



# Tools and Resources

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# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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[Questions or Comments](#)  
[p2@tceq.texas.gov](mailto:p2@tceq.texas.gov)

## About Pollution Prevention (P2) Planning

A portal to resources available for the Waste Reduction Policy Act and pollution prevention planning.



Pollution Prevention Resources for the State of Texas

[Annual Progress Report](#) | [Online P2 Annual Progress Reporting \(STEERS\)](#) |

[Pollution Prevention Workshops](#) | [P2 Planner Options](#) | [Example P2 Plans](#) |

Documents on this page are in various file formats (Help [downloading files](#).)

[Remediation](#)[Response](#)[Registration](#)[Pollution](#)[Us](#)[Us](#)

### WRPA

Background [about the Waste Reduction Policy Act](#), its requirements, and resources to help you get the most from planning.

**Pollution Prevention Planning**  
Use the [Pollution Prevention Planning Guide](#) to meet the WRPA requirements while reducing risks, eliminating waste,

### Hot Topics

#### **NEW 2017 P2WM Workshop**

The 2017 Pollution Prevention and Waste Management Workshop has been scheduled for September 20. Registration is now open. The one day workshop will cover topics from WRPA, TRI, Hazardous Waste, and more! Registration has been a sell out every year so check out the [P2WM Workshop webpage](#) for more information!

### Resources

*Reduce Waste and Save Money! Use these links to enhance your P2 efforts!*

#### **P2 Resources**

These tools can help increase the effectiveness of your pollution prevention plans.



# U.S. Environmental Protection Agency

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## Air Quality Improves as America Grows

EPA's annual air quality report highlights the clean air accomplishments of state, tribal, federal, and local agencies across the U.S.

[Read the news release](#)

[Explore the interactive report](#)



### EPA's Superfund Taskforce

- ✓ Expediting Cleanup and Remediation
- ✓ Re-Investigating Responsible Party Cleanup and Reuse
- ✓ Encouraging Private Investment
- ✓ Promoting Redevelopment and Community Revitalization
- ✓ Engaging Partners and Stakeholders



## Video Highlights



## News



## Social Media

Tweets by @EPA



U.S. EPA

@EPA

Keep generators outside and far away from your



# Resource Conservation and Recovery Act (RCRA) Laws and Regulations

The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law describes the waste management program mandated by Congress that gave EPA authority to develop the RCRA program. The term RCRA is often used interchangeably to refer to the law, regulations and EPA policy and guidance.

## RCRA Overview



- [What is RCRA?](#)
- [How Does RCRA Work?](#)
- [History of RCRA](#)

## RCRA Regulations



- [Non-hazardous Waste](#)
- [Hazardous Waste](#)
- [Underground Storage Tanks](#)

### RCRA's 40th Anniversary

- [Check out this interactive timeline of RCRA's history](#)
- [Check out the RCRA 40th Anniversary Page](#)

### Solid and Hazardous Waste Listserv

Join our listserv to get updates from EPA! To subscribe, send a blank message to: [solid-and-](#)



# Toxics Release Inventory (TRI) Program

## TRI Program to Adopt 2017 NAICS Codes

EPA has published a direct final action to adopt the 2017 North American Industry Classification System codes for TRI reporting.

[Learn more about this rule](#)



[TRI Program Contacts](#)

[Timeline of TRI Milestones](#)

[Site Map](#)



TRI is a resource for learning about toxic chemical releases and pollution prevention activities reported by industrial and federal facilities. TRI data support informed decision-making by communities, government agencies, companies, and others.



# Pollution Prevention (P2)

## Learn about Pollution Prevention

- [What is P2?](#)
- [P2 Laws and Policies](#)
- [P2 Where You Live](#)



[Results of FY 2014 P2 and SRA Grants.](#)

[What are National P2 Emphasis Areas?](#)

### [Learn About Pollution Prevention](#)

- [Why P2 is important](#)
- [P2 law and policies](#)
- [What EPA is doing](#)
- [P2 calendar of events](#)

### [Grant Programs for P2](#)

- [Pollution Prevention Grants](#)
- [P2 Information Network Grants](#)
- [Source Reduction Assistance Grants](#)

### [What You Can Do](#)

- [P2 resources for business](#)
- [Internships in P2](#)
- [Tools and calculators](#)
- [EPA regional and state program information](#)

### [Additional P2 Resources](#)

- [Pollution Prevention Information Clearinghouse](#)
- [Publications](#)
- [A-Z subject index](#)
- [Greener Products and](#)

# ZERO WASTE

## NETWORK

CENTER FOR ENVIRONMENTAL EXCELLENCE

- ✓ **Identify successful practices and publish them in a format that is useful to facilities in our region**
- ✓ **Provide means for facilities to exchange ideas**
  - **Workshops**
  - **On-line**
  - **Technical assistance**





# ZERO WASTE NETWORK

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Join Us on:



## P2 & Lean Workshops

Houston  
Nov. 14-16, 2017,  
Arlington  
Dec. 5-7, 2017

More

## Environmental Management Systems Workshops

Wake Charles  
Sep. 26-29, 2017  
Arlington  
Dec. 12-15, 2017

More

Welcome to the Zero Waste Network ([about us](#)). This web site will provide you with tools and resources to help you identify money saving options to reduce pollution.

- [Workshops](#) - Learn strategies and techniques to help improve efficiency, lower liability, and increase profitability by improving environmental performance. See a complete [schedule of events](#) hosted by the Zero Waste Network and our partners.
- [RENEW](#) - This application is designed to help organizations exchange hazardous materials that would normally be considered a waste. List materials available or wanted and browse materials by type.
- [Success Stories](#) - Discover how hundreds of facilities are reducing pollution and saving money. Search by facility type, process, and other criteria.
- [Pollution Prevention Options](#) - If you are not required to prepare a P2 Plan, you can still browse options for saving money and reducing waste.
- [Pollution Prevention \(P2\) Planner](#) - A tool for preparing a pollution prevention plan. Users can select from over 700 options including options supplied by other users. Can be used to comply with [TCEQ's P2 Planning Law](#).
- [Topic Hubs](#) - A great way to get pollution prevention information on a variety of topics.
- [P2 Results](#) - Regional highlights of [results for pollution prevention programs](#) and details of regional reports. Includes a tool for inputting P2 data, on

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ESP



[Facility](#)[Activity](#)[Step 3](#)[Final Step](#)

## The Pollution Prevention Planning Process

This planning tool will guide you through a process for pollution prevention planning. In this process you will:

- Identify the **activities** at your facility and the wastes it generates.
- Consider **options** from an extensive list designed specifically for your activities.
- Save the options you plan to implement.
- Prepare and print the **plan** and **executive summary**. Texas facilities may submit the plan and executive summary to meet the requirements of the Waste Reduction Policy Act.

[next >>](#)

This tool is provided by the [Zero Waste Network](#). In cooperation with the [Texas Commission on Environmental Quality](#). Information supplied using this tool will be shared for the purpose of promoting and advancing pollution prevention.

Questions about the Waste Reduction Policy Act e-mail: [P2@tceq.texas.gov](mailto:P2@tceq.texas.gov)

Questions, suggestions and comments about this website? [Let us know!](#)



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## P2 & Lean Workshops

[Houston \(one day\)](#)  
October 5, 2016

[Houston](#)  
November 8-10, 2016

[Arlington](#)  
December 6-8, 2016

[Houston](#)  
May 31 - June 2, 2017

[More](#)

## Environmental Management Systems Workshops

[Oklahoma City, Ok](#)  
09/27/16 - 09/30/16

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## Pollution Prevention Options



Following are a set of pollution prevention options (Best Management Practices) that can be used to save money by reducing waste. Many of the options you will find are submitted by people in the private sector who have found solutions to a variety of problems.

### Three Ways to View:

[642 Options for 114 Common Activities](#) - These options for reducing waste and saving money are reviewed by pollution prevention specialists.

[1003 Options for 70 Activities Posted from the Field](#) - These options written by people from industry, small business and local governments. The options and activities are presented without editing or review.

[All 1645 options for all 184 activities](#) - This complete list includes all P2 options including options prepared by both P2 specialists and industry.

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## Case Study Database

[Add Story](#) | [Search Case Studies](#)

## Welcome to the National P2Rx Success Story Database

Welcome the Zero Waste Network success story database. We currently have [537](#) success stories. Each case study is an example of how a real facility saved money, reduced waste, and/or lowered their regulatory burden through an innovative P2 practice. The studies are often written in a companies own words, with minimal editing. For more information on success story procedures see: [success story SOP's document](#)

Industry General :

All

Process Type :

All

- All
- Acetonitrile production
- Adhesive Manufacturing
- Aerosol Can Disposal
- Air compression
- Air compressor
- Air Conditioning
- Aircraft Repair
- Aluminum Anodizing
- Ammonia Production
- Ammonia Stripper
- Antifreeze Recycling
- Asphalt Pavement Testing, Sign Producing
- Automotive Maintenance
- Barge Cleaning
- Bending Metal Tubes
- Biodiesel Use
- Bleaching
- Boiler
- Boiler (CFB)

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Attend a workshop and earn credits toward a Professional Certification



# Case Study – Rockwell Collins

- ✓ **Formed a team to reduce energy usage**
- ✓ **Saved the facility over \$300,000/yr**



# Case Study Database – J.L. Clark

✓ **In one year they were able to save over \$335,000 by:**

- Developing a “Green Team”
- Implementing a system to correct errors quickly and reduce volume of scrap material
- Light weighting various containers they manufacture.

✓ **Total reductions:**

- 1,297,000 kWhr of Electricity
- 1,369 tons of waste

# Measuring Results

## Reported results from the P2 Program:

- ✓ **Reduced over 18,000,000 tons of hazardous waste at its source**
- ✓ **Reduced 4,900,000 tons of TRI chemicals**





# **MATERIALS EXCHANGE**

**The Resource Exchange Network for Eliminating Waste**





# What is RENEW

- ✓ **A free materials-exchange network established to promote the reuse and recycling of industrial wastes.**
- ✓ **RENEW has been a great tool to help reduce wastes**
  - **Over 500 successful exchanges:**
    - 1 billion pounds of materials recycled or reused
    - \$27 million in disposal costs avoided
    - Over \$15 million from sales of materials



# How RENEW Can Help!



## Improve your business' bottom line

- Lower or Avoid Disposal Costs- RENEW has saved facilities \$27 mil
- Earn Revenue From Sales- RENEW has helped earn over \$15 mil



## Reduce regulatory burdens

- Provides users opportunities for waste minimization
  - LQG approx. 88 requirements
  - SQG approx. 74 requirements
  - CESQG approx. 4 requirements

## Environmental Stewardship

- RENEW has helped divert more than 1 billion pounds of materials for reuse or recycling





# Types of Items on RENEW

- ✓ **Electronics**
- ✓ **Organics**
- ✓ **Wood**
- ✓ **Paper**
- ✓ **Oil**
- ✓ **Solvents**
- ✓ **Acids**
- ✓ **Rubber**
- ✓ **Alkali**
- ✓ **Miscellaneous**
- ✓ **Textile and Leather**
- ✓ **Paints and Coatings**
- ✓ **Wax**
- ✓ **Glass**
- ✓ **Metal and metal sludge**
- ✓ **Construction and demolition**
- ✓ **Inorganics**

# Successful Exchange Stories

- ✓ **A biodiesel production company transferred 275 pounds of waste acetone to a company that recycled it for lacquer paint production. The material is typically sent to a hazardous waste disposal site that would have cost the facility \$750. Helps the facility remain a CESQG!**
- ✓ **A company that refines and markets oil and natural gas transferred 7,800,000 pounds of crude oil tank bottoms to a company who was able to reuse it saving them \$236,800.**



**REUSE**   
**REDUCE**  
**RECYCLE**



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## Compressed Air

Compressed air is often called the “fourth utility,” after electricity, natural gas and water. Approximately 70% of all manufacturers having a compressed air system and up to 30% of electricity consumed by the manufacturing sector can be attributed to compressed air usage.

For many, this system is a vital input in production widely used due to its cleanliness, availability and ease of use. However, compressed air systems are highly inefficient, resulting in significant wasted energy and costs. It is estimated that 25% of compressed air is wasted through leaks!

### Effects of Air Loss

As with any wasted product, wasting this much compressed air has effects on production.

- Reduces system reliability
- Wastes energy

Use of

50%—







# POLLUTION PREVENTION INFOHOUSE

COMPREHENSIVE REFERENCE COLLECTION

The P2RIC InfoHouse is a searchable online collection of more than 50,000 pollution prevention (P2) related publications, fact sheets, case studies and technical reports.

P2RIC is operated by [The Nebraska Business Development Center](#) at the [University of Nebraska at Omaha](#) and is a member of the [Pollution Prevention Resource Exchange](#) national network of regional information centers. We receive funding from [Environmental Protection Agency](#) of the US.

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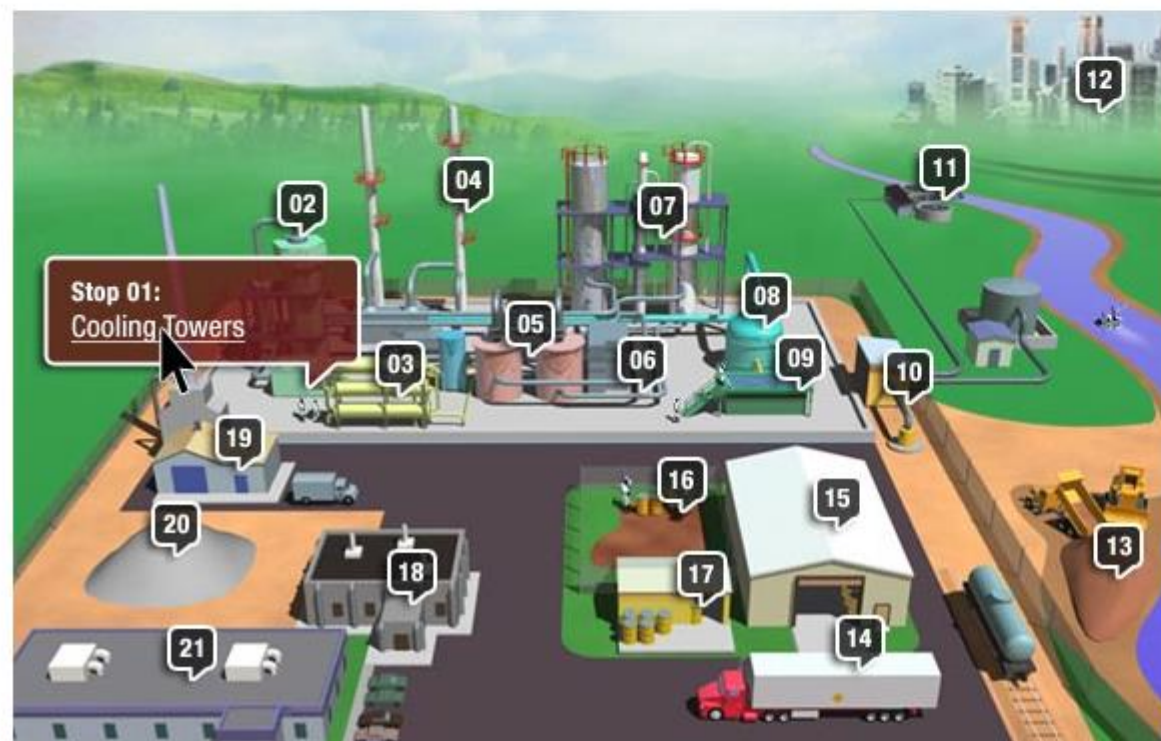


Tools

## Virtual Plant Tour

### Take the Tour!

This "Virtual Plant Tour" is intended to help you find regulatory information, pollution prevention case studies, and good management practices as they relate to operations found in nearly all chemical manufacturing facilities. More than 450 case studies are available, all drawn from actual chemical manufacturing plants. **(This Tool requires Adobe Flash Player)**



## Have a Question?

Ask  
SOCMA

- ➔ Virtual Plant Tour
- ➔ Regulatory Puzzle
- ➔ U.S. Environmental Regulations
- ➔ Regulatory Deadlines
- ➔ EHS&S Regulatory Webinar Series Hosted By ChemAlliance.Org
- ➔ Compliance Assistance Tools
- ➔ Compliance Assistance Hotline
- ➔ State-based Compliance Resources
- ➔ Chemical Industry Links
- ➔ Desktop Tools
- ➔ Glossary of Regulatory Terms
- ➔ EPA and Related Regulatory Program Offices
- ➔ Additional Resource Materials

# 2018 TEXAS ENVIRONMENTAL EXCELLENCE AWARDS

It is the highest environmental honor you can receive in Texas, and it gives businesses, organizations and individuals the opportunity to showcase their environmental projects.

[www.teea.org](http://www.teea.org)

LEARN MORE ABOUT THE  
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# 2018 TEXAS ENVIRONMENTAL EXCELLENCE AWARDS

There are nine award categories:

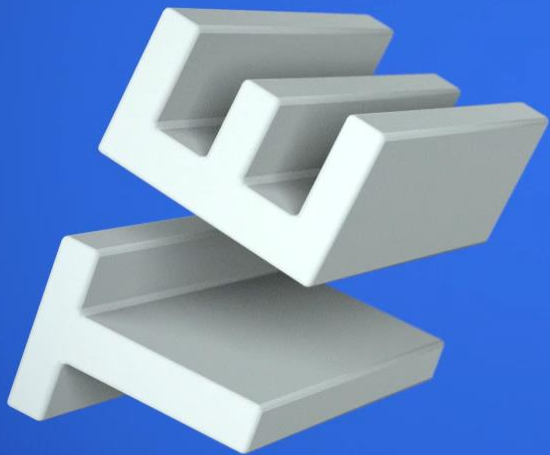
- Water Conservation
- Youth
- Individual
- Innovative Operations/Management
- Agriculture
- Pollution Prevention
- Education
- Technical/Technology
- Civic/Community

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# 2018 TEXAS ENVIRONMENTAL EXCELLENCE AWARDS

- Applications accepted annually from June – September.
- Applications reviewed October-March
- Winners and Finalists announced in Spring
- Banquet for Winners held in May (hosted by our commissioners)

**Contact:**

**Brandon Greulich or Eileen Villasenor**

**[awards@tceq.texas.gov](mailto:awards@tceq.texas.gov)**

**512-239-3143**

[www.teed.org](http://www.teed.org)

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