ADEQ's Pollution Prevention (P2) Program

Mary Wooldridge
January 31, 2018

ADEQ Arizona Department of Environmental Quality

What is Pollution Prevention?

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Pollution Prevention (P2) is any activity that reduces waste <u>at the source</u>.

- Reducing
- Eliminating
- Preventing

Reducing the amount of pollution produced means less waste to control, treat or dispose.

History on P2

1990 Federal P2 Act

- Pollution should be <u>prevented or reduced at the source</u>

P2 is reducing or eliminating waste at the source by:

Modifying production process	Promoting the use of non-toxic/less toxic substances	Implementing conservation techniques	Re-using materials and removing them from the waste stream

- EPA's definition

Arizona's P2 Program

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1991

Broadest P2 program in the Nation

Reduction of:

Toxic Substance Use

Hazardous Waste Generation

For more information see the Arizona Revised Statutes (A.R.S.) §§49-961 to 49-973

What is P2 in Arizona?

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- Business Operational Changes
- Reclamation
- Spill and Leak Prevention
- Reuse
- Inventory Control
- Toxic Substance Use Reduction
- Conservation
- Source Reduction
- Substitution
- Recycling
- Waste Minimization

P2 in Arizona

Activities that avoid, eliminate or reduce the generation of hazardous waste, toxic substance use, or the release of a pollutant or contaminant at the source

Why P2?

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Control without Prevention

- RCRA
- Clean Water Act
- Air Regulations

End-of Pipe Approaches

- Treatment
- Discharge
- Disposal

Environmental Challenges Exist

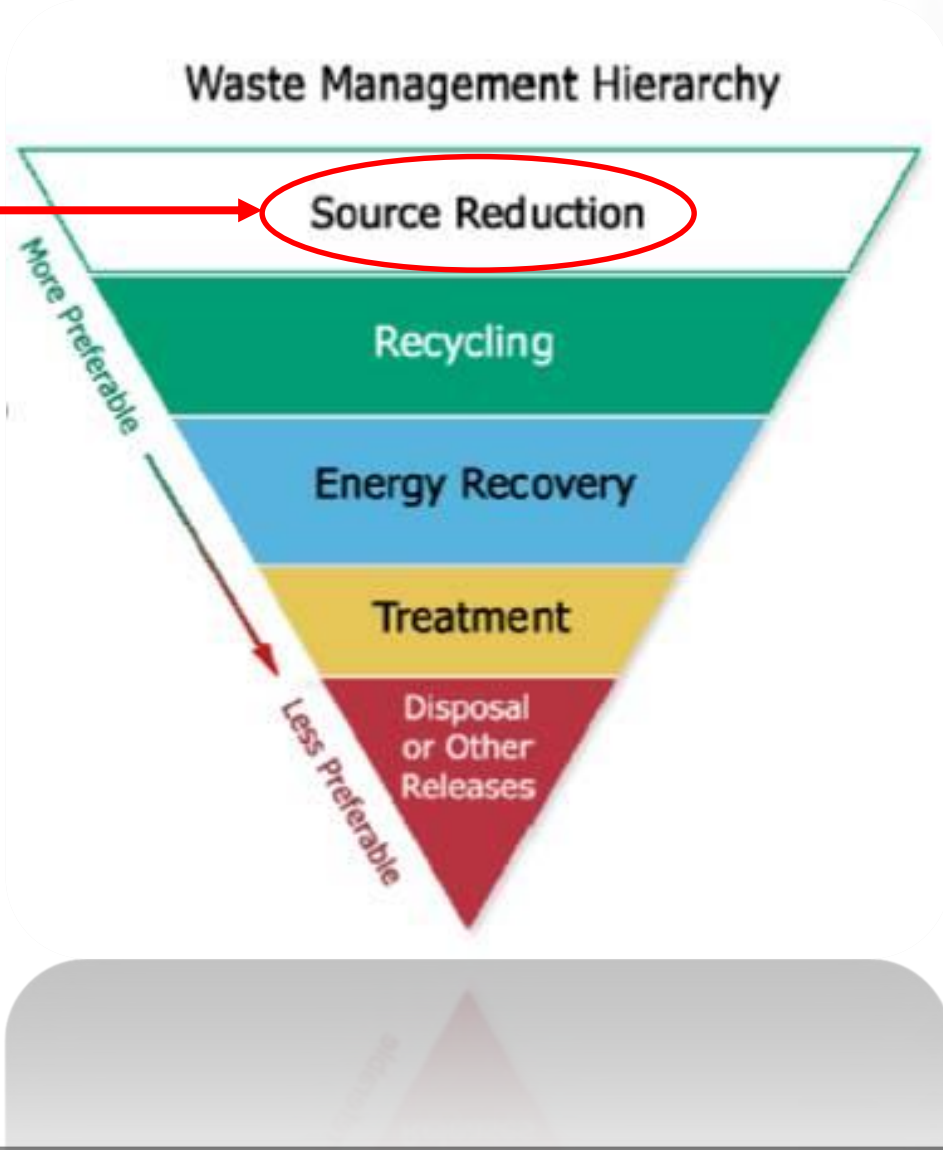
- Landfills
- Toxic Substance Use
- Hazardous Waste Generation

Waste Management Hierarchy

The most preferable option is **source reduction**.

Pollution that is never created does not have to be managed, treated or disposed.

The second best option is **recycling.**



Arizona P2 Program Plan Filing Thresholds

Let's take a look at the thresholds (or limits)!

A P2 Plan is required if during the previous calendar year a facility:

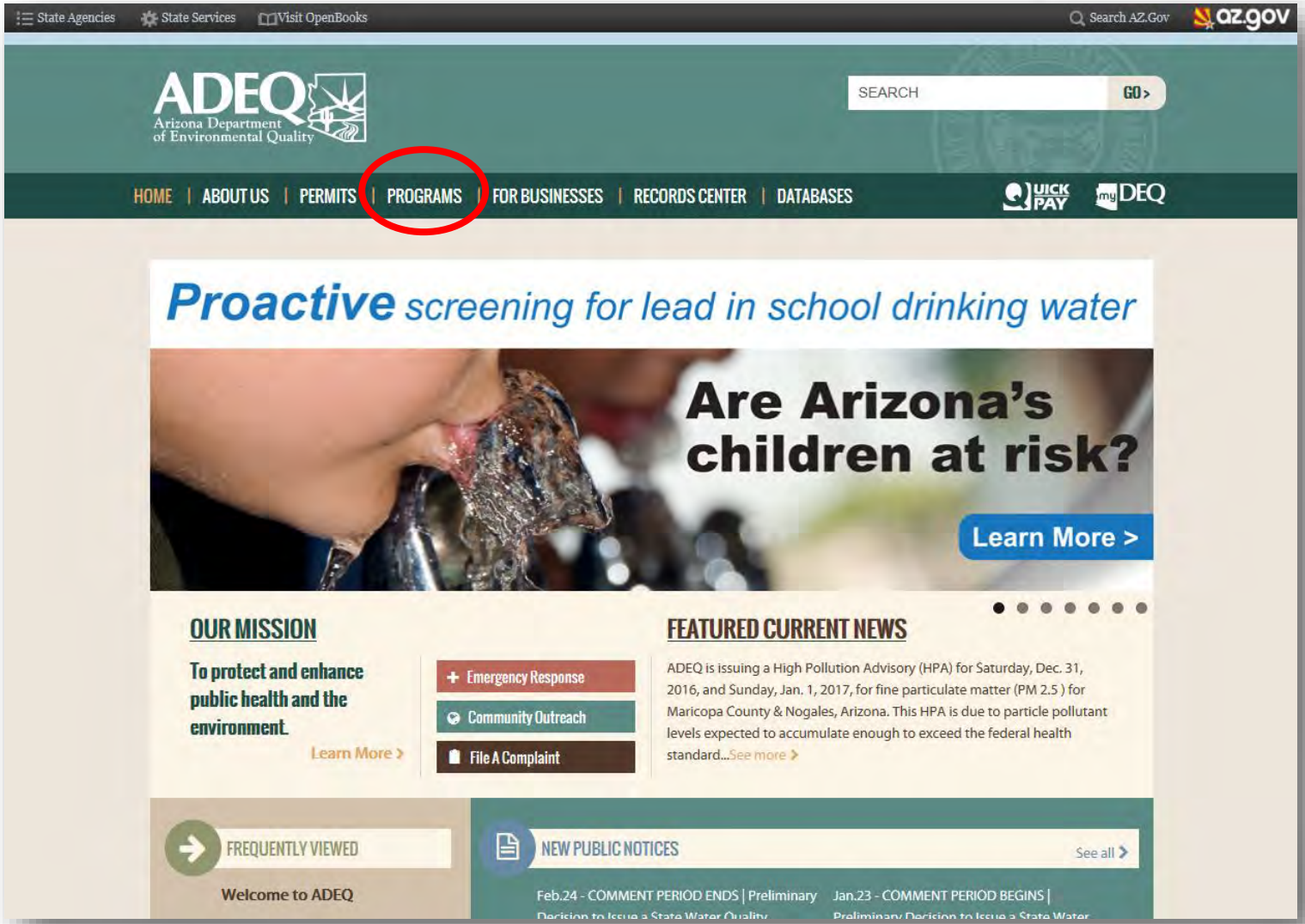
- ✓ Filed a **Toxic Release Inventory** (TRI) Form (form R or A)
- ✓ Used in excess of **10,000 pounds** of a **TRI listed chemical**
  - ➢ See the *Interpretation of "use" of toxic substances in excess of 10,000 pounds for the P2 program*
- ✓ Generated or shipped off-site, for purposes other than recycling, an <u>average</u> of
  - **2,200 pounds** (1,000 kg) per month of **hazardous waste** or
  - or **2.2 pounds** (1 kg) per month of **acute hazardous waste**

Facilities only need to meet <u>any one</u> of the above thresholds to be required to submit a P2 Plan.

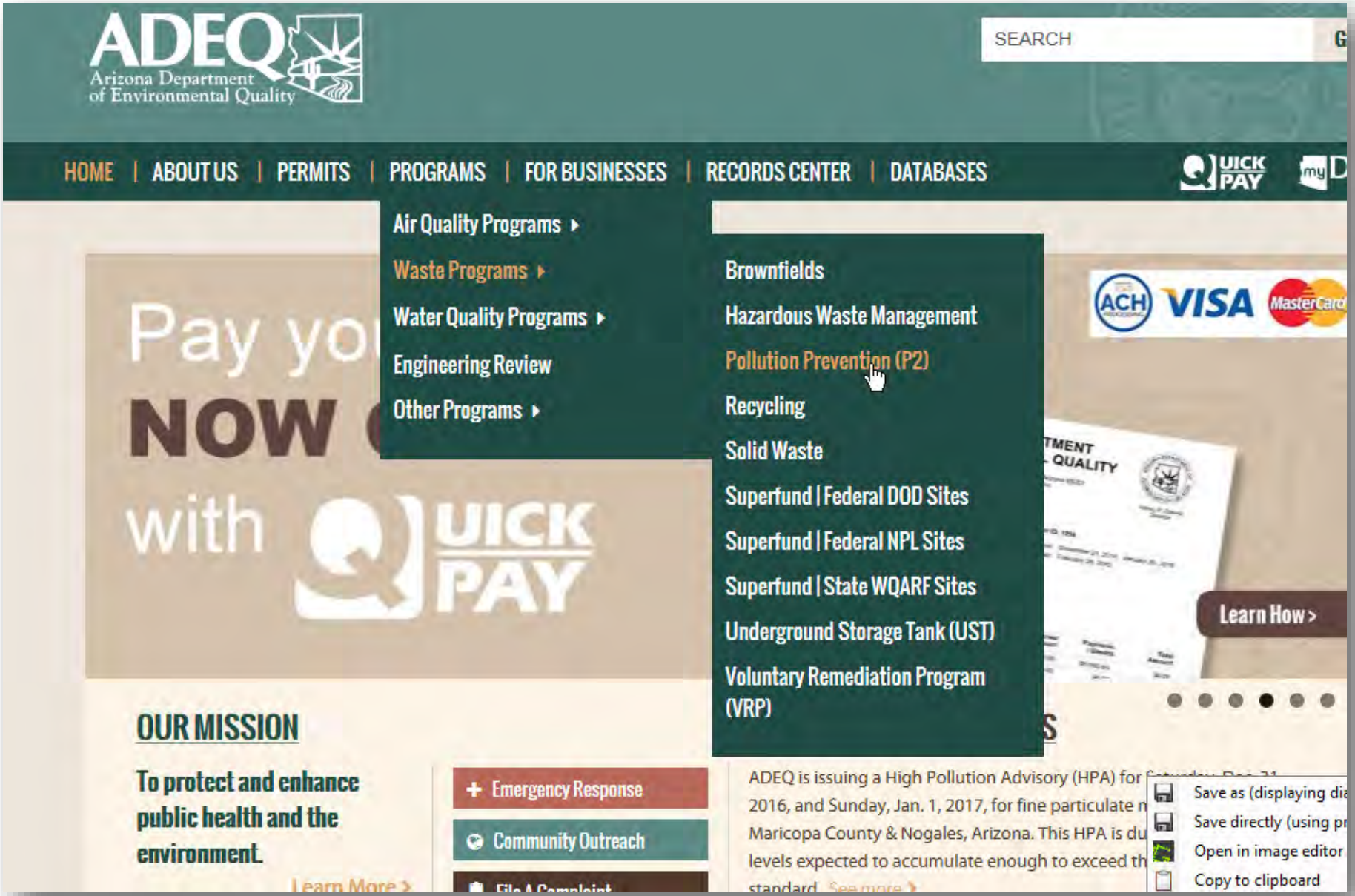
Are there any exemptions?

Yes! Please go to our website to find out if your facility meets any of the exemptions!

www.azdeq.gov



Pollution Prevention (P2)



P2 Webpage

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SEARCH GO›

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‹ RETURN TO LEARN ABOUT THE WASTE PROGRAMS DIVISION

Pollution Prevention (P2) Planning Program

ADEQ's Pollution Prevention Planning Program (P2) assists certain businesses in reducing toxic substances at their source, minimizing the generation of hazardous waste and preventing the release of pollutants into the environment. To accomplish this, these businesses must implement a P2 Plan.

What is a P2 Plan?

A P2 Plan is a management document that provides information on facility operations that directly or indirectly produce waste or use toxic substances. The plan involves:

- Recording the facility's toxic substance use, emissions and waste from current work practices
- Outlining potential P2 opportunities and providing specific performance goals, including a schedule for implementing pollution prevention activities
- Documenting that the facility has performed a rigorous P2 assessment
- Recognizing past P2 activities that have already been completed at the facility, when available

P2 Objectives

As Arizona grows, so does the generation of hazardous waste and the use of toxic substances. A great way for businesses and citizens to improve our environment is to reduce this growth without shifting the pollutant release between land, water or air. The purpose of the P2 Planning Program is to:

- Reduce the use of toxic substances and hazardous waste generation in our state
- Emphasize the preference for source reduction over recycling, waste treatment or disposal
- Encourage reduction through methods such as substitution with a less toxic chemical and product reformulation
- Implement process modification
- Improve housekeeping
- Promote recycling/reclamation

CONTACT

Environmental Engineering Specialist III
602-771-4739
Email ›

FOR BUSINESSES

What Is the P2 Program? ›
Determining a Business's Eligibility ›
P2 Thresholds ›
Tips for Creating a Successful Plan ›
P2 Planning Helpful Resources ›
P2 Forms ›
Resource Summaries ›

UPCOMING WORKSHOPS

View Dates ›

RELATED LINKS

EPA Toxic Release Inventory (TRI) Program›

FOR THE PUBLIC

What does Pollution Prevention (P2) Mean?
P2 House ›

- Sustainable Furniture ›
- Energy Conservation ›

Navigating the P2 Program Webpage

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RELATED LINKS

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FOR THE PUBLIC

What does Pollution Prevention (P2) Mean?
P2 House >

- Sustainable Furniture >
- Energy Conservation >
- Water Conservation >
- Interior Painting >
- Green Cleaning >
- Living Room >
- Garage/Laundry >
- Bedroom >
- Bathroom >
- Kitchen >
- Front/Backyard >

LAW & RULE

Substantive Policies >
Toxic Data Report | Progress Report | Exemption >
P2 Plan | Progress Report | Exemption >
Review of: Reports, Plans, Enforcement, Contempt >
P2 Technical Assistance Program >
Availability of information to the Public >
Department Rules for Adding/Deleting Toxic Substances >
Consumer Product Information >
P2 Plan for State Agencies >
Toxic Data Report for State Agencies >

Are there any exemptions?

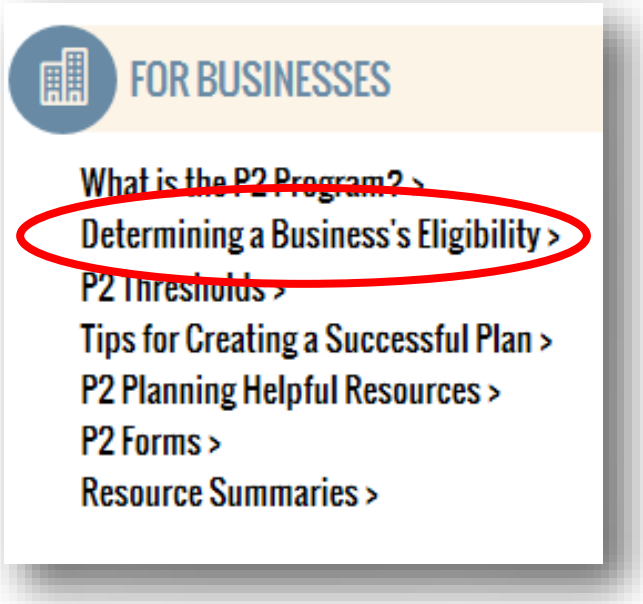
See step #2 in Determining a Business's Eligibility for the P2 Program on the website

- *View P2 Planning Exemptions*

7 exemptions related to:

- *Facilities located in tribal land*
- *Household hazardous waste collection facilities*
- *Treatment, storage, disposal facilities*
- *Toxic substance use related to mining or metallurgy processes*
  - *Please make sure to read the policies as not every process in mining or metallurgy is exempted*
- *Facilities that caused a one-time, unexpected event where a hazardous waste was generated*

How do I know if I met the P2 Thresholds?



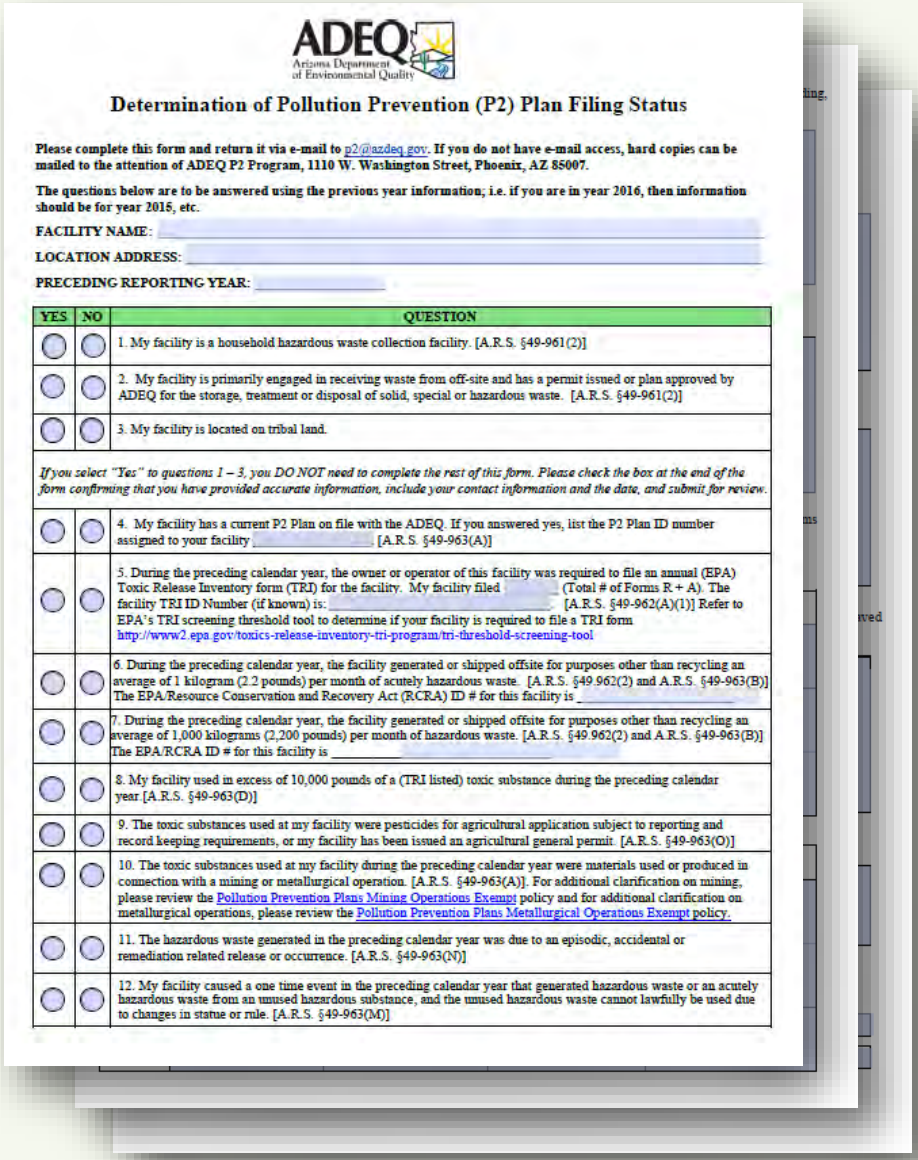
Follow the Steps

1. Determine if your company needs to file P2 plan by reviewing filing thresholds
2. Review P2 filing exemptions
3. Complete a *Determination of P2 Plan Filing Status Form*
4. *P2 Staff will determine your business Eligibility*

P2 Determination Form

Determination of Pollution Prevention (P2) Plan Filing Status

- Used to determine if P2 thresholds are met
  - ✓ Toxic substance use
  - ✓ Hazardous waste generation
- Determines if exemptions are met
- Collects information on:
  - Major processes at the facility
  - Toxic substances reported to the Toxic Release Inventory (TRI) program
  - Last three years of hazardous waste generated and/or recycled



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Determination of Pollution Prevention (P2) Plan Filing Status

Please complete this form and return it via e-mail to p2@azdeq.gov. If you do not have e-mail access, hard copies can be mailed to the attention of ADEQ P2 Program, 1110 W. Washington Street, Phoenix, AZ 85007.

The questions below are to be answered using the previous year information; i.e. if you are in year 2016, then information should be for year 2015, etc.

FACILITY NAME: _____

LOCATION ADDRESS: _____

PRECEDING REPORTING YEAR: _____

YES	NO	QUESTION
○	○	1. My facility is a household hazardous waste collection facility. [A.R.S. §49-961(2)]
○	○	2. My facility is primarily engaged in receiving waste from off-site and has a permit issued or plan approved by ADEQ for the storage, treatment or disposal of solid, special or hazardous waste. [A.R.S. §49-961(2)]
○	○	3. My facility is located on tribal land.
		If you select "Yes" to questions 1 – 3, you DO NOT need to complete the rest of this form. Please check the box at the end of the form confirming that you have provided accurate information, include your contact information and the date, and submit for review.
○	○	4. My facility has a current P2 Plan on file with the ADEQ. If you answered yes, list the P2 Plan ID number assigned to your facility _____ [A.R.S. §49-963(A)]
○	○	5. During the preceding calendar year, the owner or operator of this facility was required to file an annual (EPA) Toxic Release Inventory form (TRI) for the facility. My facility filed _____ (Total # of Forms R + A). The facility TRI ID Number (if known) is: _____ [A.R.S. §49-962(A)(1)] Refer to EPA's TRI screening threshold tool to determine if your facility is required to file a TRI form http://www2.epa.gov/toxics-release-inventory-tri-program/tri-threshold-screening-tool
○	○	6. During the preceding calendar year, the facility generated or shipped offsite for purposes other than recycling an average of 1 kilogram (2.2 pounds) per month of acutely hazardous waste. [A.R.S. §49.962(2) and A.R.S. §49-963(B)] The EPA/Resource Conservation and Recovery Act (RCRA) ID # for this facility is _____
○	○	7. During the preceding calendar year, the facility generated or shipped offsite for purposes other than recycling an average of 1,000 kilograms (2,200 pounds) per month of hazardous waste. [A.R.S. §49.962(2) and A.R.S. §49-963(B)] The EPA/RCRA ID # for this facility is _____
○	○	8. My facility used in excess of 10,000 pounds of a (TRI listed) toxic substance during the preceding calendar year.[A.R.S. §49-963(D)]
○	○	9. The toxic substances used at my facility were pesticides for agricultural application subject to reporting and record keeping requirements, or my facility has been issued an agricultural general permit. [A.R.S. §49-963(O)]
○	○	10. The toxic substances used at my facility during the preceding calendar year were materials used or produced in connection with a mining or metallurgical operation. [A.R.S. §49-963(A)]. For additional clarification on mining, please review the Pollution Prevention Plans Mining Operations Exempt policy and for additional clarification on metallurgical operations, please review the Pollution Prevention Plans Metallurgical Operations Exempt policy.
○	○	11. The hazardous waste generated in the preceding calendar year was due to an episodic, accidental or remediation related release or occurrence. [A.R.S. §49-963(N)]
○	○	12. My facility caused a one time event in the preceding calendar year that generated hazardous waste or an acutely hazardous waste from an unused hazardous substance, and the unused hazardous waste cannot lawfully be used due to changes in statue or rule. [A.R.S. §49-963(M)]

I met the thresholds, what is a P2 Plan?

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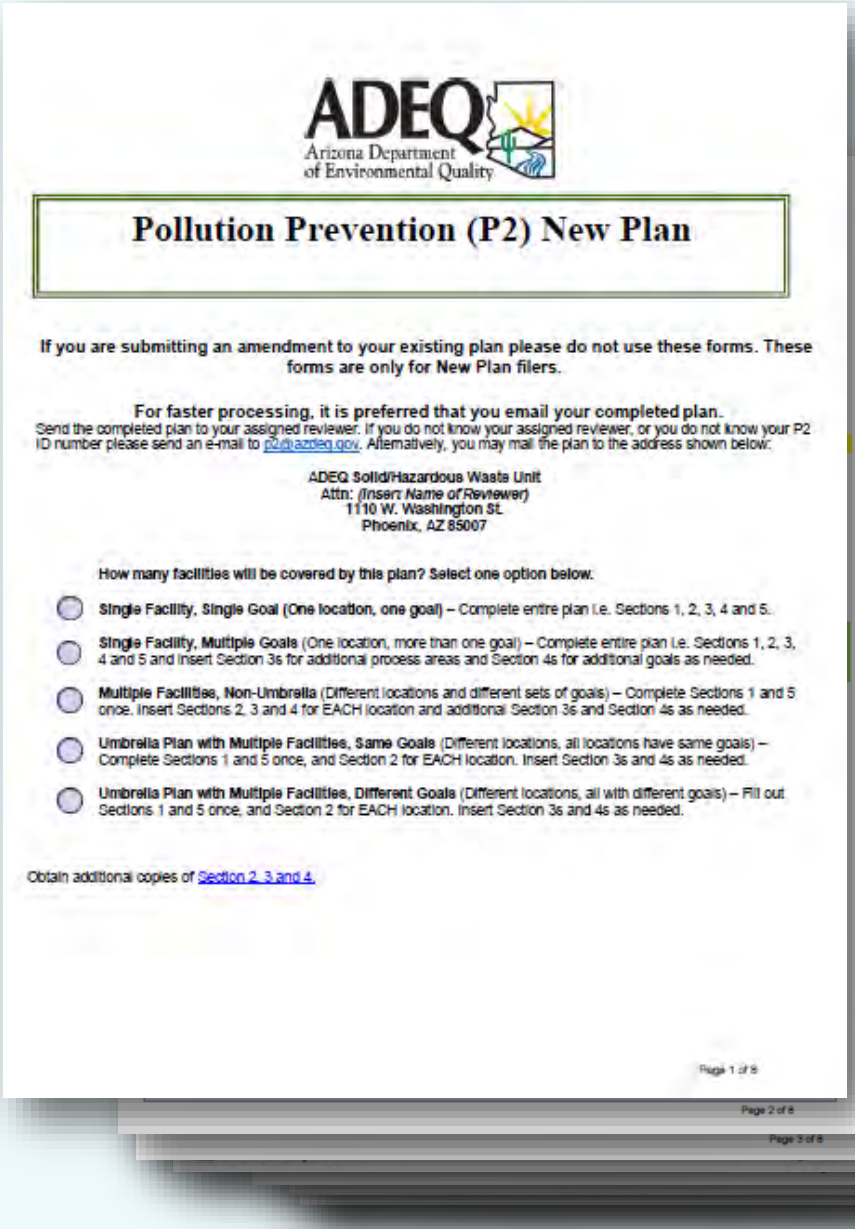
- Stand Alone Management Document
- Analyzes Work Practices and Operations
- Outline Potentials for P2 Opportunities and Goals
- Required a minimum of two years but can extend longer
- Required to maintain as long as facility meets P2 thresholds

Components of a successful P2 Plan

Updated P2 Plan Forms

Updated P2 Plan Forms

- Fillable forms
- Reduced to 5 sections
- Certain sections automatically fill
- P2 training goal no longer reported through a Plan goal
  - Training information is required in Section 1 of the P2 Plan
- Forms contain a single copy of each section to avoid paper waste.
  - Can obtain copies of additional sections through P2 webpage.



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Pollution Prevention (P2) New Plan

If you are submitting an amendment to your existing plan please do not use these forms. These forms are only for New Plan filers.

For faster processing, it is preferred that you email your completed plan.
Send the completed plan to your assigned reviewer. If you do not know your assigned reviewer, or you do not know your P2 ID number please send an e-mail to p2@azdeq.gov. Alternatively, you may mail the plan to the address shown below:

ADEQ Solid/Hazardous Waste Unit
Attn: *(Insert Name of Reviewer)*
1110 W. Washington St.
Phoenix, AZ 85007

How many facilities will be covered by this plan? Select one option below.

- **Single Facility, Single Goal (One location, one goal)** – Complete entire plan i.e. Sections 1, 2, 3, 4 and 5.
- **Single Facility, Multiple Goals** (One location, more than one goal) – Complete entire plan i.e. Sections 1, 2, 3, 4 and 5 and insert Section 3s for additional process areas and Section 4s for additional goals as needed.
- **Multiple Facilities, Non-Umbrella** (Different locations and different sets of goals) – Complete Sections 1 and 5 once. Insert Sections 2, 3 and 4 for EACH location and additional Section 3s and Section 4s as needed.
- **Umbrella Plan with Multiple Facilities, Same Goals** (Different locations, all locations have same goals) – Complete Sections 1 and 5 once, and Section 2 for EACH location. Insert Section 3s and 4s as needed.
- **Umbrella Plan with Multiple Facilities, Different Goals** (Different locations, all with different goals) – Fill out Sections 1 and 5 once, and Section 2 for EACH location. Insert Section 3s and 4s as needed.

Obtain additional copies of Section 2, 3 and 4.

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Maintaining the P2 Plan

Annual Toxic Data Reports (TDR's):

- Due by July 1st of each year
- Reminders sent during April/May
- Contain several of the documents below:
  - Progress report instructions
  - Progress report cover sheet and goal forms
    - Facilities will receive one PDF file containing both
  - Amendment
  - TRI Submittal

Updated Progress Report Cover Page

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Pre-populated with facility contact information

Include training information here

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Pollution Prevention (P2) Annual Progress Report 2017

		Technical Contact Information Corrections:
Contact Information:	Attn: Jane Smith - EHS Mgr - P2 ID #: 200001	
	ABC Inc.	
	1110 W Washington St	
	Phoenix, AZ	
Telephone #:	6027718178	
E-Mail:	jane.smith@abc.com	

Please fill out the facility information below:

My facility has implemented a P2 team? ☐ Yes ☐ No Previous for 2016: Yes

My facility has implemented an Environmental Management System (EMS)? ☐ Yes ☐ No Previous for 2016: No

P2 training goal is now tracked through this section. Include number of employees trained below and if your training material has changed since you submitted your last progress report please submit a copy of the updated training.

The number of employees trained in pollution prevention awareness (ARS 49-963.J.9) in **2017** was: ☐

If employees were not trained in 2017, please provide an explanation below and an expected date (mm/dd/yy) when training will be completed.

I certify that I have personally examined this Progress Report, that I am familiar with its content and attachments, and I believe the information presented in this report is true, accurate and complete.

	Certifying Official Contact Information Corrections:
Name (please print or type): Jane Johns	
Title: Site Director	
Telephone #: 602-000-0000	
E-mail: jane.johns@abc.com	
EPA ID (RCRA ID #): AZD000000000	
EPA TRI ID: 00000AAAAA0000A	

Signature: _____

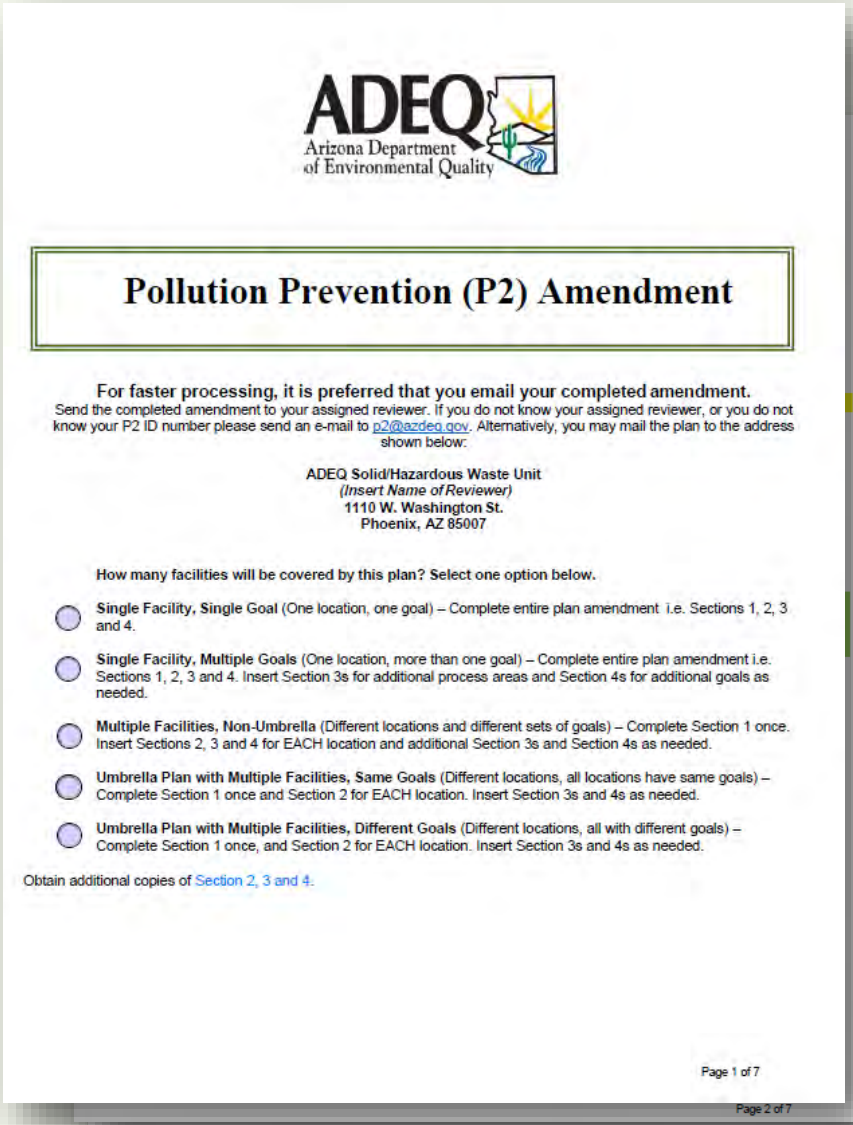
Date: _____

Send completed forms to: ADEQ Hazardous Waste Unit
ATTN: Linneth Lopez
1110 W. Washington Street
Phoenix, AZ 85007
or e-mail to LAL@azdeq.gov

Updated P2 Amendment Forms

Amendment Form Updates

- Fillable forms
- Reduced to 4 sections
- Certain sections automatically fill
- Training goal no longer reported through a goal in the amendment
  - Training information is provided through annual progress report cover page
- Forms contain a single copy of each section to avoid paper waste.
  - Can obtain copies of additional sections through P2 webpage.



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Pollution Prevention (P2) Amendment

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P2 Forms

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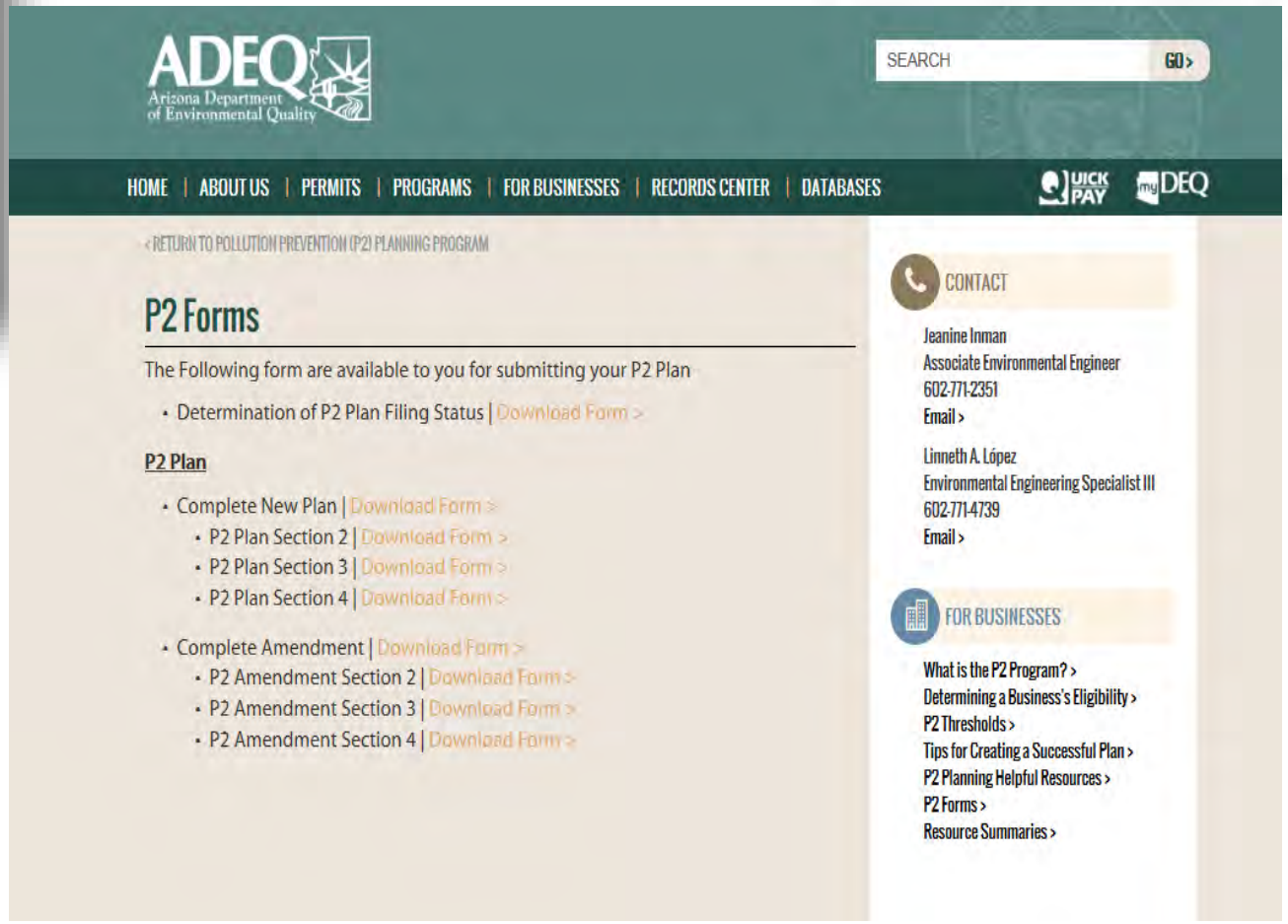
FOR BUSINESSES

- What is the P2 Program? >
- Determining a Business's Eligibility >
- P2 Thresholds >
- Tips for Creating a Successful Plan >
- P2 Planning Helpful Resources >
- P2 Forms >
- Resource Summaries >



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QUICK PAY myDEQ

< RETURN TO POLLUTION PREVENTION (P2) PLANNING PROGRAM

P2 Forms

The Following form are available to you for submitting your P2 Plan

- Determination of P2 Plan Filing Status | Download Form >

P2 Plan

- Complete New Plan | Download Form >
  - P2 Plan Section 2 | Download Form >
  - P2 Plan Section 3 | Download Form >
  - P2 Plan Section 4 | Download Form >
- Complete Amendment | Download Form >
  - P2 Amendment Section 2 | Download Form >
  - P2 Amendment Section 3 | Download Form >
  - P2 Amendment Section 4 | Download Form >

CONTACT

Jeanine Inman
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602-771-2351
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Environmental Engineering Specialist III
602-771-4739
Email >

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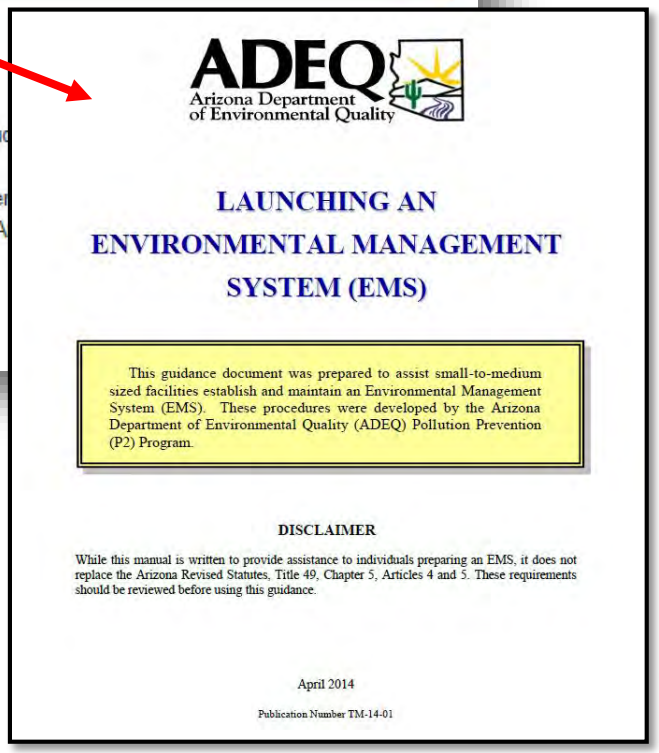
P2 Planning Resources

Sector Specific Resources for Business

EPA's Industry Specific Sector Notebooks contain profiles and P2 opportunities for different business sectors.
EPA's P2 Resources for Business provides useful P2 information for auto repair, healthcare, metal finishing and janitorial activities.
Topic Hubs from the Western Sustainability and Pollution Prevention Network (WSPPN) provide specific P2 opportunities for different business sectors. These web based guides contain peer-reviewed information as well as key processes for different business operations.
ADEQ's EMS guidance document was prepared to assist small-to-medium sized businesses establish and maintain an EMS.

Energy Resources

Energy Star for small businesses provides information on how to prevent pollution by reduc
US Small Business Administration can help estimate your current energy usage.
Arizona Goes Solar's website is an effort by the Arizona Corporate Commission and implen
residential and business customers information regarding solar options and incentives in A



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LAUNCHING AN ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

This guidance document was prepared to assist small-to-medium sized facilities establish and maintain an Environmental Management System (EMS). These procedures were developed by the Arizona Department of Environmental Quality (ADEQ) Pollution Prevention (P2) Program.

DISCLAIMER

While this manual is written to provide assistance to individuals preparing an EMS, it does not replace the Arizona Revised Statutes, Title 49, Chapter 5, Articles 4 and 5. These requirements should be reviewed before using this guidance.

April 2014

Publication Number TM-14-01

ADEQ EMS Guide

- Prepared to assist small to medium sized facilities
- Launch an internal EMS

P2 Planning Resources Continued

Water Resources

EPA's WaterSense® Program provides information and strategies for saving money and water that can help you manage your facility's water use.

Arizona Department of Water Resources Commercial, Industrial and Institutional homepage has more information on water conservation tools, programs and resources in Arizona.

ADEQ's Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activities fact sheet can help you determine if there are specific permitting requirements for your business. The key to compliance with the MSGP is to keep pollutants out of stormwater through the use of proper P2 practices. These practices or control measures are site-specific and based on the nature of the activities and types of pollutants potentially exposed to and transported by stormwater.

ADEQ's Water Quality Division web site contains further information on obtaining authorization for discharges of stormwater associated with construction activity and information on Stormwater Pollution Prevention Plan (SWPPP).

Air Resources

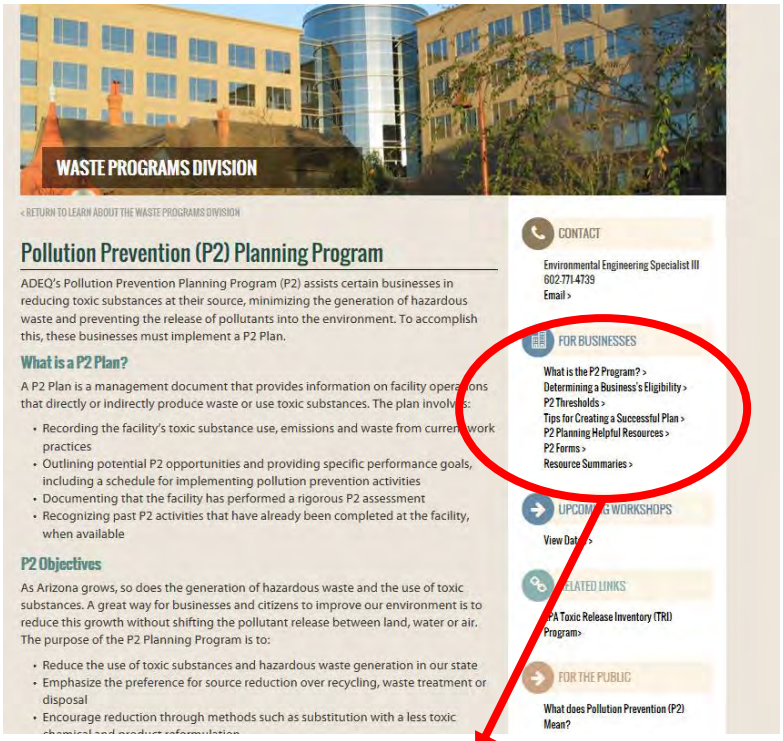
ADEQ's air quality website offers information on agricultural best management practices, travel reduction programs and fugitive dust control.

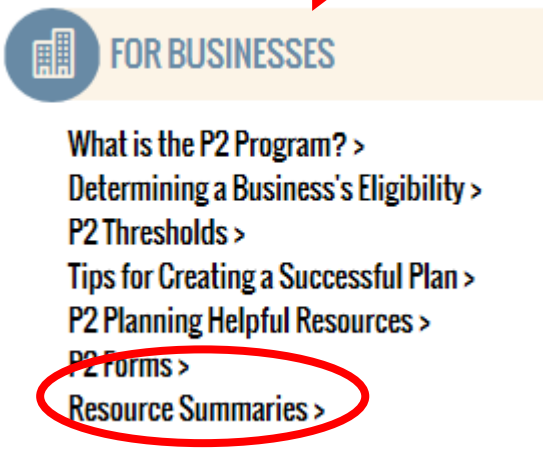
"Clean Air Make More" is Maricopa County's free downloadable app that provides current air quality conditions, including real-time updates on restrictions such as no burn days. The app offers detailed air pollution statistics on ozone, PM-10, carbon monoxide and PM-2.5 particles, as well as a means to report air quality problems.

Recycling Resources

ADEQ's recycling webpage provides useful recycling information, including a recycling locator to find where you can recycle various items in Arizona.

Resource Summaries

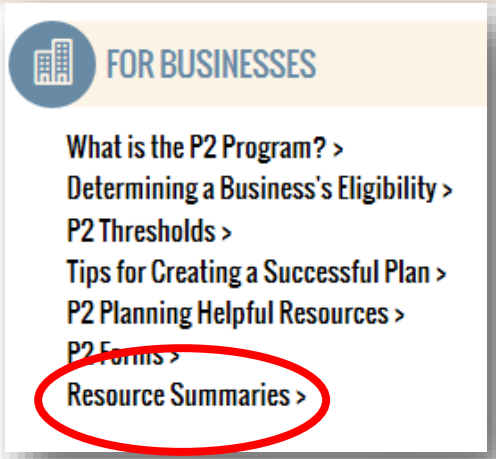




Topics and Industries

- Automotive Maintenance & Repair
- Aviation
- Chemical Warehousing and Handling
- Clean-in-place Systems
- College & Universities
- Dental Offices
- Distribution Centers
- Energy conservation through Maintenance & Repair
- Facilities Management
- Furniture Manufacturers
- Green Infrastructure
- Green Purchasing
- K-12 Schools
- Medical Laboratories – Hazardous Waste Reduction
- Medical Laboratories – Toxic Substance Use Reduction
- Military Sector
- Personal Care Product Manufacturing
- Retail Industry – Reducing Hazardous Waste Generation
- Retail Industry – Reducing Pharmaceutical Waste
- State Agencies
- Transportation Industry
- Xeriscape

P2 Resource Summaries

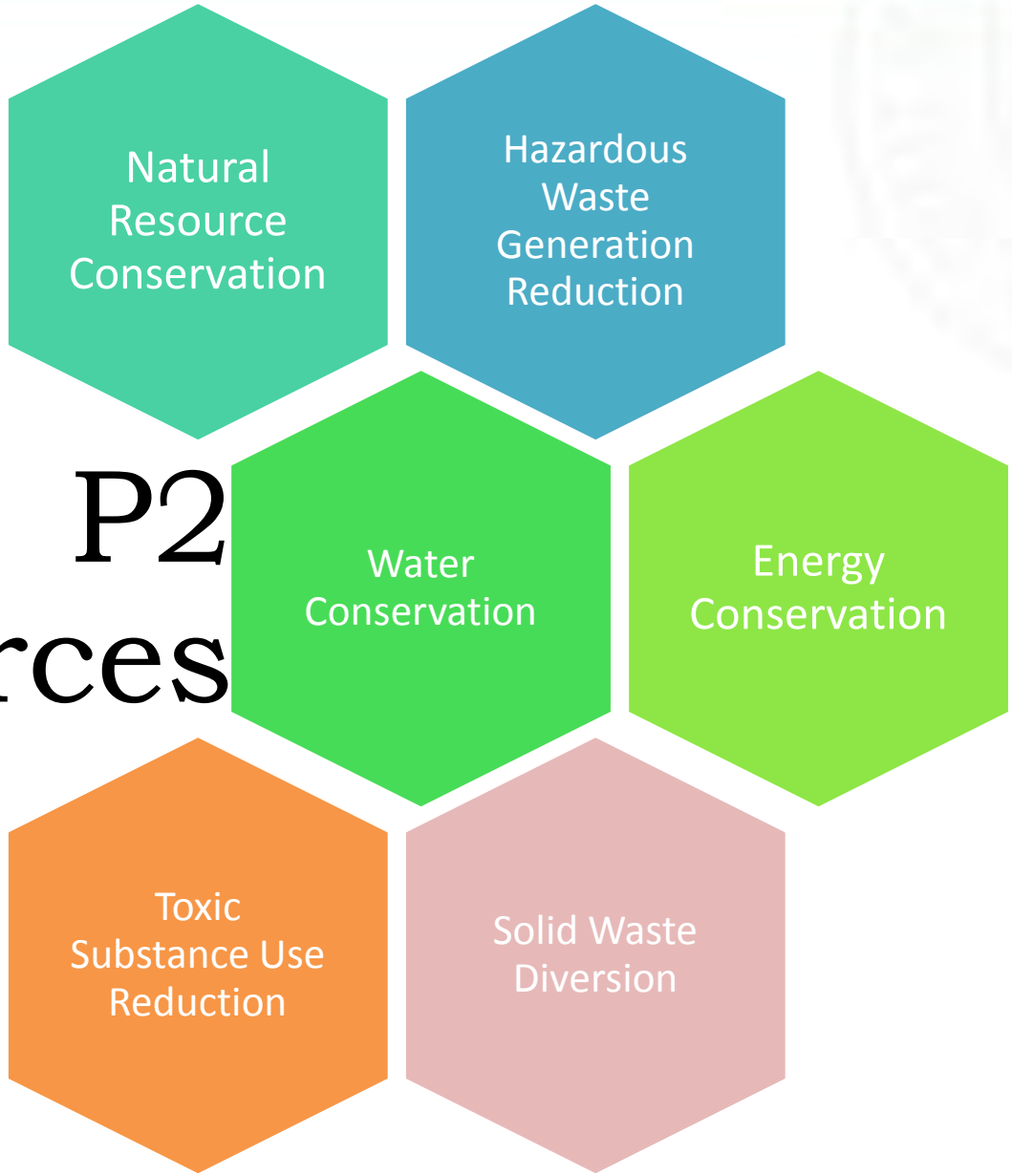


- Designed by interns with P2 staff guidance
- Quick summary fact sheets
- Assist facilities to reduce pollution in specific sectors, processes or areas.
- Provide list of links that can help you reduce pollution
- Provide case studies

P2 Interns

- Possible through an EPA grant
- 15 week internships (Spring and Fall semesters)
- ASU students
- Currently two interns
- Duties include P2 resource summaries, Food Recovery Program and Hotel/Lodging Outreach
- Focus is to provide outreach material to reduce toxic substance use and hazardous waste generation
- Facility site visits
  - P2 staff is looking for facilities interested in granting a site visit for upcoming semesters. Contact P2 staff if interested.

P2 Resources



Toxic Substance Use Reduction

ADEQ Arizona Department of Environmental Quality

What can your company do to reduce toxic substance use?

- Chemical reformulations
- Green chemistry
- Substitution of toxic substances for non-toxic or less toxic substances
- Avoid raw material waste through unnecessary excessive use
- Modify processes for more efficient toxic substance use

Toxic Substance Use Reduction Resources

ADEQ Arizona Department of Environmental Quality

EPA Safer Choice Program

- **Resources to reduce toxic substance use**
- Facility cleaning supplies
- Degreasers
- HVAC Maintenance
- Athletic field paints

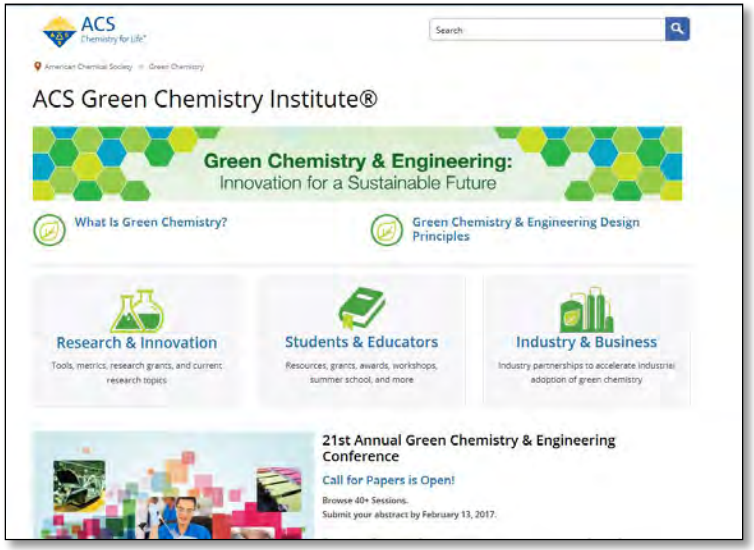
SAFER CHOICE
Meets U.S. EPA Safer Product Standards
epa.gov/saferchoice

Safer Chemical Ingredient List

- Solvents
- Specialized industrial agents
- Surfactants
- Emollients
- Chelating agents
- Colorants
- Polymers

Other Resources Continued

American Chemical Society (ACS)



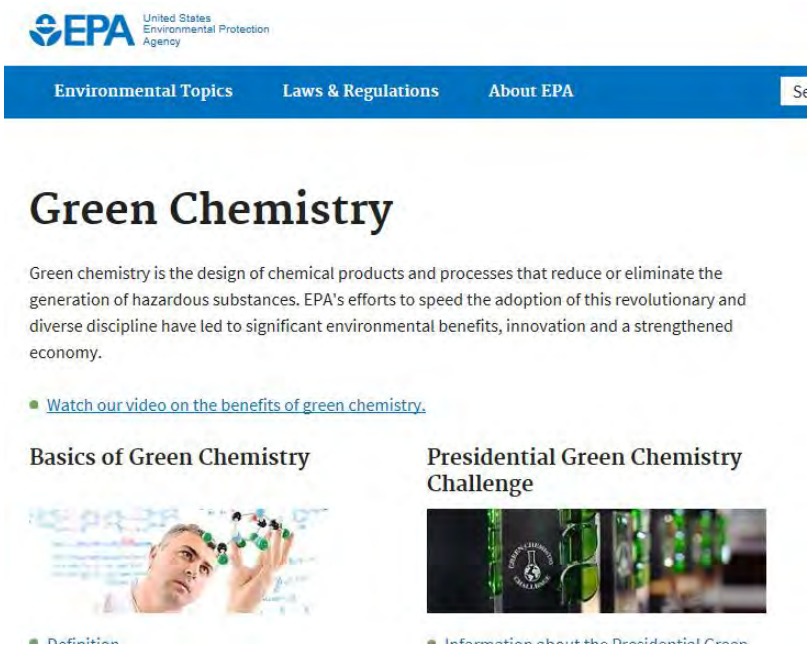
MICHIGAN GREEN CHEMISTRY CLEARINGHOUSE

https://www.migreenchemistry.org/toolbox/directory/

Webinars & Videos

Celebrating 20 Years of the Green Chemistry & Engineering Conference.

https://www.acs.org/content/acs/en/greenchemistry/students-educators/webinars-videos.html

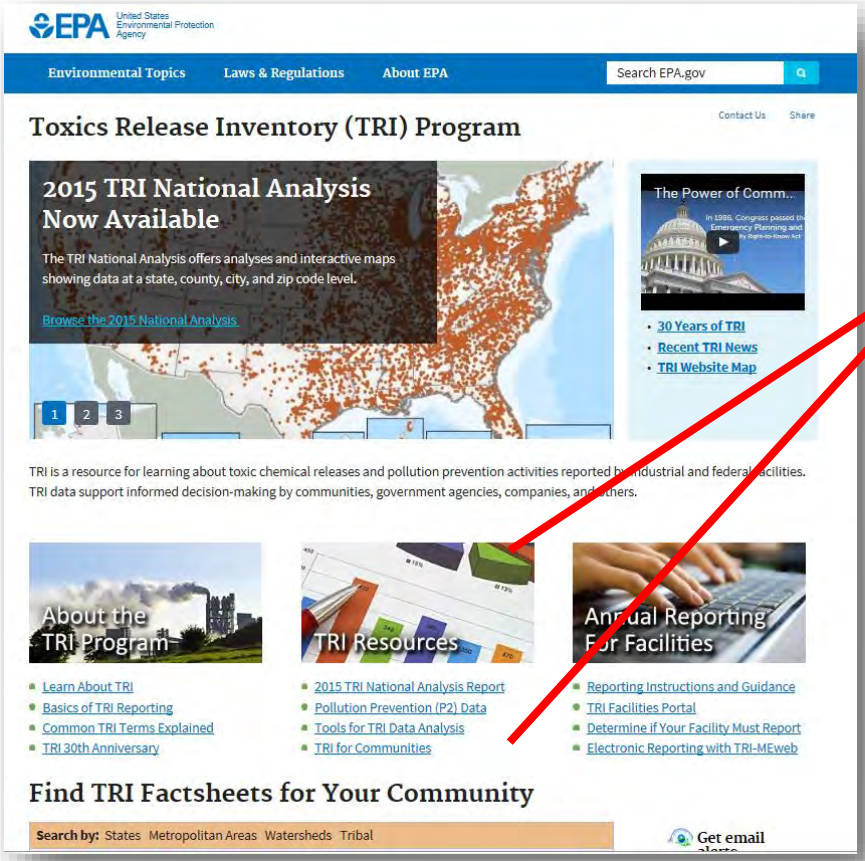


https://www.epa.gov/greenchemistry

Toxic Substance Use Reduction Resources

ADEQ Arizona Department of Environmental Quality

Toxics Release Inventory (TRI) Program P2 Search Tool



https://www.epa.gov/toxics-release-inventory-tri-program

TRI P2 Search Tool

ADEQ Arizona Department of Environmental Quality

Pollution Prevention (P2) and TRI

Under the Pollution Prevention Act of 1990 (PPA), TRI collects information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. Many facilities provide descriptions on measures they have taken to prevent pollution and reduce the amount of toxic chemicals entering the environment. As a result, TRI serves as a tool for identifying effective environmental practices and highlighting pollution prevention successes.

Launch P2 Search Tool

Access TRI's P2 Data

- Use the P2 Search Tool to get info by industry sector, chemical, geography or parent company, and compare performance

The Waste M... Hier...

The PPA calls for pollu... prevented or reduced ... whenever feasible and ... environment only as a ...

Learn about thes...

TRI Pollution Prevention (P2) Search

Home | Multisystem Search | Topic Searches | System Data Searches | About the Data | Data Downloads | Widgets | Services

TRI

Use the TRI **Pollution Prevention Search** to learn how facilities have reduced releases of toxic chemicals t... waste. You can run two types of searches:

1. Click "**Show P2 Activities**" to view reported P2 activities and associated reductions in toxic chemical qu...
2. Click "**Display Comparison**" to visually compare facilities *or* parent companies' waste management pra...

After clicking a search button and viewing results, you can also get P2 Details for any individual facility that matche... information for that facility directly using the TRI Search.

To learn more about P2 and the preferred methods for managing chemical waste, visit the **Pollution Prevention Overvie...**

Need help? The P2 Quick Start Guide offers step-by-step instructions on all the features of the P2 Search.

Search Criteria

(•) Show P2 info for facilities ( ) Show P2 info for parent companies

Select one or more Industry Sector(s):

Select one or more Chemical(s) or Chemical Group(s):
All Chemicals

Select one or more Year(s):

Select one or more State(s):

Enter a ZIP Code or City Name:

Show P2 Activities | Display Facility Comparison | Clear

Hazardous Waste Reduction

What can your company do to reduce hazardous waste ?

- Inventory Control
- Conduct proper waste determinations
- Substitution of non hazardous materials in processes
- Modify processes to reduce waste
- Spill and leak prevention
- Segregate hazardous waste and non hazardous waste properly

Pollution Prevention Case Studies

➢**EPA P2 Case Studies**: https://www.epa.gov/p2/pollution-prevention-case-studies

➢**P2 InfoHouse** - A searchable online collection of more than 50,000 P2 related fact sheets, case studies and technical reports: http://infohouse.p2ric.org/.

➢**Region 6 Success Stories Database** – Southwest Network for Zero Waste: http://www.zerowastenetwork.org/success/index.cfm

➢Case Studies on Safer Alternative for Solvent Degreasing Applications: https://www.epa.gov/p2/case-studies-safer-alternatives-solvent-degreasing-applications.

Hazardous Waste Reduction Resources

ADEQ Arizona Department of Environmental Quality

Resources

- EPA's basics on hazardous waste: https://www.epa.gov/hw/learn-basics-hazardous-waste
- EPA's resources on Hazardous Waste Recycling https://www.epa.gov/hw/hazardous-waste-recycling
- Avoid Sham Recycling – See *EPA's Legitimate Hazardous Waste Recycling Versus Sham Recycling* at https://www.epa.gov/hw/legitimate-hazardous-waste-recycling-versus-sham-recycling
- Regulatory Exclusions and Alternative Standards for the Recycling of Materials, Solids Wastes and Hazardous Wastes: https://www.epa.gov/hw/regulatory-exclusions-and-alternative-standards-recycling-materials-solid-wastes-and-hazardous
- ADEQ's Solvent-Contaminated Wipes Fact Sheet http://legacy.azdeq.gov/environ/waste/hazwaste/download/ADEQ_FS-14-03.pdf

Solid Waste Reduction

ADEQ Arizona Department of Environmental Quality

What can your company do to reduce solid waste ?

- Solid waste assessment
- Inventory control
- Reduce packaging
- Reuse packaging
- Implement a recycling program
- Reduce food waste

Resources

- **EPA's WasteWise Program** encourages sustainable materials management to reduce select industrial wastes. Join the program, conduct a waste assessment, define scope, set measurable goals. https://www.epa.gov/smm/wastewise
- Learn how to reduce, reuse and recycle from EPA https://www.epa.gov/recycle
- ADEQ's e-waste recycling toolkit http://www.azdeq.gov/node/1198
- Use the recycling locator http://www.azrecycles.gov/ to figure out what can be recycled and where to recycle different items in your zip code.
- Contact ADEQ's recycling coordinator J.B. Shaw js15@azdeq.gov or 602 771 5613

Energy Reduction

ADEQ Arizona Department of Environmental Quality

What can your company do to reduce energy use ?

- Conduct an energy audit
- Replace inefficient lighting
- Use energy efficient electronics
- Check and maintain equipment
- Turn off electrical equipment and lighting when not in use
- Install occupancy sensors/motion sensors and timers

Resources

- Save energy with **EPA's Energy Star** - *www.energystar.gov*
  - Energy Star Portfolio Manager – Benchmarks
  - Energy efficient products: Appliances, electronics, office equipment building products, heating and cooling (boilers, air conditioning), lighting…
- **Department of Energy** – https://energy.gov
  - Office of Energy Efficiency & Renewable Energy Technical Assistance Activities: https://energy.gov/eere/amo/ta.
  - Manufacturing Success Stories: https://energy.gov/eere/success-stories/listings/manufacturing-success-stories
  - Emerging Technologies: https://energy.gov/eere/buildings/emerging-technologies

Water Reduction

ADEQ Arizona Department of Environmental Quality

What can your company do to reduce water use ?

- Conduct a water audit/analyze water usage
- Install water efficient nozzles and aerators
- Reuse water in other processes if possible
- Identify and stop drips, leaks and unnecessary flows
- Practice xeriscaping landscaping
- Use motion sensors for low flow faucets and dual flush toilets

Resources

- Save water with EPA's Water Sense Program: https://www3.epa.gov/watersense/.
- Find water efficient products – Sink faucets, toilets, irrigation controllers, commercial pre-rinse sprays
- Find water assessment tools for your commercial and institutional facility at https://www3.epa.gov/watersense/commercial/tools.html#tabs-assessment.
  - Best management practices for commercial and institutional facilities
- Arizona's Department of Water Resources – ADWR: http://www.azwater.gov/AzDWR/
  - Water conservation best management practices
  - Water conservation tools and resources: http://www.azwater.gov/AzDWR/StatewidePlanning/Conservation2/
  - Information on xeriscaping, native plants for Arizona and water efficient landscapes

Successful Facility Examples

Energy Generating Facility

Electrical Energy Reduction

Action: Facility replaced halogen lights with LED ones.

Results: In 2016 this resulted in 1,646,705 kwh reduced with a cost savings of $156,737.

Hazardous Waste (HW) Reduction

Action: Installed a system for ensuring full use of substance before tote sent back to supplier with any residual labeled HW.

Results: In 2016 this resulted in a reduction of 85% for this particular HW stream and a cost savings of $2,866.

Successful Facility Example

Chemical Manufacturing Facility

Water Reduction

Action: Reduced the amount of water used in the process by 5%.

Results: In 2016 this resulted in 10,299,000 gallons reduced with a cost savings of $51,492.

Hazardous Waste Reduction

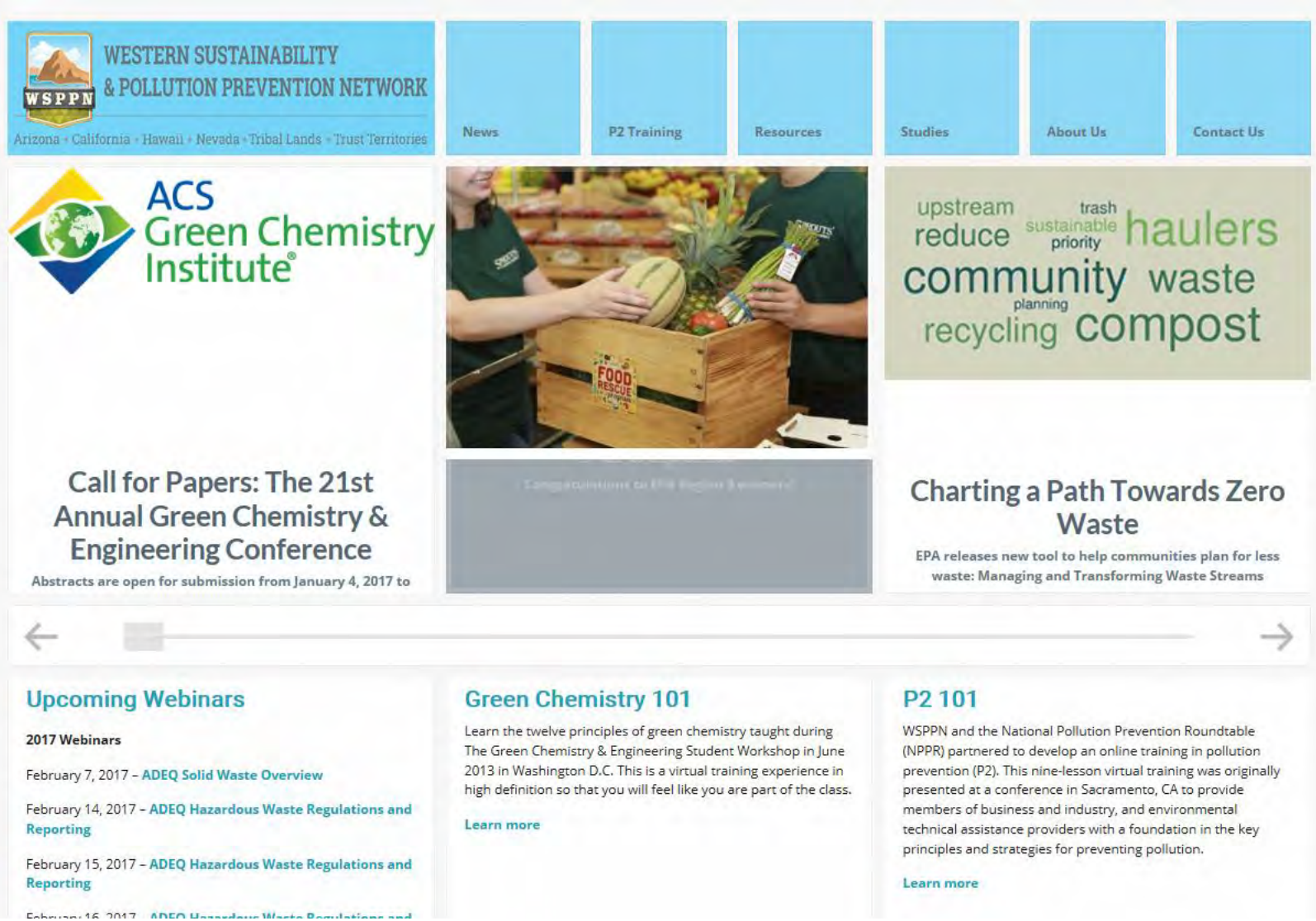
Action: Reduce total waste by 10% and incinerated waste by 25% by working with waste vendor to redirect waste.

Results: In 2016 this resulted in a hazardous waste reduction of 139,101 pounds with a cost savings of $278,201.

Other resources - WSPPN

Western Sustainability Pollution Prevention Network

http://wsppn.org



EPA Regional Information Centers

ADEQ Arizona Department of Environmental Quality

Great Lakes Regional Pollution Prevention Roundtable

NEWMOA

Peaks to Prairies
Pollution Prevention Information Center

ZERO WASTE NETWORK
CENTER FOR ENVIRONMENTAL EXCELLENCE

pprc

WSPPN
WESTERN SUSTAINABILITY & POLLUTION PREVENTION NETWORK
Arizona * California * Hawaii * Nevada * Tribal Lands * Trust Territories

esrc

RIGHT WASTE! PZRIC.org
POLLUTION PREVENTION REGIONAL INFORMATION CENTER

NEBRASKA
MISSOURI
KANSAS
IOWA

preventing pollution at its source 25 years right from the start

Voluntary Environmental Stewardship Program

A.R.S. §49-192

- Identify and reward organizations with a good history of compliance
- Various categories
  - Copper, bronze, silver gold and platinum

Reasons to join

- ADEQ recognition of your organization
- Reduced inspection frequency
- Coordination of multiple onsite inspections
- Advanced notification of inspections and enforcement rulings

Contact:
Ian Bingham,
ADEQ Communications Director and
Ombudsman
Phone: (602) 771-4322
Fax: (602) 771-2251
idb@azdeq.gov

Need Additional Assistance?

Contact us! We are here to help!

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Thank You