#) for specific categories of industrial, commercial, and institutional sources. *NESHAP* regulations also pertain to any type of source that emits or is capable of emitting listed hazardous air pollutants above specified threshold amounts.

In 1993, Arizona adopted portions of the 1990 Amendments of the *Clean Air Act* into its regulations, including [Section 112](#) which authorized the promulgation of regulations for a total of [188 listed toxic air pollutants](#) considered to be hazardous to human health. New *NESHAP* regulations for 178 additional hazardous air pollutants were promulgated by the EPA and adopted by Arizona. These new *NESHAP* regulations became effective throughout the 1990's and into the 2000's. These regulations require application of [maximum achievable control technologies \(MACT\)](#) to new and existing stationary point sources which emit specific hazardous air pollutants.

In 2006, Arizona promulgated new state regulations for sources which emit [Hazardous Air Pollutants \(HAP\)](#). These regulations become effective January 1, 2007, and require air quality permits or permit revisions and the demonstration of the use of pollution control equipment which meets certain efficiency standards.

Do any of the Arizona Air Quality regulations apply to facilities owned or operated by your small community?

- Yes No Don't Know Not Applicable



Most of the above Arizona Air Quality regulations will not pertain to small communities.

Some Arizona air quality regulations that **may apply** to small communities include:

- *NESHAP* notification and survey requirements for the hazardous air pollutant [asbestos](#) **are required** for all demolition activities and **may be required** for threshold amounts of asbestos containing materials removed or disturbed during renovation activities of buildings owned or operated by small communities. Asbestos *NESHAP* work practice, record-keeping, manifesting, disposal and emission control requirements **may also apply** to renovation or demolition activities (A.A.C. R18-2-1101(A) and Title 40 C.F.R. §§ 61.140 through 61.157).
- Outdoor [open burning](#) of most solid waste materials **are prohibited**; controlled burns conducted by a small community or its contractor such as for weed abatement or agricultural purposes **may require** a small community to obtain an open burning permit from ADEQ (A.A.C. R18-2-602) and/or a permit or approval from the local fire department.
- Commercial [fuel burning equipment](#) (boilers, generating engines, incinerators) such as at schools, municipal buildings or sewage treatment plants **may require** an air quality control permit from ADEQ (A.R.S. § 49-426 and A.A.C. R18-2-302).
- Small communities which own or operate open [municipal solid waste landfills](#) may require an air quality permit from ADEQ (A.R.S. § 49-426 and A.A.C. R18-2-302).
- Small communities with [above or below ground gasoline storage tanks](#) of any storage capacity **must** utilize submerged or bottom fill devices; and associated pumps and compressors **shall be** equipped with



mechanical seals to control the release of hydrocarbon vapors (A.A.C. R18-2-905).

- Small communities and their agents or contractors are required to take reasonable precautions to limit excessive amounts of dust from becoming airborne from building or subdivision construction, reconstruction, demolition, earthmoving or excavation sites, vacant lots, sales lots, roadways or alleys. Reasonable precautions include using approved dust suppressants, adhesive soil stabilizers, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means (A.A.C. R18-2-604 and 605). ADEQ suggests bids for contracts announced by small communities to perform roadwork, grading, clearing, earth moving, construction and renovation activities designate responsibility for compliance and require equipment and measures to comply with these dust prevention and minimization requirements.



Small communities that issue building permits are required to examine the plans and specifications by an applicant for a building permit to determine if an air quality permit may possibly be required under A.R.S. § 49-426. If it appears possible that an air quality permit will be required, the small community **is required** to notify the applicant and ADEQ (A.R.S. § 49-431).

Small communities are encouraged to contact the ADEQ [Air Quality Compliance Section](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

AIR QUALITY CONTROL PERMITS ISSUED BY ADEQ

Arizona's Air Quality regulations require specific sources to obtain [air quality permits](#) to construct and operate facilities which emit air contaminants. These issued permits contain conditions and provisions covering all air quality regulations applicable to emission source(s) at the facility. Air quality control permits typically contain human-health based emission concentration standards (grams of air contaminant per dry standard cubic feet of air) or mass emission rate limits (pounds per hour) for specific air contaminants emitted from source facilities.



Issued air quality permits may include provisions for limiting the density (opacity) of smoke emissions from stacks, emission monitoring, record keeping, stack testing, and reporting requirements. Air quality permits may also contain provisions requiring the operation and maintenance of pollution control equipment, establishing limits on constituents in fuels and raw materials (i.e. percent sulfur in fuels and/or percent VOCs in coatings), and may prescribe operation or maintenance procedures for the emission source(s) to assure continuous emission reduction and to prevent upsets leading to excess emission releases to the atmosphere.

Applications for air quality control permits are submitted on forms supplied by ADEQ and are subject to licensing time frames (time limits for ADEQ to review). Certain permits (such as those issued for major or synthetic minor sources or those issued for significant increases or changes in emissions) require public notification and allow for public written and verbal comment during public hearings, prior to issuance.

As part of ADEQ's review process, certain types of more complex sources may require application information to perform air quality dispersal modeling from a facility's emission vents and stacks. In order for a permit to be issued, ADEQ must ensure the worst case ambient ground level concentrations predicted by the model will not result in 24-hour or annual ambient concentrations exceeding health-based Arizona Ambient Air Quality Guidelines for hazardous air pollutants and will not cause or contribute to an exceedence of NAAQS concentrations downwind of the facility's property line.

Class I and Class II Air Quality Permits

There are two classes of Individual Air Quality Control permits issued by ADEQ for stationary and portable point sources requiring air quality permits.



- [Class I permit](#) is required **prior** to construction and operation of any major source (actual or potential emissions of specific air contaminants above pollutant-specific thresholds) and any solid waste incineration unit.
- [Class II permit](#) is required **prior** to construction and operation of any major source, for certain types of sources which are regulated under *NESHAP* and *NSPS* requirements adopted into Arizona's rules, for fuel burning equipment rated and operated above certain thresholds, for actual or potential emissions of air contaminants above certain thresholds, and for synthetic minor sources (sources which potentially emit major source threshold amounts of air contaminants which have agreed to operational and/or emission limits to keep actual emissions below the major source levels).

General Air Quality Control Permits

There is also another category of air quality permits that may be obtained from ADEQ known as General Air Quality Control Permits for common types of minor sources with predictable emissions, equipment capacities, and production rates below certain gatekeeper values known through modeling to comply with the NAAQS for criteria pollutants and the Arizona Ambient Air Quality Guidelines for hazardous air pollutants.



Do any of the Equipment or Facilities Owned or Operated by your community require an Air Quality Permit?

If you answer yes to any of the following questions, an air quality control permit **may** be required to be obtained from ADEQ:

- Do you have stationary generating engines located at schools, municipal buildings, or sewage treatment plants rated greater than 325 brake horsepower (A.A.C. R18-2-302.B.2.a.v.)?
 Yes No Don't Know Not Applicable
- Do you have hot water or steam boilers located at schools or other municipal buildings, sludge heaters/dryers at sewage treatment plants, methane gas flares at landfills, or solid waste incinerators at schools or other municipal buildings capable of being fired at a sustained heat input rate of greater than 1 million BTUs per hour for more than an eight-hour period (A.A.C. R18-2-302.B.2.a.iv.)?
 Yes No Don't Know Not Applicable
- Do you have sewage sludge incinerators located at sewage treatment plants (A.A.C. R18-2-302.B.2.a.i.)?
 Yes No Don't Know Not Applicable
- Do you own/operate any active municipal solid waste landfills (A.A.C. R18-2-302.B.2.a.i.)?
 Yes No Don't Know Not Applicable

ADEQ regulates the emission of air contaminants from source facilities by conducting inspections in response to citizen complaints and by conducting periodic inspections to verify compliance with conditions and provisions of air quality permits. ADEQ is also available for compliance assistance for small communities interesting in determining and maintaining compliance with Arizona's Air Quality requirements.

For information on whether any of the equipment or facilities owned or operated by your community requires an Air Quality Permit or an Open Burning Permit or is subject to any of the above air quality regulations, contact the ADEQ Air Quality Division at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

ARIZONA'S COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS



BACKGROUND

In setting National Ambient Air Quality Standards (NAAQS), EPA focused on *six criteria pollutants* and established performance standards to ensure that the best pollution control technology is used to limit emissions.

Criteria Air Pollutants – A group of common air pollutants regulated based on their effects on health and the environment.

1. **Carbon Monoxide (CO)**: A colorless, odorless, poisonous gas, produced by incomplete burning of carbon-based fuels, including natural gas, gasoline, coal, oil and wood. CO is also produced from incomplete combustion of many natural and synthetic products. When CO gets into the body, it combines with chemicals in the blood and prevents the blood from bringing oxygen to cells, tissues and organs which need oxygen for energy. High concentrations of CO can cause acute health effects including death. Symptoms of exposure to CO can include vision problems, reduced alertness, and general reduction of mental and physical functions. CO exposures are especially harmful to people with heart, lung and circulatory system diseases.

2. **Lead (Pb)**: Lead is a highly toxic substance that can cause a number of health problems. Lead is also listed as one of the original hazardous air pollutants under *NESHAP*. Before it was known how harmful lead can be, it was used in paint, gasoline, water pipes, and many other products. Lead is also emitted by smelters, metal refining operations and battery manufacturing facilities. Until recently, the most important airborne source of lead was automobile exhaust. Tighter auto emission standards and reformulated cleaner burning fuels have significantly reduced lead emissions from motor vehicles. Lead is particularly harmful to the developing brain and nervous systems of children, infants, and fetuses and can cause digestive and other health problems. In addition, lead-containing chemicals cause cancer in animals.

3. **Nitrogen Dioxide (NO₂)** – **One of the Nitrogen Oxides (NO_x)**: A smog forming gas produced from burning fuels or raw materials containing nitrates, and from high temperature combustion, including from gasoline and coal. Nitrogen oxides react with volatile organic compounds and sunlight to form photochemical smog. Nitrogen dioxide is a major component of acid rain (acid aerosols) which can damage lakes and trees and can eat away stone on buildings, statues and monuments. Nitrogen dioxide causes damage to the respiratory system affecting breathing passages and lungs.

4. **Ozone:** High concentrations of ozone gas are found in a layer of the atmosphere – stratosphere, high above the earth – that shields the earth against harmful rays from the sun particularly *Ultraviolet B*. *Ground level-ozone* is the principal component of photochemical smog and is formed by a chemical reaction of pollutants from burning coal, gasoline and other fuels and from chemicals found in solvents and paints. Ground-level ozone causes breathing problems, reduced lung function, asthma, irritates eyes, stuffy nose, reduces resistance to colds and other infections, and can damage plants and trees.

5. **Particulate Matter (PM₁₀):** Particulate matter less than 10 microns in diameter (smaller than the width of a human hair) when inhaled are most harmful sizes of particulate matter to human health. PM₁₀ is capable of lodging itself most deeply in the alveoli of the lungs, and interfering with normal lung function. Particulates include dust, smoke, soot and other tiny bits of solid matter that are released into and move around in the air. Particulates are produced by many sources including burning diesel fuels, incineration, mixing and applying fertilizers and pesticides, road construction, industrial processes, mining operations, agricultural burning (field and slash burning), and the operation of fireplaces and woodstoves. Particulate pollution can cause eye, nose and throat irritation, lung damage, bronchitis and early death. Particulate matter can dirty and discolor structures and damage other property including clothes and furniture, and reduce visibility.

6. **Sulfur Dioxide (SO₂):** Sulfur dioxide is a yellow colored gas produced by burning fuels containing sulfur compounds, including diesel fuel, heating oil, jet fuel, and coal. Coal burning power plants are the largest point sources of SO₂ in Arizona. Industrial processes such as the production of paper and smelting of metals, also are significant sources of SO₂ in Arizona. The acidic nature of sulfur dioxide deteriorates metal, stone, and concrete surfaces, causes breathing problems and may cause permanent lung damage. Sulfur dioxide plays a major role in the production of acid rain.

Volatile Organic Compounds (VOC): All VOC contain carbon (C) the basic chemical element found in all living beings. EPA does not list VOC as a criteria air pollutant, but VOC are included in the list of pollutants because efforts to control smog target VOC for reduction. Many VOC are *Hazardous Air Pollutants (HAP)*. VOC are released from burning fuels including natural gas, gasoline, coal, oil and wood and from solvents, paint glues and other products used at work and at home. VOC can cause cancer and are can damage to plants.

[Also see Toxics Air Pollutants: Hazardous Air Pollutants (HAP)]

ARIZONA'S STATE IMPLEMENTATION PLAN (SIP)

Under the CAA Amendments, EPA directed states to develop plans to address specific criteria air pollutants. [*Arizona's State Implementation Plan \(SIP\)*](#) provides for the implementation, maintenance and enforcement of NAAQS. Arizona's SIP describes the geographic extent of attainment, non-attainment and unclassified areas for all pollutants under the NAAQS as well as emission standards.



ATTAINMENT AREAS & CHANGES TO ATTAINMENT AREA DESIGNATIONS

Arizona's SIP established procedures and criteria for attainment area designations and for changing area designations that include all of the following:

- Technical basis for proposed changes including ambient air quality data.
- Types and distribution of source air pollution.
- Population density and projected population growth.
- Transportation system characteristics.

- Traffic congestion.
- Projected industrial and commercial development.
- Meteorology.
- Pollution transport.
- Political boundaries.
- Provisions for review of and public comment on proposed changes to area designations.

NONATTAINMENT AREAS

For any ozone, carbon monoxide or particulate matter non-attainment or maintenance areas, ADEQ works directly with designated local government planning organizations, regional agencies and county air quality control boards to develop and implement plans to achieve compliance with NAAQS.

UNCLASSIFIED AREAS

Unclassified area means an area which has not been classified as an attainment or non-attainment area for a specific pollutant because of a lack of adequate data, and which is treated as an attainment area.

MAINTENANCE AREAS

Maintenance areas are areas that were once in non-attainment, but were re-designated to attainment, but still need to be maintained to stay in compliance with the NAAQS.

COMPLIANCE WITH NAAQS

Compliance with air quality standards is achieved through air quality control permits, open burning permits, including monitoring and reporting requirements, facility inspections, technical reports, administration of the Vehicle Emissions Inspection Program, monitoring air quality throughout the state and by initiating compliance and enforcement actions.

ADEQ's Air Quality Division (AQD) has taken initiatives to improve air quality. EPA recently recognized Arizona for its improved ozone air quality by re-designating the Phoenix metropolitan airshed from non-attainment to maintenance.

Some of the initiatives that have positively impacted Arizona's air quality include:

- Cleaner burning gasoline which is one of the most effective programs for reducing carbon monoxide and ozone emissions.
- [Vehicle Emissions Inspection Program](#) designed to reduce carbon monoxide and ozone.
- Visibility and air toxics monitoring networks which go beyond federal requirements by establishing a monitoring network in wilderness areas and an increased monitoring network in metropolitan Phoenix.

Is the air quality designation for your community non-attainment or maintenance for any of the criteria air pollutants?

- Yes No Don't Know Not Applicable

To assist in determining whether your community is located in a non-attainment area, please go to the following URL link to the [map](http://www.azdeq.gov/air/plan/notmeet.html) of Air Quality Non-attainment Areas and Maintenance Areas: <http://www.azdeq.gov/air/plan/notmeet.html> If the answer to the above question is "Yes", the following Arizona Air Quality regulations **may apply** to your community:

- Small communities located within the boundaries of a *non-attainment area* (within portions of Maricopa, Pinal, Yavapai, and Pima counties) **are required** to prohibit the parking of motor vehicles in parking lots in their facilities which fail to comply with the ADEQ Emissions Inspections program (A.R.S. §49-542).

- Small communities that have 50 or more employees that report to a facility located within the boundaries of the Phoenix metropolitan 8-hour ozone *non-attainment area* covering portions of Maricopa County with 50 or more employees reporting to a single work site or located within the boundaries of the Tucson metropolitan 1-hour carbon monoxide *maintenance area* with 100 or more employees reporting to a single work site **are required** to participate in a travel reduction program which includes surveying, reporting, planning and implementation requirements (A.R.S. §49-588).
- Small communities with fleets of 25 or more community owned vehicles located within the boundaries of a *non-attainment area* **may** apply to ADEQ for a permit to establish a fleet emissions inspection station for self-inspections of its fleet (A.R.S. §49-546) to meet state emissions inspection program requiring annual or biennial inspections of motor vehicles located within or commuting into a *non-attainment area* (A.R.S. §49-542).

For further information on the [Air Quality Designation of Your Community](#) contact the ADEQ [Air Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

OPEN BURNING PERMIT REQUIREMENTS

An [Open Burning Permit](#) issued by the Director of the ADEQ or a delegated authority and authorizes **only** the following types of burns:



Agricultural Burning: burning vegetative materials related to producing and harvesting crops and raising animals for the purpose of marketing for profit, or providing a livelihood, but does **NOT** include burning of household waste or prohibited materials. A person may conduct agricultural burns in fields, piles, ditch banks, fence rows, or canal laterals for purposes such as weed control, waste disposal, disease and pest prevention, or site preparation.

Construction Burning: burning wood or vegetative material from land clearing, site preparation, or fabrication, erection, installation, demolition, or modification of any buildings or other land improvements, but does NOT include burning household waste or prohibited material.

Residential Burning: open burning of vegetative materials conducted by or for the occupants of residential dwellings, but does NOT include burning household waste or prohibited material.

Prescribed Burns: conducted on private lands without the assistance of a federal or state land manager. ***Any fire set or permitted by a public officer in the performance of official duty*** - if the fire is set or permission is given for the purpose of weed abatement, or the prevention of a fire hazard, unless the fire is exempt by the Director of the Department of Agriculture for the purposes of disease and pest prevention in an organized, area-wide control of an epidemic or infestation affecting livestock or crops.

Open Burn permits provide [instructions](#) on how to conduct an open burn including time of day and under what air quality conditions and include a specific list of what **cannot** be burned. Open burns must **not** be left unattended.

For more information on [Open Burning Permit](#) requirements, contact the ADEQ [Air Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Actions your community should be taking:

Air pollution is everybody's business. In addition to complying with the requirements above, your small community can make a difference in reducing air pollution. For example, you can:

- Learn about the air quality in your area; talk to your local air authority and ADEQ air program.
- Work with representatives of industry, environmental groups, citizens, and health associations to identify air quality issues and recommend potential solutions.
- Report problems. If you see an air pollution problem, advise your local air authority or ADEQ air program authority.

When environmental scientists talk about air pollution, they talk in terms of millions of tons of emissions of pollution. It is not easy to relate these figures to the smoke coming out of chimneys or smoke stacks or the exhaust coming out of motor vehicles. However, even small sources of pollution, when added to hundreds of thousands of other small sources, do harm the environment and can be dangerous to public health.

For more information contact the ADEQ [Air Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

ASBESTOS



BACKGROUND



Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability and high tensile strength. Asbestos is made up of microscopic bundles of fibers that may become airborne when disturbed. These fibers get into the air and are inhaled into the lungs, where they may cause significant health problems. Individual fibers are too small to be detected by the human eye.

As part of the *Clean Air Act (CAA)*, EPA established the *National Emission Standard for Hazardous Air Pollutants (NESHP)* Program to protect public health from exposure to *regulated asbestos-containing material (RACM)* during *NESHAP* facility renovation/demolition activities, asbestos removal, transport and disposal, closely monitoring those activities for proper notification and asbestos emissions control. Asbestos is known to cause cancer and other respiratory diseases in humans.

Under the *CAA*, EPA has delegated authority for regulation and enforcement to Arizona. The Asbestos *NESHAP* program in Arizona is enforced by federal, state, and county [Asbestos NESHAP Coordinators](#). Program coordinators and inspectors conduct inspections, investigate complaints, and collect renovation and demolition activities data.

Asbestos affects all communities – large and small.

For the *NESHAP* Coordinator in your area, contact the [ADEQ NESHAP Coordinator](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

What are the Health Effects of Asbestos Exposure?

If asbestos fibers are inhaled, these microscopic fibers can cause normal functions of the lungs to be disturbed. Exposure increases the risk of developing lung cancer, mesothelioma, or asbestosis, which is a scarring of the lungs that leads to breathing problems. It could take anywhere from 15 to 30 years after the first exposure for symptoms to occur. Medical investigations have shown that inhalation is the principal route of entry that leads to asbestos-related diseases. There is no known safe exposure level to asbestos.

Asbestos NESHAP Program and Notification Requirements

Applicability

Any facility undergoing renovation or demolition. "Facility" means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site.



Requirements

Prior to beginning renovation or demolition activities of a Facility, a certified [Asbestos Hazard Emergency Response Act \(AHERA\)](#) building inspector must thoroughly inspect the Facility or part of the Facility where the renovation or demolition operation will occur for the presence of asbestos, including friable and non-friable asbestos-containing materials.

A thorough inspection typically involves obtaining samples of materials which are to be disturbed during a renovation or demolition activity, and having them analyzed for asbestos content. The only way to be sure of the asbestos content of materials is to have it tested. Materials containing **greater than 1% asbestos** which are friable (brittle) or which can be made friable through demolition or renovation activities are considered [regulated asbestos-containing materials \(RACM\)](#).

For all demolitions (even when no asbestos is present) and renovations activities involving threshold amounts of RACM, provide the Asbestos NESHAP agency with jurisdiction over the Facility with an Asbestos NESHAP notification at least 10 working days **prior** to the demolition or renovation activity.

Threshold amounts of RACM are:

- 260 linear feet or more on pipes.
- 160 square feet or more on other facility components.
- 35 cubic feet or more of facility components.

What activities are covered by the Asbestos NESHAP?

Among others, the following activities and facilities are regulated:

- Demolition of all facilities, even those that may not contain asbestos.
- Controlled burning of structures, including for fire training.
- Renovation of facilities that contain friable asbestos-containing materials.
- Spraying of asbestos-containing materials..
- Disposal of asbestos-containing waste generated during renovation, demolition, spraying, and fabricating operations.
- Active waste disposal sites.
- Closure and maintenance of inactive waste disposal sites.
- Operation of and reporting on facilities that convert asbestos-containing waste material into non-asbestos material.



Fees:

There is no ADEQ notification or permitting fees involved with this program for jurisdictional counties. The EPA Region 9 Asbestos Program charges no fees for work on Tribal Lands. Some Arizona counties have fees for their notification process. Some cities may have separate permit fees, and *AHERA* certified inspectors usually charge a fee for their inspection.

Asbestos NESHAP Written Notification Requirement:

Written notification is required for renovation and demolition operations and only completed notification forms will be accepted.



For asbestos NESHAP regulated activities scheduled to occur within jurisdictions regulated by ADEQ, the notification should be hand or typewritten and postmarked or delivered to ADEQ no later than 10 working days (Monday through Friday) prior to the beginning of the asbestos renovation or demolition activity. For additional information on the asbestos NESHAP regulations or to determine whether an activity is located within ADEQ's jurisdiction.

Please contact ADEQ's Asbestos NESHAP program at (602) 771-2300 or, toll free in state, (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Send Asbestos NESHAP Notifications to ADEQ at:

Arizona Department of Environmental Quality
 Air Quality Compliance Section, Field Services Unit
 Attn: Asbestos NESHAP Coordinator
 1110 West Washington Street
 Phoenix, AZ 85007



What Small Communities & Firefighters Need To Know About Asbestos In Buildings

Small Communities and fire districts should be well informed of the asbestos regulations, which are applicable for building renovations and demolitions. Burning of buildings, including residential homes for fire training exercises, is considered "demolition," and fire departments must adhere to federal, state and county asbestos standards prior to such a burn.



Fire Department Responsibilities

Prior to purposely burning a facility that has been donated or provided for use, a fire department must:

1. Conduct a thorough inspection to identify any *asbestos containing materials (ACM)* in the facility.
2. After taking control of the structure, remove all ACM identified prior to burning.
3. Submit an Asbestos NESHAP Notification to the ADEQ Air Quality Division.

Note: A single residential building having four or fewer dwelling units is ordinarily not subject to the Asbestos *NESHAP* requirements for any renovation and/or demolition activity. Homeowners can remove ACM prior to providing the structure for a fire training exercise. However, ADEQ encourages homeowners to use proper procedures and certified personnel for inspections, asbestos removal, transportation and disposal of ACM.

Detailed Guidelines:

1. **Taking Control:** A fire department becomes an operator under the Asbestos *NESHAP* regulations when it takes possession of a building for burning purposes, and becomes subject to the asbestos requirements. For example: an agreement with a property owner and a city or county authority for abandoned properties would qualify as transfer of authority to the fire department.
2. **Inspections:** A “thorough inspection” meeting the Asbestos *NESHAP* regulations must be completed prior to any burn. This means that all suspect ACM must be identified, sampled and analyzed by an approved laboratory or materials must be assumed to contain asbestos. ADEQ recommends that an *Asbestos Hazards Emergency Response Act (AHERA)* trained and certified building inspector conduct these inspections. A list of consulting firms having individuals with this certification, and approved laboratories can be found on ADEQ’s website at www.azdeq.gov/environ/air/asbestos/index.html or direct at [Asbestos Contact Directory](#).

An AHERA certified inspector may also be able to help a fire department identify other potential hazardous materials which should be removed prior to burning such as fluorescent ballasts and thermostats.

Notification Requirements

Renovation

- All asbestos containing materials identified in a building or structure for fire training must be removed prior to demolition, or intentional burning.
- An **ADEQ Asbestos NESHAP Notification** form is required to be submitted to the agency at least 10 days **prior** to removal of threshold amounts of regulated asbestos containing materials.



Demolition

- Asbestos regulations consider burning a structure a demolition activity. Fire Departments planning to complete a fire training exercise on a structure must submit an ADEQ Demolition Notification form to the agency at least 10 days prior to the training exercise even if NO asbestos is identified or removed from the structure.

There are **no** fees associated with the notification process to ADEQ.

Compliance with Open Burning Regulations

Once asbestos containing materials are removed, a structure may be burned as an official fire training exercise. An ADEQ Open Burning Permit is not required for fire training exercises. Most other types of open burning, such as for agricultural purposes, are subject to local Fire Department regulations governing fire safety and may also require an ADEQ Open Burning Permit. ADEQ Open Burning Permits are separate from ADEQ Asbestos *NESHAP* notifications, and include provisions prohibiting the burning of materials (including asbestos), which tend to produce gaseous and/or particulate emissions which may be harmful to human health.



For more information, see ADEQ’s website at:
<http://www.azdeq.gov/environ/air/permits/class.html#open>

Disposal of Remaining Debris

After burning of a facility has taken place the remaining debris, consisting of cold ash and unburned material must be deposited of at an approved landfill.

For more information, contact the [ADEQ Solid Waste Program](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Asbestos Products Ban and Phase Out - Regulations Governing Asbestos

Asbestos regulations fall primarily under the authority of two different federal rules.

[Clean Air Act \(CAA\) – National Emissions Standards for Hazardous Air Pollutants \(NESHAP\)](#)



1. 1973 banned asbestos for fireproofing and insulation
2. 1978 banned asbestos for “decorative” purposes
3. 1990 *Revised Asbestos NESHAP Rule*
 - Prohibits spray-on application of materials containing more than 1% asbestos to buildings, structures, pipes and conduits unless the material is encapsulated with bituminous or resinous binder during spraying and the materials are not friable (material that when dry, may be crumbled, pulverized or reduced to dust by hand pressure and become airborne).
 - Prohibits wet-applied and pre-formed asbestos pipe insulation, and pre-formed asbestos block insulation on boilers and hot water tanks.
 - Allows spray-on application for equipment and machinery, materials with more than 1% asbestos where the asbestos fibers are encapsulated with a bituminous or resinous binder during application and where the materials are not friable after drying; or friable materials, where either no visible emissions are discharged to the outside air from spray-on application or specified methods are used to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

Toxic Substance Control Act (TSCA) (e.g. Asbestos Ban and Phase-out)

EPA administers the [Toxic Substance Control Act \(TSCA\)](#). Six asbestos-containing product categories are still subject to the asbestos ban:

Banned Products:

1. Corrugated Paper
2. Rollboard
3. Commercial Paper
4. Specialty Paper
5. Flooring Felt
6. New uses of asbestos



Products NOT Banned:

The following asbestos containing products are not banned under TSCA and continue to be manufactured and used in new construction and consumer products:

1. Asbestos-cement corrugated sheet
2. Asbestos-cement flat sheet
3. Asbestos clothing
4. Pipeline wrap
5. Roofing Felt
6. Vinyl-asbestos floor tile
7. Asbestos-cement shingles
8. Asbestos-asphalt shingles

9. Millboard
10. Asbestos-cement pipe
11. Automatic transmission components
12. Clutch facings
13. Friction materials
14. Disc brake pads
15. Drum brake linings
16. Brake blocks
17. Gaskets
18. Non-roofing coatings
19. Roof coatings

For this reason, it is incorrect to assume buildings constructed after the date of any ban on asbestos containing materials do not contain asbestos. The only way to be sure of the asbestos content of a material is to have it sampled and tested as part of an inspection performed by an AHERA certified building inspector.

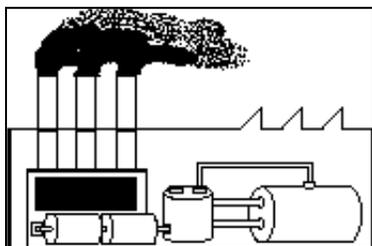
U.S. Consumer Products Safety Commission

The [U.S. Consumer Products Safety Commission \(CPSC\)](#) also developed bans on the use of asbestos in certain consumer products such as textured paint and wall patching compounds.

For more information call the CPSC Consumer Hotline toll free at 800-638-2772 or (TTY 800-638-8270) or visit the [CPSC website](#).

TOXIC AIR POLLUTANTS: Hazardous Air Pollutants (HAP)

BACKGROUND



[Toxic Air Pollutants](#), also known as [Hazardous Air Pollutants \(HAP\)](#), are those pollutants that are known or suspected to cause or contribute to serious adverse acute or chronic health effects, such as genetic defects, organ or nervous system damage, respiratory problems, cancer, or other serious illnesses.



Examples of toxic air pollutants include [benzene](#), which is found in gasoline; [tetrachloroethylene \(perchloroethylene\)](#), which is emitted from most dry cleaning facilities; and [methylene chloride](#), which is used as a solvent and paint stripper by a number of industries. Examples of other listed air toxics include [dioxins](#) and [furans](#), [asbestos](#), [toluene](#), and metals such as [cadmium](#), [mercury](#), [chromium](#), and [lead compounds](#).

ADEQ has adopted and incorporated into its rules [Section 112](#) of the 1990 Amendments to the federal Clean Air Act (CAA) to reduce and control the emissions of 187 listed federal HAP. The 1990 Amended list originally included 188 HAP. In December 2005, [methyl ethyl ketone](#) was removed from the list. ADEQ has also adopted and incorporated [National Emission Standards for Hazardous Air Pollutants \(NESHAP\)](#) which requires source specific pollution control technologies for specific categories of sources that are known to emit specific HAP. These regulations vary by HAP pollutant and source category and include emission limits, work practices, monitoring, testing, record keeping and reporting requirements. Air quality permits are also required to be obtained from ADEQ for any source facility with potential or actual emissions of 10 tons per year or more of any one of the 187 listed HAP or 25 tons per year or more of any combination of the 187 listed HAP. Additional specific technology based [NESHAP](#) standards, known as [Maximum Achievable Control Technology \(MACT\)](#) standards apply to some the [HAP](#) emitted by specific categories of sources which were added under the 1990 [CAA Amendments](#).

HAP may be emitted from various types of industrial, commercial or institutional source operations, including from [Publicly Owned Treatment Works \(POTW\)](#) or [municipal waste landfills](#) owned or operated by small municipalities. These sources may release HAP from equipment leaks, from evaporation during liquid storage, when materials are transferred from one location to another, or during discharge through emission stacks or vents.

The [source category list](#) includes such types of facilities as:

- Municipal landfills.
- Publicly Owned Treatment Works (POTW - wastewater treatment plants).
- Facilities engaged in paint stripping (certain municipal fleet maintenance facilities, for example) using listed HAP.
- Auto paint shops.
- Chemical plants.
- Coal-burning power plants.

In addition to adopting and incorporating the 1990 CAA HAP regulations, ADEQ has pre-existing air quality rules which set emission limits for toxic air pollutants including [hydrogen sulfide](#), [carbon monoxide](#), [hydrogen cyanide](#), and [sodium cyanide dust](#) from existing stationary sources not otherwise covered under rules for specific categories of new or existing stationary sources.

A new set of rules, known as [Arizona State Hazardous Air Pollutants Program](#), became effective as of January 1, 2007. Currently, the *Arizona State HAP* list is the same as the 187 HAPs adopted from [Section 112](#) of the 1990 CAA. These rules apply to all major state HAP sources, and 24 categories of minor state HAP sources constructed after this effective date, or to modifications which occur after this effective date at existing major or minor sources which result in increased HAP emissions above listed *de minimus* amounts. These *de minimus* amounts are listed in the rules for 73 HAP currently emitted by existing Arizona HAP sources.



Under these program rules, a major source is one which has actual or potential emissions of 10 tons per year or more of a single listed state HAP, or 25 tons per year or more of any combination of listed HAP. A minor source is one within the 24 listed categories which has actual or potential emissions of 1 ton per year or more of a single listed state HAP, or 2½ tons per year or more of any combination of listed HAP. Minor sources subject to the *Arizona State HAP* program are required to obtain a permit which complies with these rules. Compliance with these rules is achieved for minor sources through demonstration of operation with HAP emission control equipment which meet criteria for [HAP Reasonably Available Control Technologies \(HAPRACT\)](#). Compliance with these rules is achieved for major sources through demonstration of operation with HAP emission control equipment which meet criteria for [HAP Maximum Achievable Control Technologies](#).

Does this rule apply to your community?

- Yes No Don't Know Not Applicable

If your community owns or operates any of the above facilities, or emits or potentially emits any of the HAP or air toxics as described above, or you do not know, review this section. If you do not own or operate any of these facilities, and do not emit or potentially emits HAPs or air toxics, [skip to Section 10](#).

How do Toxic Air Pollutants enter the environment?

Most air toxics originate from manmade sources including both mobile and stationary sources. Some are released in major amounts from natural sources such as forest fires.

Air Toxics Source Categories:

1. Point Sources: factories and coal-burning power plants.
2. Mobile Sources: motor vehicles, airplanes, lawn mowers and lawn care equipment.
3. Biogenic Sources: trees and vegetation, gas seeps and microbial activity.
4. Area Sources: small stationary sources such as dry cleaners and solvent degreasing.

Once air toxics are released, they can be carried by the wind away from their original source to other locations. Factors such as weather, the terrain (mountains, mesas, valleys) and the chemical and physical properties of a pollutant determine how far it is transported, its concentration at various distances from the source, what kind of physical and chemical changes it undergoes, and whether it will degrade, remain airborne or deposit to land or water. Some toxic air pollutants are of particular concern because they degrade slowly or not at all as in the case of metals such as mercury and lead.

How are people exposed to Toxic Air Pollutants and what are the Health Effects?

Toxic air pollutants enter the body from:

- Breathing contaminated air.
- Eating contaminated food such as fish from contaminated waters; meat, milk or eggs from animals that feed on contaminated plants; and fruits and vegetables grown in contaminated soil.
- Drinking water contaminated by toxic air pollutants.
- Eating contaminated soil: young children are especially vulnerable because they put their hands and objects in their mouths.
- Touching (skin contact) contaminated soil, dust or water (during recreational use of contaminated water bodies).

TECHNOLOGY AND RISK BASED APPROACH

Realizing the difficulties of a chemical-by-chemical decision framework based solely on risk, the 1990 amendments to the *Clean Air Act* and the [Arizona State Hazardous Air Pollutant Program](#) mandated a more practical approach to reducing emissions from toxic air pollutants by source category.

MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT) STANDARDS

MACT standards are industry specific and require sources to meet specific emission limits based on HAP emission levels already achieved by the best performing similar sources in the country through clean processes, control devices, work practices or other methods. These emission levels set a baseline (often referred to as the "*MACT floor*") for the new standard. At a minimum, a *MACT* standard must achieve, throughout the industry, a level of emission control that is at least equivalent to the *MACT floor*.



HAZARDOUS AIR POLLUTANT REASONABLE AVAILABLE CONTROL TECHNOLOGY (HAPRACT) STANDARDS

HAPRACT standards are industry specific and require sources to meet specific emission limits achieved through readily available technologies which are in widespread use, demonstrated to be reliable. *HAPRACT* standards are less stringent than *MACT* standards. The Director of ADEQ determines whether the process controls, emission control devices, and/or work practices employed meet the *HAPRACT* standard. In making the foregoing determination the Director shall take into consideration the estimated actual air quality impact of the standard, the

Director shall take into consideration the estimated actual air quality impact of the standard, the cost of complying with the standard, the demonstrated reliability and widespread use of the technology required to meet the standard, and any non-air quality health and environmental impacts and energy requirements.

RISK-BASED APPROACH

The *NESHAP MACT* and the *Arizona State HAP Program* regulations apply a risk-based approach to assess how these technology-based emission limits are reducing health and environmental risks. Based on this assessment, EPA or ADEQ may implement additional *HAP* standards to address any significant remaining, or residual, health or environmental risks, or remove *HAP* from the list based upon new scientific information of risk to human health.

PUBLICLY OWNED TREATMENT WORKS (POTW)

POTW can release air toxics in the form of volatile organic compounds in wastewater. *MACT* standards have been established for [POTW](#) which treat wastewater received from residential, commercial and industrial sources. [\[Also see Section 3\]](#)

POTW Classifications:

1. **Industrial:** treat regulated waste streams from industrial sources
 - Some POTW treat wastewater from industrial sources whose waste stream is already regulated by *Industrial Air Toxics Rules*.
 - Under the new rule, POTW that treat waste streams from industrial sources are classified as Industrial POTW.
 - New or reconstructed industrial POTW must comply with non-industrial standards, or with all other air toxics regulations applicable to the industrial sources whose wastewater they are treating, whichever is more stringent.
2. **Non-Industrial:** treat waste streams from other than industrial sources
 - New or reconstructed non-industrial sources will need to either include air pollution controls on certain wastewater treatment units or demonstrate through pollution prevention techniques an equivalent reduction in emissions.

To determine if your existing [POTW](#) is regulated, please contact the ADEQ [Water Quality Permits Section](#) and/or the [Air Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Actions your community should be taking:

If your community owns or operates any facility included on the list of regulated air toxics source categories this rule applies and you must comply with all applicable emission reductions standards for that category.

If you are planning to build a new facility or modify an existing facility that belongs to one of the regulated source categories, that facility must be in compliance with all applicable air toxics regulations at the time it begins operating.

You may not modify a regulated facility unless the standards applicable to existing facilities within that source category are met. A facility cannot be constructed or reconstructed unless it meets the applicable emissions standards established for new sources.

To determine if your community facilities or activities are regulated under *HAP*, contact the ADEQ [Air Quality Division](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SECTION 10

TOXICS – Lead & PCB

LEAD

BACKGROUND

Lead is a highly toxic substance that can cause a number of health problems, particularly in children and fetuses. Humans can be exposed to lead through contact with lead-based paint, soil, dust, and drinking water. Before it was known how harmful lead can be, it was used in paint, gasoline, water pipes, and many other products.

Old lead-based paint is the most significant source of lead exposure in the United States today, and it has been banned since 1978. Improper paint removal, such as dry scraping, sanding, or open flame burning can cause harmful exposure to workers, as well as occupants of dwellings.

Airborne lead enters the body when an individual breathes or swallows lead dust. Until the early 1980's, the most important airborne source of lead was automobile exhaust. High concentrations of airborne lead particles in homes can also result from lead dust from outdoor sources, contaminated soil tracked inside, and use of lead in certain activities such as electronics repair and stained glass-making.

Health Effects of Exposure to Lead

Lead affects practically all systems of the body. High levels of lead can cause convulsions, coma, and even death. Lower levels of lead can cause adverse effects on the central nervous system and the kidneys and can have other effects.

Lead is particularly harmful to the developing brain and nervous systems of children, infants, and fetuses. They are more vulnerable to lead exposure than adults because they have more hand-to-mouth activity and they absorb more lead. Effects can include delays in physical and mental development, lower IQ levels, shortened attention spans, and increased behavioral problems. Children should be tested for lead. Call your doctor or local health clinic to find out where your child can be tested.

Actions your community should be taking:

Schools: Keep areas in schools and other areas where children play as dust-free and clean as possible. Floors, window ledges, and chewable surfaces should be cleaned with a solution of powdered automatic dishwasher detergent in warm water. (Dishwasher detergents are recommended because of their high-phosphate content.) Most multi-purpose cleaners will not remove lead in ordinary dust. Make sure that children wash their hands before meals and nap-time.

Homes and public buildings: Reduce the risk from lead-based paint. Most homes and other buildings built before 1960 contain heavily leaded paint. Some built as recently as 1978 may also contain lead paint. This paint could be on window frames, walls, the outside of homes, or other surfaces. ***Do not burn painted wood: it may contain lead.***

Paint in good condition: Leave lead-based paint undisturbed if it is in good condition. Do not sand or burn it off. Lead paint in good condition is usually not a problem except in places where painted surfaces rub against each other and create dust (example: opening a window).

Correcting lead paint problems: Hire people with special training in correcting lead paint problems to remove lead-based paint. Until all work is finished and cleanup is done, all occupants especially children and pregnant women should leave the building.

Testing homes for lead-based paint: Consult your state or county health or housing department for suggestions on private laboratories or public agencies that may be able to help test homes for lead in paint. Home test kits cannot detect small amounts of lead under some conditions.

Construction work, demolition or painting working with batteries or radiators, or other tasks which involve lead: These can unknowingly create lead dust which can be brought into buildings. In addition, soil very close to walls may be contaminated from lead paint on the outside of buildings.

Roads or highways: Soil by roads or highways may be contaminated from years of exhaust fumes from cars and trucks that used leaded gas. Your town public works employees should be aware of this, and, if possible, they should change clothes before they go home.

Drinking water: Most well and city water does not usually contain lead. Water usually picks up lead inside homes, from plumbing that is made with lead materials. The only way to know if there is lead in drinking water is to have it tested.

Testing requirements for public water systems: Public water systems (PWS) are required to take a certain number of tap water samples to test for lead in water. [\[See Section 2\]](#)



The National Lead Information Center Hotline, 1-800-424-LEAD, is a helpful resource for municipalities seeking more information on lead, and regulatory requirements related to demolition and lead-based paint removal, etc.

For more information contact the ADEQ [Hazardous Waste Inspections and Compliance Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

PCBs - Polychlorinated Biphenyls

BACKGROUND

The abbreviation [PCB](#) refers to polychlorinated biphenyls - a group of man-made chemicals containing 209 individual compounds with varying toxicity. Because of their insulating and nonflammable properties, PCB have been used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment on utility poles or in buildings. They are also present in fluorescent light ballasts and heat transfer systems, in hydraulic fluids, lubricating oils, wood preservatives, paints, printing inks, cutting oils, fire retardants, plasticizers, adhesives, and other products. The manufacture of PCB stopped in the United States in October 1977, because of evidence that PCB accumulate in the environment and may cause health hazards for humans.

Testing requirements for PWS: Public water systems are required to test for PCB in water. [\[See Section 2\]](#)



PCB are particularly dangerous when they are burned. In addition, they can be released into the environment from:

- Poorly maintained toxic waste sites that contain PCB.
- Illegal or improper dumping of PCB wastes, such as transformer fluids.

- Leaks or fugitive emissions from electrical transformers containing PCB.
- Disposal of PCB-containing consumer products into municipal landfills rather than into landfills designed to hold hazardous materials.

Consumer products that may contain PCB include:

- Old fluorescent lighting fixtures.
- Electrical devices or appliances containing PCB capacitors made before PCB use was stopped.

Occupational exposure to PCB can occur during:

- Repair or maintenance of PCB transformers.
- Accidents or spills involving PCB transformers.
- Disposal of PCB materials.
- Contact at hazardous waste sites.

Do these regulations apply to your community?

Yes No Don't Know Not Applicable

If your local government uses or disposes of PCB-containing equipment or substances, these [regulations](#) apply to you. Local governments should be particularly sensitive to PCB risks of equipment or supplies for road work, vehicle maintenance, air conditioning, heating, and the operation of electric utilities. The use, storage, labeling and disposal of PCBs are strictly regulated because they can be so dangerous.

Actions your community should be taking:

PCB wastes at concentrations of 50 ppm (parts-per-million) and above are regulated by EPA for disposal. Regulated PCB waste must be disposed of in either an approved chemical waste landfill, by incineration, or by an alternate approved technology. In addition, local officials should be aware of:

- Disposal requirements.
- Technical requirements for incinerators and landfills.
- Approved alternate technologies.
- Storage requirements (PCB going into storage for disposal must be disposed of within one year).
- Labeling requirements.
- Reporting and recordkeeping requirements.

IN AN EMERGENCY:

For releases of 1 or more pounds of PCBs (e.g., spills and fires) call your local fire department immediately, and contact [The National Response Center](#) at 1-800-424-8802.

What Help is Available?

Eye Contact

Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

FIRE HAZARDS

- PCB may burn, but they do not readily ignite.
- Use dry chemical, CO₂, water spray, or foam extinguishers.

POISONOUS GASES ARE PRODUCED IN FIRE.

- If employees are expected to fight fires, they must be trained and equipped properly.
- All buildings in which there are PCB should be posted so firemen will be aware of their presence.

SPILLS AND EMERGENCIES

If PCB are spilled or leaked, take the following steps:

- It may be necessary to contain and dispose of PCB as a Hazardous Waste.
- Restrict persons not wearing protective equipment from the area of spill or leak until clean-up is complete.
- Ventilate the area of spill or leak.
- Absorb liquids in dry sand, earth, or a similar material and deposit in a sealed container
- Collect powdered material in the most convenient and safe manner and deposit in a sealed container.

HANDLING AND STORAGE

- Prior to working with PCB, you should be trained in its proper handling and storage.
- Store in tightly closed containers in a cool, well-ventilated area away from STRONG OXIDIZERS (Such as CHLORINE, BROMINE, and FLUORINE).
- PCB should be handled only in an established, controlled, regulated area.

PHYSICAL DATA

- Flash Point: 383 degrees Fahrenheit.
- Water solubility: slightly soluble.

PCB POINT-OF-CONTACT:

EPA has jurisdiction over PCB as hazardous waste. However, ADEQ Hazardous Waste Inspections and Compliance Unit staff will serve as a point-of-contact for Arizona and will then refer the issue to EPA.

For more information contact the ADEQ [Hazardous Waste Inspections and Compliance Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SECTION 11

PESTICIDE STORAGE



BACKGROUND

Every year millions of people use pesticides in businesses, farms, homes, and golf courses. An EPA survey in 1986 estimated that 223 million pesticide containers were manufactured in that year alone. A similar survey conducted two years later by the pesticide industry revealed that 233 million pesticide aerosol containers were manufactured in 1988. Problems frequently arise when pesticides are stored in containers that leak, are corroded by the chemical within, or are stored in locations that allow the pesticides to leach into the environment or cause a potentially violent reaction.



To prevent hazards to human health and the environment from improper storage of pesticides, the [Federal Insecticide, Fungicide, and Rodenticide ACT \(FIFRA\)](#) called on EPA to set standards for the types of containers that can be used to store pesticides and proper storage methods. It is largely the responsibility of the pesticide manufacturer to ensure that the pesticide is properly contained and that *storage requirements are specified on the label*, but everyone who uses pesticides must do their part to ensure that these products are safely managed.

Does this rule apply to your community?

- Yes No Don't Know Not Applicable

If your community uses pesticides it must ensure those pesticides are stored in compliance with the law and with the recommendations indicated on the pesticide label.

Actions your community should be taking:

If you use pesticides for insect control, to kill weeds on public golf courses, parks, and gardens, or for any other purpose, you must be sure to store those pesticides properly.



Generally speaking, you may not store any regulated pesticide:

- In a manner inconsistent with its labeling.
- So as to cause or allow open dumping.
- So as to cause or allow open burning.
- So as to cause or allow water or ocean dumping.
- So as to violate any applicable federal or state pollution control standard.

It is the responsibility of the pesticide manufacturer to ensure that the pesticide is sold in appropriate containers, and to indicate on the label of each container the proper methods for storing the pesticide. Be sure to read the labels carefully on all pesticides you manage, and follow all storage and handling instructions indicated.

EPA has recommended a number of general procedures for storing pesticides and pesticide containers. EPA suggests that you choose the locations and methods you use to store pesticides carefully taking into consideration the hazardous nature of the pesticide, the potential for accidental releases to the environment, your ability to detect any accidental releases, and the health and safety of those who work around the pesticides. Pesticides should always be stored in a dry, well ventilated room. Be sure that the labels on the pesticide containers, which contain valuable safety information, are plainly visible and that you inspect and maintain both the containers and your storage facility regularly.

ACTIONS TO PREVENT PESTICIDE CONTAMINATION OF THE ENVIRONMENT

1. Pesticides should be stored in a cool, secure and properly constructed building or room that is dry, well ventilated and fireproof.
2. Such storage facilities should be located at least 100 feet away from any drinking water well.
3. Keep pesticides out of the way of activities that might knock over a container or rip open a bag.
4. Pesticide containers should be stored off the floor and in an upright position with the label in plain view.
5. All pesticide containers should be regularly inspected for corrosion, leaks, loose caps, or bungs.
6. To avoid cross-contamination, all pesticide application equipment or items used for handling pesticides should be stored in a special area and not used for other purposes.
7. If by accident a pesticide spills on the floor, quick action must be taken to remove the spill. If the spill is a liquid, soak up as much as possible by throwing activated charcoal, pet litter, or sawdust over it.
8. Surround storage or work areas with concrete floors to prevent chemical seepage into the ground.

Note: If you are disposing of unused pesticides, be aware that these materials may be considered hazardous waste. Please refer to [Section 4 Hazardous Waste and Municipal Solid Waste](#) of this guidance to make this determination.

For more information refer to the EPA Manual [“Protect Your Self from Pesticides - Guide for Pesticide Handler.”](#) Office of Pesticide Programs, USEPA.

SELF-ASSESSMENT QUESTIONNAIRE

1. Does your community store pesticides?

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> Not Applicable
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2. Does your community use or store any pesticides near a drinking water well?

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> Not Applicable
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3. Does your community apply pesticides without reading the label first?

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> Not Applicable
------------------------------	-----------------------------	-------------------------------------	---
4. Are pesticides stored in a location that is unlocked and open to vandalism or to children?

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> Not Applicable
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5. Are pesticide chemicals stored on a permeable surface such as wood, gravel or soil?

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Don't Know	<input type="checkbox"/> Not Applicable
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6. Are pesticide chemicals stored on a concrete (or other impermeable) surface?
 Yes No Don't Know Not Applicable

7. Does your community have any pesticide containers that are rusted, damaged or leaking?
 Yes No Don't Know Not Applicable

8. Are pesticides stored in an area where containers could become damaged or where a chemical spill could occur?
 Yes No Don't Know Not Applicable

9. Does your community have a concrete pad around your storage facility to contain spills?
 Yes No Don't Know Not Applicable

10. Does your community have written policies and procedures on managing and handling pesticides?
 Yes No Don't Know Not Applicable

For more information contact the ADEQ [Hazardous Waste and Compliance Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

Additional Information:

Structural Pest Control Commission at (602) 255-3664.

SECTION 12

Spill Prevention Control and Countermeasures (SPCC) (OIL SPILL) PROGRAM

BACKGROUND

Americans use over 250 billion gallons of oil and petroleum products each year. From the time the oil is produced, to the time it is delivered to its final destination, it will have been stored numerous times at many different facilities, raising the potential for oil spills at every stop. The effects of even a minor oil spill can be devastating, both to the environment and the creatures that inhabit it.



To combat oil spill danger, EPA established the [Spill Prevention Control and Countermeasures \(SPCC\) Program](#). The *SPCC* program is designed to ensure that facilities housing large quantities of oil and facilities located in environmentally-sensitive areas make definite plans to protect against oil spills and other releases. The program establishes spill prevention procedures, methods, and equipment requirements for facilities that consume, store, distribute, drill, produce, gather, process, refine, or transfer certain quantities of oil and oil products. One method EPA uses to ensure that facilities are managing their oil stores correctly and are prepared to handle any spills is requiring facilities to prepare and implement a *SPCC plan*.

Does this rule apply to your community?

- Yes
 No
 Don't Know
 Not Applicable

Your community must comply with the *SPCC* program regulations if you own or operate:

- A facility with a total aboveground oil storage capacity greater than 1,320 gallons.
- A facility with a total underground oil storage capacity greater than 42,000 gallons.
- A facility with a single aboveground container having a storage capacity of greater than 660 gallons.
- A facility that due to its location, could reasonably be expected to discharge oil into navigable waters of the United States (including dry washes) or its adjoining shorelines.

If your community does not own or operate any of the facilities listed above, skip to [Section 13](#).

Actions your community should be taking:

Facilities that are subject to the EPA *SPCC* program requirements must prepare a [SPCC Plan](#). The plan must address three general areas of concern:

1. Operating procedures designed to prevent oil spills at the facility.
2. Control measures that have been installed to prevent a spill from reaching navigable waters.
3. Counter measures to contain, clean up, and mitigate the effects of an oil spill that does reach navigable waters.

The facility *EPA SPCC Plan* must contain, at a minimum, the following elements:

- A written description of any spills occurring within the past year and how those spills were addressed.
- A prediction of the direction, rate of flow, and total quantity of oil that could be released.
- A description of containment and/or diversionary structures or equipment in place to prevent spilled oil from reaching navigable waters.
- A demonstration, where containment and/or diversionary structures or equipment are not practical, of a strong oil spill contingency plan and a written commitment of manpower, equipment, and materials to quickly control and remove spilled oil.

- A complete discussion of the spill prevention and control measures applicable to the facility and its operations.

Each *SPCC Plan* must be certified by a registered professional engineer and must be kept available for review at the facility. Regulated facilities must prepare a *SPCC Plan* within six months of the date they begin operations, and the Plan must be fully implemented six months later.

Arizona's Used Oil Regulatory Program

When the Arizona legislature adopted the federal regulations for managing used oil, it determined that additional regulatory provisions were needed to protect public health and the environment.



These additional provisions are summarized below:

WHAT IS USED OIL?

Arizona has expanded the federal definition of used oil in the [ADEQ Used Oil Program](#). Used oil is any oil that has been refined from crude oil, or any synthetic oil that has been used, handled, transported or stored, and as a result of that use, is contaminated by physical or chemical impurities and is no longer suitable for its originally intended purposes.



- Used Oil includes: Motor oil, metal working fluids, emulsions, transmission fluids, brake fluids, coolants, heating media, refrigeration oils, electrical oils, buoyants, and hydraulic fluids.
- Used does *not* include: antifreeze, cleaning agents, and animal and vegetable oils.
- Gasoline, jet and diesel fuel are *not* used oil: however, if these fuels are mixed with used oil, these fuels must be regulated as used oil.
- Used oil is presumed to be recyclable. If it is not recyclable, it is waste oil.
- EPA considers the burning of used oil for energy recovery as a form of recycling.
- In Arizona, most used oil is burnt for energy recovery.
- Two common examples of devices used in which oil is burned for energy recovery are space heaters and asphalt hot plants.

DEFINITIONS

- Used oil includes oil that has become contaminated as a result of its handling, transportation or storage.
- Off-specification Used Oil means used oil which exceeds any of the allowable levels in 40 CFR 279.11.
- On-specification oil means used oil that is not off-specification used oil.
- [Do-It-Yourselfer \(DIYer\)](#) means a person who generates used oil from maintaining personal vehicles or equipment.

PROHIBITED PRACTICES

Used Oil:

- Cannot be discharged into sewers or waters of the state, without a permit issued by an ADEQ.
- Cannot be incinerated except by a facility authorized to incinerate.
- Cannot be used as a dust suppressant or contact herbicide.
- Cannot be disposed of on land, except in a landfill that has an approved solid waste facility plan.

- Cannot be stored in a surface impoundment.

Where Can Your Community Take Used Oil?

Once used oil is generated, it must be handled in an environmentally responsible manner.

Used Oil Disposal:

Do-It-Yourselfer (DIYer)

A DIYer must take the used oil to one of the following facilities:

- DIY collection center.
- Household hazardous waste collection center or collection area.
- Used oil collection center.
- Used oil Marketer.
- Used oil processor.
- Used oil re-refiner.

A DIYer may burn their used oil, and other DIYer’s used oil as well, in an on-site, oil-fired space heater.

Used Oil Generated by Business Activities

- If used oil is generated through business activities, the business is a regulated used oil generator.
- A regulated generator may self-transport 55 gallons or less of its own used oil to any facility discussed above, **except** a DIY Collection Center.
- If a regulated generator has more than 55 gallons of used oil, it may have a used oil transporter pick-up its used oil, or it may burn its own self-generated used oil in an on-site, oil-fired space heater.
- A regulated self-generator may burn DIYer used oil as well, but may **not** burn used oil generated by other regulated used oil generators.

Transport/Transfer Facilities, Marketers and Burners:

- MUST use Used Oil Transporters *registered with ADEQ* to pick-up used oil from, or deliver used oil to their facilities.

USED OIL COLLECTION CENTERS

A [used oil collection center](#) is required to register with ADEQ, which will issue an identification number to each registrant.

In general, facilities that collect used oil are divided into two categories:

1. Accept large quantities – more than 55 gallons.
 - Operations by transporters, transfer facilities, processors and marketers are typically set-up to deal with large quantities of used oil.
2. Accept small quantities – less than 55 gallons.
 - Facilities that accept smaller quantities of used oil are generally referred to as collection facilities and are subdivided into three classifications.
 - a) DIY Collection Center
 - b) Used Oil Collection Center
 - c) Used Oil Aggregation Point

DIY Collection Center

A facility that can only accept used oil generated by DIYers. Operators of these facilities usually impose some restrictions such as a five (5) gallon limit on DIYers who use their facility. Although DIYers who bring their used oil to DIY used oil collection centers are unregulated generators of used oil, the **DIY collection center itself is regulated as a used oil generator and is regulated by EPA**. Since DYI centers are not required to register with ADEQ, ADEQ does not maintain a list of these facilities. Typical examples of DIY collection centers include automotive retail stores and gas stations that accept used oil from DIYers, but not from businesses.

Used Oil Collection Center

A facility that accepts used oil from businesses and school and municipal maintenance facilities. Although by law, the maximum size of used oil that may be accepted is 55 gallons or less, many such facilities impose a smaller per-load limit. This type of facility **must** register with ADEQ. A used oil collection center may accept used oil from DIYers. This type of facility is classified as a regulated used oil generator.

Used Oil Aggregation Point

A facility that accepts used oil from satellite, field, or regional facilities which it owns, operates or controls. Used oil aggregation points are not required to register with ADEQ. **This type of facility is classified as a regulated used oil generator and is regulated by EPA**. Since used oil aggregation points are not required to register with ADEQ, ADEQ does not maintain a list of these facilities. The maximum size of each individual load of used oil that may be accepted by this type of facility is 55 gallons. A used oil aggregation point cannot accept used oil from regulated used oil generators that are owned and operated by other entities; however, a used oil aggregation point may accept used oil from DIYers.

MARKETER’S CERTIFICATION

A Marketer must provide certification to a burner that is selling on-specification used oil fuel to a burner. A burner who relies on a Marketer’s Certification that the Marketer’s used oil meets used oil specification is not criminally liable for burning off-specification used oil fuel that the Marketer certified as on-specification used oil.

PERIODIC REPORTING REQUIREMENTS FOR USED OIL HANDLERS

Used oil transporters, processors, marketers, and burners are required to submit to ADEQ periodic written reports about their used oil activities. All information about client names and related identifying data, which is required to be submitted to ADEQ, is classified as confidential. [Forms for reporting used oil activities are available from ADEQ](#). Used oil transporters, processors, marketers, and burners may develop their own forms to report their used oil activities as long as the ADEQ required information is included in the report.



Used oil transporters, processors, marketers, and burners are required to submit to ADEQ quarterly reports for each calendar quarter. These reports are due 30 days after the end of the each calendar quarter.

Used oil burners are required to submit annual reports for each year and are due by February 1, following the end of the calendar year.

USED OIL CONTAINER/TANK MANAGEMENT REQUIREMENTS

Any tank or container that stores on-specification used oil is required to be labeled “Used Oil.” In addition, tanks and containers of used oil are required be in good condition. Used oil generators are required to address spills of used oil upon detection.



ADDITIONAL REQUIREMENTS FOR TANKS STORING USED OIL

All regulated handlers of used oil are subject to the following minimum requirements for the tanks in which they store used oil:

- Tanks must be designed for, or capable of storing, used oil safely.
- Tanks must be in good condition (no severe rusting, apparent structural defects or deterioration).
- Tanks must not be leaking (no visible leaks).
- Tanks and fill-pipes to underground tanks must be labeled “Used Oil.”
- Upon detection of a leak to the environment, the tank operator **must**:
 1. Stop the release.
 2. Contain the used oil.
 3. Clean-up and properly manage the released used oil and other materials used for the clean-up.
 4. Repair or replace the defective tank or defective tank components.

In addition to the above requirements, the following requirements also apply:

- Used Oil marketers and burners are required to label all tanks that store on-specification used oil as “On-Specification Used Oil.”
- Used Oil transporters, processors and marketers and “off-specification” used oil burners are required to have secondary containment with the capacity to contain 110 percent of volume of the largest tank in the containment area. However, secondary containment is not required for “on-specification” used oil burner tanks but is recommended.

For more information contact ADEQ [Solid Waste Inspections and Compliance Unit Management Staff](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SELF-ASSESSMENT QUESTIONNAIRE

1. Does your community generate used oil?
 - Yes No Don't Know Not Applicable

2. Where does your community dispose of used oil?
 - Yes No Don't Know Not Applicable

3. Are there DIY collection centers available to residents of your community?
 - Yes No Don't Know Not Applicable

4. Does your community use tanks to store used oil?
 - Yes No Don't Know Not Applicable

5. Is your community compliant with container/tank management requirements?
 - Yes No Don't Know Not Applicable

- 6. If your community uses tanks to store used oil, is the community compliant with the additional requirements for used oil storage tanks,
 Yes No Don't Know Not Applicable

- 7. Does the community burn used oil for energy recovery?
 Yes No Don't Know Not Applicable

- 8. Does your community submit the required periodic reports to ADEQ?
 Yes No Don't Know Not Applicable

SECTION 13

POLLUTION PREVENTION (P2)

Background

Since the best approach to protecting human health and the environment is to keep problems from occurring in the first place, Arizona has a "[Pollution Prevention or P2](#)" policy and strategy, a preferred way to think about protecting the state's natural resources, our health, and the quality of life of future generations.

Arizona's Pollution Prevention Policy Enacted by the Legislature In 1991

In the interest of protecting the public health and safety and the environment, the legislature declared that it is the policy of this state to:

1. Encourage pollution prevention whenever technically and economically practicable, without shifting risks to one part of a process, environmental medium or product to another, and
2. Reduce the amount of hazardous substances used and reduce the amount of hazardous waste generated in this state.

The preferred approaches to protecting public health and the environment place pollution prevention at the top of the list. The primary goal of pollution prevention is:

1. Source reduction: Stop or reduce the generation of wastes and pollutants at their source.
2. Reuse and Recycle is the next best alternative: Collect, remanufacture and reuse waste materials.
3. Waste treatment: Pollution must be treated in an environmentally safe manner: Reduce the toxicity and the amount of release of pollutants.
4. Disposal as a last resort: Pollutants should be released into the environment only as a last resort, and local officials should do everything possible to make sure that the release is environmentally safe.

Instead of using traditional treatment and control methods, pollution prevention aims to anticipate and avoid the generation of pollutants in the first place.

Actions your community should be taking:

Rulings by courts, pronouncements by ADEQ, or wishing alone, cannot clean up the environment or keep it from becoming more polluted. What is needed is an attitude change. Community leaders can help by encouraging environmental awareness and finding ways to create a new ethic: pollution prevention first. Small communities are in a unique position to make things happen and improve public health and the environment. They can encourage and stimulate people to prevent pollution in their daily lives in areas like homes, hospitals, schools and businesses, and in activities like transportation, agriculture, and energy generation and use.

What community leaders can do to fight pollution and preserve environmental quality, human health, and natural resources:

- Set pollution prevention as a major goal and integrate the concept into all your activities.
- Publicly recognize that pollution prevention is a priority. Talk about it and write about it! Then practice what you preach - set an example.

- Educate the public, businesses, and industry about pollution prevention. Help people understand how better uses of natural resources and more efficient ways of working can increase profits, reduce operating costs and result in a cleaner environment.
- Develop programs that provide environmental alternatives.
- Reduce waste. Recycle paper, glass, plastic, aluminum, scrap metal, motor oil, and yard waste.
- Use less energy. Set back thermostats, insulate by planting trees for shade, buy energy-efficient lighting and appliances, and make creative use of daylight.
- Use less water, be conservative. Use ultra-low flush toilets; install water meters, repair leaks, review maintenance schedules, and use water conserving landscaping.
- Develop a transportation strategy. Buy energy-efficient automobiles and other vehicles and keep them tuned. Bike, bus or walk when possible. Reduce toxic substance use in vehicle repair and maintenance. Reduce urban sprawl.
- Promote sustainable agriculture. Take advantage of natural methods of protection. Apply pesticides such as insecticides and herbicides carefully if they must be used. Use integrated pest management techniques to reduce pesticide use.
- Reduce smoke, radon, asbestos, and other indoor-air pollutants.
- Reduce toxic chemical use and storage in homes, schools and businesses by encouraging the use and purchase of non-toxic substitutes for toxic ingredients or products.
- Buy green, recycled or recyclable products. Seek out reusable, recyclable, or returnable packages.
- Reduce lead. In communities where the houses are old and deteriorating (built before the 1980's), take advantage of available lead paint screening programs offered by local health departments. Reduce your exposure to lead based paint chips and dust (replace, cover or remove) and be cautious when children are nearby during renovation or rehabilitation of old buildings.
- Plant trees, shrubs, and indoor plants. They replenish the earth's oxygen supply, clean the air by removing pollution and provide shade to structures to reduce energy use.

For more information, contact the ADEQ [Pollution Prevention Unit](http://www.azdeq.gov/environ/waste/p2/index.html) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call or see our website at <http://www.azdeq.gov/environ/waste/p2/index.html>.

Community Vision

Has your community developed a vision of what the community wants its environment to be like in the future?

- Yes
 No
 Don't Know
 Not Applicable

Community environmental concerns include protecting human and environmental health; having healthy ecosystems and habitat; reducing and/or eliminating pollution in water, air, and land; providing green spaces and parks for wildlife, recreation, and other uses; pursuing ecosystem management; and protecting biodiversity.

P2 activities can be incorporated into the broader community perspective for developing a long-term healthy community. P2 is also a building block for sustainable community activities. A sustainable community is one that is not degrading its environment or using up finite resources.

Pollution prevention is a multimedia or multidisciplinary strategy because it involves integration of improvements to land, water and air. As such, pollution prevention is involved in community problems such as urban sprawl, new economic development, inner-city and brownfield redevelopment, local small businesses, a strong local economy, environmental justice, ecosystem management, recycling, agriculture, biodiversity, lifestyles, green buildings, energy conservation, native plant protection and restoration.

Is your community aware of the environmental impact of its activities?

- Yes No Don't Know Not Applicable

Many activities can interact with the environment and can result in a change to the environment. P2 opportunities are everywhere, for example: dust creation, energy use, hazardous waste, use of natural resources, air degradation, ground or surface wastewater pollution, land contamination areas, odors, noise pollution, visibility concerns, ozone, green house gasses, indoor air pollution, pesticide use, and the need for more landfills. You can make a table of these activities and their impacts and then set goals to address these impacts (SCEPP).

Has your community developed indicators to measure the quality of the environment?

- Yes No Don't Know Not Applicable

Indicators allow us to better understand overall community and environmental health, and, most importantly, they provide data to help guide decision making. Set goals and objectives and formulate indicators of progress in achieving them. This step involves translating the vision into specific goals and milestones. It also tries to incorporate ongoing assessment measures into the pollution prevention strategy. P2 can be a goal or guiding principle for communities and can also provide a focus for specific activities.

Has your community developed a pollution prevention plan?

- Yes No Don't Know Not Applicable

Pollution prevention can reduce waste, and less waste can mean less regulatory liability. Developing a pollution prevention plan will involve analyzing chemical use, waste, emissions, energy use and raw material use, developing pollution prevention goals, implementing goals and measuring results. Children are especially susceptible to the negative effects of chemicals. Home chemical use is *not* regulated. A good principle to follow is always to look for ways to reduce or eliminate the use of toxic chemicals as we go about our daily lives to keep our homes safe for our children, our pets, and us.

Reducing Energy Use and Providing Safe, Healthy Buildings

Does your community have access to information to reduce energy use in homes and businesses?

- Yes No Don't Know Not Applicable

Our energy use is not regulated but energy use causes pollution like air emissions and waste. Our energy use involves use of electricity, natural gas, and gasoline. There is a great deal of information that has been developed to help reduce energy use in our daily lives. Producing energy produces pollution and waste, and wasting energy does the same.

Does your community have a policy to implement green building standards (LEED) into new building construction or renovation?

- Yes No Don't Know Not Applicable

[LEED](#) standards are available to reduce the environmental impact and public health for new building construction and building renovation.

Does your community consider the Energy Star rating when purchasing new appliances/equipment?

- Yes No Don't Know Not Applicable

[Energy Star](#) is an EPA program helping businesses and individuals protect the environment through superior efficiency. Look for products with the energy star label.

Actions your community could be taking:

Local governments should promote buildings that are environmentally responsible, profitable and healthy places to live and work. This involves becoming knowledgeable about the training and standards provided by the [U.S. Green Building Council \(USGBC\)](#). Constructing and operating buildings requires enormous amounts of energy, water, and materials and creates large amounts of waste. Where and how they are built affects the ecosystems around us in countless ways. And the buildings themselves create new indoor environments that present new environmental problems and challenges. As the environmental impact of buildings becomes more apparent, pollution prevention and a growing field called *sustainable design* is leading the way to reduce that impact at the source. Sustainable design is the practice of creating healthier and more resource efficient models of construction, renovation, operation, maintenance, and demolition.

Environmentally Preferred Purchasing (EPP)

Has your community implemented a program for green purchasing (Environmentally Preferred Purchasing - EPP)?

- Yes No Don't Know Not Applicable

[Environmentally Preferred Purchasing](#) or green purchasing includes buying recycled content products, environmentally preferable products and services, bio-based products, energy and water-efficient products, alternate fuel vehicles, products using renewable energy, and alternatives to hazardous or toxic chemicals. Progressive communities encourage environmentally preferred product purchasing which can include buying recycled products, low emission paints, and buying green power.

Typical categories include:

- Paper and Paper Products
- Vehicular Products
- Construction Products
- Transportation Products
- Park and Recreation Products
- Landscaping Products
- Non-paper Office Products
- Miscellaneous

Solid Waste

Has your community considered becoming more involved in local and business generated solid waste generation and recycling?

Much of the growing volume of garbage is from the use of disposable consumer products and excess packaging. Rather than develop landfill after landfill, a comprehensive design strategy could be developed for preventing generating and land filling solid waste. As an example, a

garbage prevention strategy could require that most everything brought into a landfill be recycled for reuse or recycled back into the environment through biodegradation. If a garbage prevention strategy can be implemented, actual remaining waste could be minimal.

Pesticide Management

Has your community considered implementing an Integrated Pest Management Program?

Pesticide use causes pollution and waste. Pollution can cause regulatory concerns and health problems. Water pollution from runoff is one big regulatory concern. *Integrated Pest Management (IPM)* is a pollution prevention approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks. IPM has been proven to work equally well in cornfields, on golf courses, in backyard gardens, and in hospitals, schools and homes. The [National Foundation for IPM Education, the Bio-Integral Resource Center](#), and the [University of Arizona](#) are sources of information.

Green House Gases

Has the community considered providing information on and implementing a voluntary program to reduce green house gases?

- Yes
 No
 Don't Know
 Not Applicable

Arizona Climate Action Initiative

[Arizona Climate Action Initiative](#): Greenhouse gasses degrade our existing environment. While not currently a regulatory compliance issue, the possibility of change in the climate system is a concern because many aspects of human society rely on a stable climate. After decades of research, an increasing amount of evidence suggests that human emissions of heat-trapping greenhouse gases, including carbon dioxide, methane, and nitrous oxide, may be altering the natural rhythm of climate variability. Communities can start to meet these challenges by addressing local problems such as traffic congestion, air pollution, urban sprawl, and energy costs.

Source reduction techniques include: reducing pollution from coal fired electricity generating plants; implementing energy efficiency and conservation and increased use of solar energy; land use planning, transportation improvements and traffic management that help people travel less distance or less frequently; energy efficient recycling of products and waste streams, more use of energy efficient buildings, homes and schools, tree planting, recovering methane from landfills, etc.

Has the community considered implementing a SCEPP?

- Yes
 No
 Don't Know
 Not Applicable

In many ways, a [Small Community Environmental Protection Plan \(SCEPP\)](#) is an extension of pollution prevention (P2) initiatives. A SCEPP and P2 programs share the philosophy that future gains in environmental protection are more likely to come from a proactive approach that avoids and minimizes problems rather than reacting to them.

The incorporation of P2 concepts into a SCEPP can help expand a pollution prevention program to all elements of environmental management and can help ensure broad awareness of pollution prevention issues; enhance relevant training and communication; and strengthen

the ability to recognize and capitalize on pollution prevention opportunities. As a result, the benefits of P2 can be significantly enhanced through a SCEPP framework. A SCEPP can be the primary management approach to determining, prioritizing, implementing, and improving upon those environmental issues that will help focus on implementing pollution prevention and regulatory compliance.

Fleet Management

Has your community considered purchasing alternatively fueled vehicles, using alternative fuels, using green fleet maintenance practices, and encouraging use of public transportation?

Yes No Don't Know Not Applicable

Reducing use of gasoline and diesel fuels through use of higher mileage vehicles and alternative fuels can have a significant effect on reducing air pollution and reducing fuel costs. Hybrid vehicles and the new low sulfur clean diesel fuels will be more widely available in the near future. Alternative fuels such as "[biodiesel](#)" and ethanol may help reduce our need for oil imports. Preventive maintenance practices, particularly for heavy duty vehicles such as police cars, fire trucks, garbage trucks, and road maintenance equipment, saves money, extends engine and service life, and reduces pollution in the long run. Recycling of waste engine fluids, water based parts cleaning, and dry spill clean up techniques can reduce waste and save money. Encouraging car pooling, commuter clubs, flexible work hours and use of public transportation can reduce air pollution, save time and save money.

For more information, contact the ADEQ [Pollution Prevention Unit](#) at (602) 771-2300 or toll free at (800) 234-5677, press 0 to speak to the receptionist who will direct your call.

SECTION 14

MINI CAPITAL IMPROVEMENTS PLAN FOR SMALL COMMUNITIES

This section is provided to assist small communities to finance, build and maintain public works facilities. Sound public facilities are essential to a community's growth, prosperous business environment, and quality of life.

This is written for the non-engineer, and is intended to provide local officials and public works directors for small communities and county water/sewer districts with a straightforward description of the capital improvement planning and budgeting process. The end product of the process, the *Five-Year Mini Capital Improvements Plan or Financial Plan*, provides the essential tool to evaluate local needs, identify priorities objectively, identify costs and funding sources, and ultimately, schedule construction projects.

Scope of the Problem

There is an overwhelming demand for shrinking state and federal grant dollars. A distressed economy and lack of aggressive financial planning further add to a problem that has reached staggering proportions. Only with better financial planning and aggressive public education will local governments be able to maintain financial solvency and adequate service capabilities. The cost may be high but cannot be ignored. It will not go away or get cheaper.

What is a Capital Improvements Plan?

A *Capital Improvements Plan (CIP)* is a budgeting and financial tool used by a local governing body to establish public works rehabilitation and maintenance priorities and to establish funding for repairs and improvements. The CIP includes planning, setting priorities, effective public works management, financial management, and community decision making.

A CIP is also an invaluable asset when meeting the eligibility requirements for grants and/or below market loans as a means to finance improvements. Technical assistance grants are available to develop a CIP.

[See Arizona Department of Commerce and the WIFA section below.]

Does your community have a Capital Improvements Plan?

Yes No Don't Know Not Applicable

Who Should Develop and Maintain a Mini-CIP?

- All small communities (municipalities under 10,000 in population) that need to make water, sewer, street repairs and improvements (most drinking water and wastewater delivery systems are located under roads and arterial streets); and
- County Water and Sewer Districts in rural areas that need to make water or sewer repairs and improvements.
- County governments that need to make road improvements and set up capital improvement plans may find some parts of this section useful.

The focus of this section is on water, sewer, street repair, and improvement planning and financing methods so that your community or district can create a simple capital improvements plan (financial plan) or revise or update an existing CIP.

The following individuals and department staff should be involved in the development of a Capital Improvements Plan which can be used in planning and financing improvements:

- Governing Body (Mayor, Town or City Manager, Council)

- Clerk
- Financial Staff
- Public Works Director and Maintenance Staff
- Planning Director
- Consulting Engineer
- Environmental Director
- Other Consultants such as Accountants or Grant Writers

A CIP consists of five basic elements:

1. Inventory and evaluation of existing conditions for each facility
 - a) **Materials Survey** and Assessment of existing infrastructure
 - b) Needs assessment based on the **Materials Survey**
2. Prioritization of improvement needs for each public facility and prioritization of the needs for the entire infrastructure
3. Identification of financing options that can be used to meet the needs
4. Establishment of a time schedule that matches available funds to the improvements required to meet the system needs, and
5. A brief written document (*CIP*) which is formally adopted by the governing body by resolution or by ordinance.

Arizona Department of Commerce Community Assistance

A community's CIP normally covers all public works: streets, water, sewer, bridges, drainage, parks, public buildings, etc. This section sets forth a method to establish a "Mini CIP", focusing only on the street, sewer, and drinking water facilities. These three facilities are normally the most expensive to construct and maintain. Each is subject to intense regulation and are the most time-consuming to administer. For communities that have a desire to reap the benefits of a full CIP, the [Arizona Department of Commerce](#), *Community Assistance Rural Development Program* has additional materials available and links to funding sources.

Why Should a Local Government Have a Capital Improvements Plan?

1. To save money.
2. To improve effectiveness of government expenditures.
3. To understand and respond to citizens' needs and desires.
4. To obtain community understanding and support for critical projects. Citizen participation helps generate support for making public facility repairs.
5. To encourage economic development. New businesses need adequate water, sewer, parking, and street access. A CIP provides for these facilities.
6. To prevent public works crises. With a CIP, government officials are made aware of what needs to be done, how much it costs, when it needs to be done. Most crises can be prevented with a CIP.
7. To encourage consensus. Consensus will reduce administrative delays and conflicts because there is agreement on the scope of work, timing, and responsibilities.
8. To help a governing body set up a stable financial plan to meet public works needs, thus ensuring financial stability. A CIP demonstrates to bond underwriters that the local government is a better financial risk.
9. To help improve your chances for obtaining grants. For example, a CIP will be an asset when applying for development grants and below market interest loans.
10. To help the governing body provide direction to its own staff and consultants. A CIP compels local staff to thoroughly justify each project request.
11. To prompt a thorough analysis of all financial options. This analysis may help the local government uncover financing options which can help stretch tax dollars and save money.
12. To take unreasonable pressure from the governing body to fund a project that a small group thinks is important. A CIP helps to prevent funding "pet projects."

Can Cost Savings be Realized from a CIP?

A CIP is a *proactive* cost savings tool. It identifies where improvements will be needed over time rather than waiting for each crisis to occur before taking action. It is usually more expensive to make emergency repairs than it is to maintain a system in working order by foreseeing problems and making corrections before there is a total breakdown in the system.

Since there is never enough money to meet all needs, the CIP assists the governing body in establishing priorities for funding projects for different types of facilities. For example, a town council is faced with a decision as to whether to fund the paving of a street this year or to fund the repair of the ailing sewage lift station on another street. A CIP provides the council with information on which project is most technically critical and which is most economical. Thus, money is allocated in the most effective way with an eye to avoiding major breakdowns or crises.

What is the Relationship Between Engineering Master Plans and the CIP?

An engineering master plan is a detailed analysis and pre-design tool for a public works facility. The master plan is a systematic evaluation which proposes a comprehensive solution to meet local needs. The engineering plan is a more detailed technical analysis; it is not a budgeting or financial tool. A CIP is a budgeting and financial tool that is used by the governing body to set public works priorities from a financial perspective. If possible, the CIP is based on an engineering master plan for each facility discussed in the CIP.

Unfortunately, due to lack of funding, many small communities do not have an engineering master plan for each public facility. Yet, the governing body still must budget money every year for public works repairs and upgrades. This section provides sound but practical analytical methods to identify needed improvements and begin the budget process to fund detailed plans, repairs, and construction.

Capital Improvements Planning Process Summary **(Inventory, Evaluation, Setting Priorities, Funding, Public Education)**

The development of a Mini-CIP requires information for each community facility be collected and assembled in a form that can be entered into the CIP process. The information is generally available at the community level and can be assembled by local government using existing staff or part-time help. A summer intern with an engineering background could be employed to collect and tabulate the data.

The following process is used to develop a Mini-CIP:

1. Inventory - Functional Classification of the Three Systems

This item consists of the preparation of a map breaking the three systems into segments and showing the basic function of each segment. For example, the segments of the three systems could be described as follows:

- Street system - arterial streets, collector streets, local access streets.
- Sewer system - treatment, trunk line, collectors.
- Water system - treatment, transmission line, distribution pipelines, pumping.

The functional classification breaks each system down into segments so that each segment can be designed for its specific function and a database can be constructed. For example, arterial streets are designed to carry traffic with a minimum of conflict from cross streets. Local access streets are designed for slow speeds and provide direct access to abutting properties.

2. Evaluation - Condition of the Three Systems

Each system must be evaluated to identify the relative condition of each segment. This can be a costly process, depending on the detail required. This section sets forth basic

procedures to identify major system deficiencies. Detailed technical system analysis will require the use of a professional engineer with the expertise and resources required to carry out a detailed condition analysis. At some stage it may be necessary to prepare a full engineering master plan for the street, sewer, and water systems. Evaluation also means looking at potential public health threats and compliance with state and federal regulations.

3. Set Improvement Priorities

Improvement priorities for each system are developed by analyzing the information from Step 1 and 2 for the three systems. Overall priorities for all 3 systems are then established.

4. Develop Cost Estimates for Improvements

Preliminary cost estimates for improvements identified by the condition analysis are made using estimated bid prices from local contractors. Due to the general nature of the condition analysis, these cost estimates are not accurate enough to be used as a definitive basis for estimating the cost of a specific improvement project, but are acceptable for budget level estimates.

5. Funding Research and Analysis

The research and identification of funding sources and options to finance improvements to each system is one of the most difficult tasks of developing a CIP. Changes in federal and state funding programs, makes it impossible to forecast funding availability from these sources for short time periods when budgets are known. For this reason, the current level of funding, from state and federal grants or low-interest loans, and user fees is assumed to be the same for the duration of the CIP.

6. Public Involvement and Education

Public support of the CIP is the most essential step in the entire planning process. A draft CIP document or chart must be prepared and distributed to the media and the public. A variety of methods must be used to educate the public about the repair and improvement needs.

7. Governing Body Adopts CIP

The governing body must formally adopt the CIP by resolution or ordinance. A "final" CIP document or chart must be prepared and attached to the community's annual budget document.

8. Secure Funding

This may include applying for and receiving state or federal grants and loans, raising user fees, issuing bonds to finance capital improvements.

9. Construct Improvements

Now that the money is in hand, the scheduling and management of the construction or repair projects may begin.

10. Annual Update of CIP

The CIP should be updated *each year* prior to approval of the annual budget. Attach the updated CIP to the annual budget document.

Roles and Responsibilities: Who does what in the CIP process?

The composition and needs of each local government will vary. The following is a summary of the role of each of the key officials and participants often involved in the capital improvements planning and financing process:

1. **Governing Body (City council or county commissioners or county water/sewer board)** - Makes policy decisions, financial decisions, and management decisions. Directly represents the voters. Has the responsibility to involve the general public in the discussions regarding proposed improvements. For small municipalities in particular, the mayor is a key figure because the mayor supervises the staff, manages town issues, and formally represents the town on public facility improvement matters.
2. **City Manager** - Often the city or town manager usually serves as the CIP coordinator. The manager prepares budgets and financial proposals and proposes new methods to improve the effectiveness of the government.
3. **Lead Financial Researcher (Typically, the CIP Coordinator in Small Cities and Towns)** - Investigates and analyzes financial options to pay for improvements. For many small communities, this person is usually the city clerk. For county water/sewer districts, this person may be someone on the board. This person may be a financial consultant.
4. **Engineering Consultant** - Provides engineering and facility management expertise when designing complex major improvements, such as water and sewer treatment plants. Some firms may also provide financial, planning, grant writing, and related services. Small towns typically contract with an engineer to provide part time assistance.
5. **Public Works Director or Maintenance Superintendent** - Operates, maintains, repairs, and replaces the community's public facilities and conducts analysis of water, sewer, street and other needs. For many small communities, the director is responsible for carrying out the repairs in the CIP and must work closely with the governing body and consulting engineer.
6. **Local Government Attorney** - Clarifies legal requirements.
7. **Planning Board and Planning Director** - Advises the governing body and the CIP coordinator regarding the relationship of proposed public works improvements to the comprehensive plan (the overall plan of development and conservation for the community). A CIP and individual improvement projects may be used to carry out the development goals of the comprehensive plan. If the town or county has a professional planning director, that person is sometimes asked to serve as the Mini-CIP coordinator.
8. **Bond Counsel** - If bonds will be used to finance improvements, bond counsel prepares the issue so that the bonds are legally correct and marketable.
9. **Grant Writing Consultant** - Prepares complex grant and loan application packages. Often administers projects if grants are awarded. Some communities handle grant writing with local staff, some contract out this function to a consultant.

The role of the CIP Coordinator is critically important. The coordinator has to be in charge of pulling everything together from the many individuals involved in the process. The coordinator has to make sure the work gets done.

The CIP Coordinator serves as a troubleshooter, particularly when problems with financing occur. The governing body should formally designate the Coordinator after careful consideration of who has the appropriate management, planning and financial skills to handle the job. If a consultant is chosen for the post of coordinator, the governing body must still *supervise* the consultant and make the final policy decisions.

Most local governments find that a team approach to preparing and carrying out the CIP is most effective. Typically, a committee of the key officials, staff, and consultants compose the team.

Comprehensive Plan, Land Use Regulations and the Planning Board

Local officials need to think about the "big picture" before they make major improvements to a community's water system, sewer system, and streets. A comprehensive plan, zoning regulations, and subdivision regulations are part of the "big picture." The planning board advises the governing body on these issues.

Does your community have a planning board?

- Yes No Don't Know Not Applicable

If so, get the planning board involved in the preparation of the Mini-CIP?

Small communities benefit from having a planning board and preparing and updating a comprehensive plan. A comprehensive plan is a *written* statement or "blueprint" of how the citizens think the community should develop in the future. The plan provides advice on how to make the community more beautiful, more efficient and a safer place to live. The plan suggests which lands should be developed and which buildings could be improved. The plan also provides advice on which lands and buildings should be preserved in their present state. A comprehensive plan can include a suggested long range development program for public works such as water, sewers, and streets. Knowing the desired development pattern for the community is important before local officials undertake major water, sewer, or street improvements.

The Mini-CIP can be an important tool to help the community carry out its comprehensive plan.

Examples:

- If a community wants new business development in the downtown retail district, the Mini-CIP can propose that upgraded water and sewer lines will be needed to stimulate and service new development.
- Private property owners may not be able to make improvements to their houses and businesses until the community installs central water and sewer systems or repairs existing systems.
- For the community to succeed in carrying out its comprehensive plan of community improvements, central water and sewer systems may first have to be installed or upgraded.

A comprehensive plan can also help with the preparation of the Mini-CIP because a comprehensive plan includes population projections for the community. To compute the sizes of new water and sewer mains and treatment plants, engineers or designers need to know the estimated future population. Whether the population is growing, declining or stagnant is also important in determining how much each resident will pay for the improvements, now and over the next few years. *This information is required when applying for development grants and below market interest loans.*

Mini-CIP and Zoning Regulations

It is important to consider how your Mini-CIP relates to your zoning regulations. For example, if you are improving sewer lines through a residential neighborhood that is zoned "single family residential use," you would not want to oversize the lines. Oversized lines are an invitation for developers to suggest rezoning of the neighborhood for apartments or commercial development that may disrupt the quiet nature of the neighborhood. This usually leads to intense disputes between the developers and the existing neighborhood residents, with the local government officials caught in the middle. Local officials have learned from experience that zoning can not usually control the development pressure that oversized sewer lines unleash.

Another relevant issue in planning improvements is the ultimate population density specified or implied by the community's zoning ordinance. This is called the "build out density." The build

out density is simply the total number of buildings that would be built if all vacant lots and lands are developed. It is important to look at the build out density to estimate the number of new water and sewer hookups needed, as well as the new capacity needed for the water and sewer treatment plants.

Your community's subdivision regulations have a relationship to water and sewer improvements. New housing subdivisions will need water and sewer facilities. Does your community want these new neighborhoods on central water and sewer facilities? Is there enough treatment capacity to handle more subdivision activity?

In summary, if you have a planning board, get them involved to help you look at the bigger picture. For unincorporated communities the county water and sewer district representatives should seek the assistance of the county planning board and staff. If you don't have a planning board, the governing body and the staff should at least discuss these issues before making major water, sewer, and street improvements.

The Value of Policies in Developing the Mini-CIP

A local government should establish management policies that guide the Mini-CIP process. Policy guidelines are a reflection of overall community goals and objectives related to future growth and development and fiscal capacity. Policies are useful because they provide long-term guidance on how day to day decisions should be made, so that the daily decisions conform to long-term and overall community needs or desires. Decision makers need to take the time to ask themselves questions about where their community is going, how they are going to get there, and how funds will be allocated to do this. The Planning Board should be part of this process because it is their responsibility to make recommendations regarding land use, zoning, and comprehensive planning that should be compatible with and coordinated with CIP policies.

Public works policies can span the range from fiscal policies concerning indebtedness, to management policies relating to proper maintenance and operation of a facility. Some categories of policies include fiscal policies, policies on allocating costs, policies on how to finance capital projects, policies on extension of water and sewer mains, and policies on planning construction management.

Examples of policies a local government might develop include:

- Your local government's willingness to incur debt for facility improvements and replacement if necessary and the financial means to repay that debt.
- Water, sewer, and street improvements to encourage redevelopment of run-down areas in town.
- Municipal water and sewer will only be provided to areas that are in the municipal limits or are to be annexed into the municipality.

Need for Engineering Services

There are limitations to the Mini-CIP. However, even without an engineering master plan, the Mini-CIP process enables the local government to:

1. Develop and retain historical repair and maintenance costs.
2. Perform an inventory including a **Materials Survey of the complete delivery system including pipes**, and analysis of your water system, sewer system, and streets (with the exception of very technical drinking water treatment analysis and wastewater treatment analysis).
3. Develop general cost estimates for annual in-house replacement efforts, for objective prioritization of improvements, and for financial planning.
4. Develop public education and information programs to show the need for funding public works projects.

Much of the needs analysis in the CIP process can be done by the local public works director or maintenance supervisor. Some analysis may require a professional engineer. Communities are urged to work with a qualified professional engineer on needs or problems that local staff cannot handle.

Water Infrastructure Finance Authority of Arizona (WIFA)

The [Water Infrastructure Finance Authority of Arizona \(WIFA\)](#) is an independent agency of the state of Arizona and is authorized to finance the construction, rehabilitation and/or improvement of drinking water, wastewater, wastewater reclamation, and other water quality facilities/projects. Generally, WIFA offers borrowers below market interest on loans for one hundred percent of eligible project costs.

As a "bond bank," WIFA is able to issue water quality bonds on behalf of communities for basic water infrastructure. Through active portfolio and financial management, WIFA provides significant savings due to lower interest rates and shared/reduced closing costs. The WIFA Board of Directors has established a target interest rate ranging between 70% and 95% of tax-exempt AAA Bond Rate for government entities and 70% to 95% of the prevailing prime rate for non-government entities.

WIFA's principal tools for providing low interest financial assistance include the **Clean Water Revolving Fund** for publicly held wastewater treatment projects and the **Drinking Water Revolving Fund** for both publicly and privately held drinking water systems. Both funds are capitalized by contributions from the state and the U.S. Congress.

WIFA Technical Assistance Grants Program

WIFA also manages a Technical Assistance (TA) program. The TA program offers pre-design and design grants to all eligible wastewater and drinking water systems. Both pre-design and design loans are available. The purpose of the TA program is to enhance project readiness to proceed with a WIFA project construction loan.

Development Grants for Mini-CIP

WIFA Technical Assistance Grants are available to develop capital improvements plans for water and wastewater systems who meet the eligibility requirements.

For more information visit the [WIFA website](#) or contact WIFA staff at (602) 364-1310 or toll free at (877) 298-0425 or by Fax (602) 364-1327.

Other Funding Sources

Visit the [ADEQ Small Community Compliance Assistance](#) website or contact your [ADEQ Community Liaison](#).

APPENDIX A

ACRONYMS

A	
AAC	Arizona Administrative Code
ACM	Asbestos Containing Materials
ADEQ	Arizona Department of Environmental Quality
AHERA	Asbestos Hazard Emergency Response Act
APP	Aquifer Protection Permit
ARS	Arizona Revised Statute
AST	Above Ground Storage Tank
AWQS	Aquifer Protection Water Quality Standards
AZPDES	AZ Pollution Discharge Eliminations System
AZSERC	Arizona State Emergency Response Commission
B	
BADCT	Best Available Demonstrated Control Technology
C	
CAA	Clean Air Act and Clean Air Act Amendments
CAFO	Concentrated Animal Feeding Operations
CCR	Consumer Confidence Report
C&D	Construction & Demolition (Landfills)
CDC	Centers for Disease Control
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CIP	Capital Improvements Plan
CO	Carbon Monoxide
CPSC	U.S. Consumer Products Safety Commission
Cu	Copper
CWA	Clean Water Act and Clean Water Act Amendments
D	
DIY	Do It Yourself
DMR	Discharge Monitoring Report
E	
ECOS	Environmental Council of States
EIN	EPA (RCRA) Identification Number
EMS	Environmental Management System
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act EPCRA
EPP	Environmentally Preferred Purchasing
F	
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
H	
HAA5	Haloacetic Acids
HAP	Hazardous Air Pollutants
HAPRACT	Hazardous Air Pollutants Reasonably Available Control Technologies
I	
IOC	Inorganic Chemicals
IPM	Integrated Pest Management

APPENDIX A

L	
LEED	Leadership in Energy and Environmental Design
LEPC	Local Emergency Planning Committee
LQG	Large Quantity Generators
M	
MACT	<u>Maximum Achievable Control Technologies</u>
MCL	Maximum Contaminant Level
MINI-CIP	Mini-Capital Improvement Plan
MSSP	Microbiological Site Sampling Plan
MSWLF	Municipal Solid Waste Landfill Facility
N	
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NO ₂	Nitrogen Dioxide NO ₂
NOC	Notice of Opportunity to Correct
NOV	Notice of Violation
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
NSPS	New Source Performance Standards NSPS
P	
P2	Pollution Prevention
Pb	Lead
PCB	Polychlorinated Biphenyls
PCS	Petroleum Contaminated Soils
PM ₁₀	Particulate Matter less than 10 microns in diameter
POTW	Publicly Owned Treatment Works
PWS	Public Water System
R	
RACM	Regulated Asbestos-Containing Materials
RCRA	Resource Conservation and Recovery Act
S	
SARA	Superfund Amendments and Reauthorization Act
SCEPP	Small Community Environmental Protection Plan
SDWA	Safe Drinking Water Act and Safe Drinking Water Act Amendments
SIP	State Implementation Plan
SMRF	Self-Monitoring Reporting Forms
SOC	Synthetic Organic Chemicals
SO ₂	Sulfur Dioxide
SPCC	Spill Prevention Control and Countermeasure
SQG	Small Quantity Generators SQG
SWPP	Source Water Protection Program
SWTR	Surface Water Treatment Rule

APPENDIX A

ACRONYMS

T	
TA	Technical Assistance (WIFA)
TRI	Toxic Release Inventory Report
TSCA	Toxic Substance Control Act
TSD	Treatment, Storage, Disposal Or Recycling Facility (TSDR)
THM	Trihalomethanes
TTHM	Total Trihalomethanes
U	
USGBC	U.S. Green Building Council
UST	Underground Storage Tank
V	
VOC	Volatile Organic Chemicals or Volatile Organic Compounds
W	
WIFA	AZ Water Infrastructure Finance Authority
WHP	Wellhead Protection Program and Wellhead Protection Plan
WQARF	Water Quality Assurance Revolving Fund
WW	Wastewater

Also see [EPA Environmental Terms Glossary](http://www.epa.gov/OCEPaterms/)
<http://www.epa.gov/OCEPaterms/>



Small Communities Environmental Compliance Assistance Project

CHECK LIST

In recognition of the limited financial, technical, and administrative resources available to small communities and special districts for environmental compliance, the Arizona Department of Environmental Quality (ADEQ) *Small Community Policy* is designed to promote the development of management tools to be used in identifying, prioritizing, correcting, and preventing future environmental problems.

Once the requirements of this policy have been met, eligible small communities and special districts who volunteer to participate in this project may qualify for up to 100% penalty reduction from ADEQ for environmental violations. ADEQ's policy will also qualify eligible small communities and special districts for special penalty considerations from the U.S. Environmental Protection Agency (EPA).

ADEQ has developed detailed guidance to assist eligible small communities and special districts to conduct a *Self-Assessment* of their environmental activities and responsibilities to determine compliance with statutes, rules, and regulations. Based on the results of the *Self-Assessment*, eligible communities and special districts that voluntarily disclose environmental violations, make a Good Faith Commitment to cooperate with ADEQ to resolve violations and agree to develop a Small Community Environmental Protection Plan (SCEPP), will qualify for a significant reduction or waiver of penalties that might otherwise be imposed.

This Check List is intended to assist small communities and special districts to determine their eligibility to participate in this project and to track compliance with the policy terms and conditions. The completed Check List does not need to be submitted to ADEQ.

ADEQ's Small Community Policy is the governing document and should be reviewed prior to completing this Check List.

<input checked="" type="checkbox"/>	#	ELIGIBILITY REQUIREMENTS	<input checked="" type="checkbox"/> YES	If YES, Go to Check List #	<input checked="" type="checkbox"/> NO	If NO, Go to Check List #
<input type="checkbox"/>	1.	Are you a <u>non-profit government entity</u> (incorporated or unincorporated) that owns facilities that provide municipal services?		Go to # 2		Go to # 4
<input type="checkbox"/>	2.	As a <u>non-profit government entity</u> , do you serve <u>less than 3,300 residents</u> based on the most recent U.S. Census Bureau Estimate?		Your community is <u>automatically eligible</u> to participate. Go to # 7		Go to # 3
<input type="checkbox"/>	3.	As a <u>non-profit government entity</u> , do you provide municipal services to between 3,301 to 10,000 residents based on the most recent U.S. Census Bureau Estimate?		Eligibility is on a <u>Case-by-Case basis</u> . A <u>Letter Requesting to Participate</u> and a <u>Capacity Test</u> is required. Go to # 5		You are <u>not</u> eligible to participate in this program.
<input type="checkbox"/>	4.	Are you a <u>special district</u> that owns facilities that supply municipal services to <u>less than 10,000 persons</u> based most recent U.S. Census Bureau Estimate?		Eligibility is on a <u>Case-by-Case basis</u> . A <u>Letter Requesting to Participate</u> and a <u>Capacity Test</u> is required. Go to # 6		You are <u>not</u> eligible to participate in this program.
<input checked="" type="checkbox"/>	#	CAPACITY TEST: ELIGIBILITY REQUIREMENTS – CASE-BY-CASE BASIS				
<input type="checkbox"/>		<input type="checkbox"/> Small Communities serving 3,301 to 10,000 residents <u>must</u> provide a <u>Letter</u> to ADEQ specifically requesting consideration to participate.				
<input type="checkbox"/>	5.	<input type="checkbox"/> The letter <u>must</u> include information as to why ADEQ should conduct a Capacity Test to determine whether the community's administrative, technical and financial capacity is such that the community's compliance with environmental requirements would improve significantly with ADEQ assistance. Use the Eligibility Capacity Test Indicators listed in the <i>ADEQ Small Community Policy</i> as guidance. These indicators will be used by ADEQ in conducting a Capacity Test to determine whether your Small Community will be approved to participate in this program. ADEQ may consider other indicators not listed in the policy.				
<input type="checkbox"/>		<input type="checkbox"/> If ADEQ approves your Small Community to participate in this program, Go to # 7 and # 8.				
<input type="checkbox"/>		<input type="checkbox"/> Special Districts serving less than 10,000 persons <u>must</u> provide a <u>Letter</u> to ADEQ specifically requesting consideration to participate.				
<input type="checkbox"/>	6.	<input type="checkbox"/> The letter <u>must</u> include information as to why ADEQ should conduct a Capacity Test to determine whether the special district's administrative, technical and financial capacity is such that the special district's compliance with environmental requirements would improve significantly with ADEQ assistance. Use the Eligibility Capacity Test Indicators listed in the <i>ADEQ Small Community Policy</i> as guidance. These indicators will be used by ADEQ in conducting a Capacity Test to determine whether your Special District will be approved to participate in this program. ADEQ may consider other indicators not listed in the policy.				
<input type="checkbox"/>		<input type="checkbox"/> If ADEQ approves your Special District to participate in this program, Go to # 7 and # 8.				

<input checked="" type="checkbox"/>	#	SPECIAL CONSIDERATIONS & BENEFITS FOR QUALIFIED PARTICIPANTS
<input type="checkbox"/>	7.	<p>An eligible Small Community or Special District can qualify for a 100% penalty reduction by:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Making a Good Faith Commitment [See # 9] to environmental compliance, and <input type="checkbox"/> Developing a comprehensive Small Community Environmental Protection Plan (SCEPP) designed to maintain compliance once achieved. <p>A SCEPP may be developed with or without ADEQ assistance, but to qualify for 100% penalty reduction, the SCEPP must be submitted to ADEQ prior to ADEQ's identification of the violation(s) subject to the penalty. [See # 10]</p> <p>If an eligible Small Community or Special District has not yet submitted a SCEPP to ADEQ, ADEQ will still offset a higher than normal amount of a civil penalty up to a 75% penalty reduction if the all of the following requirements are met:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Agree to correct the violations at issue; <input type="checkbox"/> Make a Good Faith Commitment [See # 9] to environmental compliance; and <input type="checkbox"/> Adopts a Small Community Environmental Protection Plan (SCEPP) as a Supplemental Environmental Project (SEP). <p>A SCEPP may be developed with or without ADEQ assistance. [See # 10]</p> <p>GOOD FAITH COMMITMENT: 3 STEPS</p>
<input checked="" type="checkbox"/>	#	<p>To demonstrate an overall Good Faith Commitment to cooperating with ADEQ in resolving violations, a eligible Small Community or Special District must:</p> <ol style="list-style-type: none"> 1. Promptly self-disclose known violations; 2. Make attempts to comply or make a request to ADEQ for compliance assistance prior to initiation of enforcement actions; 3. Participate in a comprehensive <i>Self-Assessment</i> compliance evaluation to identify violations; 4. Promptly correct known violations; 5. Demonstrate a willingness to remediate harm to public health, welfare, or the environment; 6. If necessary, enter into a <u>written</u> and enforceable compliance agreement establishing a schedule to correct all violations as expeditiously as practicable in order of <i>Risk-Based</i> priority, or enter into a <u>written</u> and enforceable agreement establishing a schedule to correct all <u>known</u> violations as expeditiously as practicable in order of <i>Risk-Based</i> priority and to develop a SCEPP for all its operation; and 7. Adhere to the terms of the <u>written</u> agreement and compliance schedule.
<input type="checkbox"/>	9.	

<input checked="" type="checkbox"/>	#	<p>STEP 1: GOOD FAITH COMMITMENT</p> <p>Identifying Violations: The first step towards environmental compliance is a comprehensive evaluation. This compliance evaluation may be conducted with assistance from ADEQ, but must be completed as part of the good faith commitment. A thorough assessment of the compliance status of a community or special district must include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. A comprehensive evaluation of compliance with every applicable environmental requirement; <input type="checkbox"/> 2. Current and anticipated future noncompliance with those environmental requirements; <input type="checkbox"/> 3. Comparative risk to public health, welfare, or the environment of each current and anticipated future noncompliance, <input type="checkbox"/> 4. An evaluation of compliance options; and <input type="checkbox"/> 5. Special considerations including the level of government that operates the utility systems, regionalization, restructuring, consolidation of staff and processes with other operations within the community or special district, or the community=s resources. <p>ADEQ has developed detailed Implementation Guidance including a Self-Assessment Questionnaire to assist Small Communities and Special Districts in conducting a comprehensive evaluation.</p>
<input checked="" type="checkbox"/>	#	<p>STEP 2: GOOD FAITH COMMITMENT</p> <p>Prioritizing Violations: Once violations are identified, they must be resolved in order of <u>Risk-Based Priority</u>.</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Highest Priority - violations presenting a risk of ingestion or inhalation of, or contact exposure to, acute toxins must be remediated and corrected. <input type="checkbox"/> 2. Highest Priority - any identified violation or circumstance that may present an imminent and substantial endangerment to, has caused or is causing actual serious harm to, or presents a serious threat to, public health, welfare, or the environment is to be addressed immediately in a manner that abates the endangerment or harm or reduces the threat. <p>Activities necessary to abate the endangerment or harm and reduce the threat posed by such violations or circumstances must not be delayed.</p>

<input checked="" type="checkbox"/>	#	STEP 3: GOOD FAITH COMMITMENT
<input type="checkbox"/>	9.	<p>Resolving Violations: If violations cannot be corrected within 180 days of the commencement of ADEQ's compliance assistance, a Small Community or Special District must enter into a Consent Order with a compliance schedule that incorporates all of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. A specified timeframe for correcting all outstanding violations in order of risk-based priority; <input type="checkbox"/> 2. Interim milestones that demonstrate reasonable progress toward compliance; <input type="checkbox"/> 3. Provisions to ensure continued compliance with all environmental requirements; and <input type="checkbox"/> 4. Provisions to ensure future compliance with any additional already promulgated environmental requirements that will become effective after the agreement is signed.
<input checked="" type="checkbox"/>	#	SMALL COMMUNITY ENVIRONMENTAL PROTECTION PLAN (SCEPP) REQUIREMENTS
<input type="checkbox"/>	10.	<p>In addition to the Good Faith Commitment which ensures the identification, prioritization, and resolution of existing violations, a Small Community or Special District must also develop a SCEPP designed to maintain compliance with environmental regulations. To qualify for special penalty considerations, a SCEPP must be submitted to ADEQ and contain all of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. SCEPP Documentation – Develop a SCEPP manual that contains the relevant elements listed below including policies, procedures (e.g. operational and maintenance), and standards showing how the SCEPP conforms to and will accomplish SCEPP elements to ensure compliance with environmental requirements. A copy of the SCEPP manual must be submitted to ADEQ <u>no later than one year</u> after the request to participate in the project; <input type="checkbox"/> 2. Environmental Policy – A policy statement that asserts a commitment to environmental excellence to comply with all environmental requirements and use this statement as a framework for planning and action; <input type="checkbox"/> 3. Environmental Aspects - Identify activities, products and services subject to environmental regulations; <input type="checkbox"/> 4. Legal and Other Requirements – Identify environmental laws and regulations that apply to operations. Include key compliance dates, including dates when monitoring (sampling) and reporting, or other reports are due to ADEQ and the dates of annual Environmental Compliance and SCEPP Audits as described below; <input type="checkbox"/> 5. Objectives and Targets – Establish goals for operations that are consistent with environmental policy that will eliminate the gap between current procedures and an accepted SCEPP framework, and that will improve compliance with environmental requirements. Identify specific actions that will achieve objectives and targets;

- 6. **Structure and Responsibility** – Identify and establish roles and responsibilities for:
 - All staff and management with environmental compliance obligations;
 - All staff and management with oversight responsibility for implementing the SCEPP; and
 - Identify the resources to be made available to ensure compliance;
- 7. **Training, Awareness and Competence** – Include a plan to ensure staff are trained and capable of carrying out their environmental responsibilities;
- 8. **Communications** – Establish procedures for internal and external communications on environmental compliance and SCEPP implementation issues;
- 9. **Document Control and Records** – Establish a system to ensure effective management of documents relating to the SCEPP and environmental activities including compliance with record retention requirements and develop a system to maintain and manage SCEPP performance;
- 10. **Operational Control** – Establish a system to identify, plan and manage operations consistent with objectives and targets;
- 11. **Emergency Preparedness and Response** – Include an Emergency Operations Plan (EOP) that identifies potential emergencies and their environmental impacts and procedures for preventing or responding to unpreventable emergencies. Existing plans currently required by law may be used to meet this requirement so long as they are referenced in the SCEPP;
- 12. **Noncompliance and Corrective and Preventive Action** – Establish a continuous management review process that identifies and corrects deviations from the SCEPP and take actions to prevent recurrence;
- 13. **Environmental Compliance Audit** – Establish a process to conduct an annual assessment of key SCEPP activities and track performance including an assessment of compliance with environmental rules and regulations. Upon request, ADEQ will make available facility-specific inspection check lists it uses to evaluate compliance;
- 14. **SCEPP Audit** – Include a commitment to an annual, comprehensive review of adherence to the SCEPP documented in a report to be presented to the governing body, and made available to the public and ADEQ upon request. In addition, include a commitment to initiate an independent 3rd party audit of the SCEPP within 3 years of submitting the SCEPP to ADEQ. ADEQ will be available to conduct this audit upon request; and

10.

- 15. **Management Review** – Include a commitment to review the annual Environmental Compliance and SCEPP Audit reports with the goal of continuous improvement of both the SCEPP and environmental performance.

ADEQ has created a [SCEPP Guidance Template](#) to assist in the development of a SCEPP Manual.

For more information [Contact ADEQ's Community Liaisons](#):

- Northwestern Arizona: (928) 779-0313
- Northeastern Arizona: (928) 337-3565
- Southwestern Arizona: (928) 373-9432
- Southeastern Arizona: (928) 348-4040

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