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## 1993 Reference Guide to Pollution Prevention Resources

This guide is an annual publication developed by EPA's Office of Pollution Prevention and Toxics under the direction of:

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# 1993 Reference Guide to Pollution Prevention Resources

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## *Contents*

Introduction .....	v
1. Pollution Prevention Documents .....	1
Facility Planning and General Pollution Prevention Manuals .....	2
Industry Specific Guides, Factsheets, and Bibliographic Reports .....	9
2. Pollution Prevention Videos .....	15
3. State Pollution Prevention Programs .....	25
Technical Assistance, Training, and Regulatory Programs for Each State .....	36
Islands and Territories .....	59
4. University-Affiliated Pollution Prevention/Research and Training Centers .....	63
5. U.S. EPA Pollution Prevention Programs and Resources .....	87
Grant Programs .....	88
Other Programs .....	91
Additional Resources .....	106
6. Additonal Technical Assistance Programs for Businesses .....	111
7. Pollution Prevention Clearinghouses, Associations and Hotlines .....	117
8. Calendar of Pollution Prevention Events .....	129



# Introduction

*"There are significant opportunities for industry to reduce or prevent pollution at the source through cost-effective changes in production, operations, and raw materials use. Such changes offer industry substantial savings in reduced raw material, pollution control, and liability costs as well as help protect the environment and reduce risks to worker health and safety."*

—The Pollution Prevention Act of 1990

## Purpose of this Document

This annual guide contains information about publicly sponsored pollution prevention resources and training opportunities available across the Nation. Drawing upon diverse sources, the document consolidates a wide range of information not easily accessible by the public. The goal of this publication is to provide persons interested in learning more about pollution prevention options with a single source of information on:

- Where to obtain pollution prevention training, or who might be able to share experiences about establishing a new training opportunity;
- What publications and videos are available that can help them learn more about pollution prevention;
- Whom to contact at the State and Federal levels for assistance;
- Which university centers are conducting pollution prevention research and training;
- Which Federal, State, and nonprofit organizations can provide additional pollution prevention information and technical assistance.
- Where small businesses can obtain Technical Assistance

Additional information on the topics covered in this manual and on related subjects can be obtained by accessing the Pollution Prevention Information Clearinghouse (PPIC), which offers a wide range of free information services (see Section 7, Pollution Prevention Clearinghouses, Associations and Hotlines).

## What Is Pollution Prevention?

Faced with the increasing costs and liabilities associated with end-of-pipe waste management practices, many waste generators are turning to pollution prevention as a cleaner, safer, and more cost-effective alternative. Pollution prevention (also known as source reduction) is defined as:

*Any practice which reduces the amount of any hazardous substance, pollutant, or contaminant entering the waste stream or otherwise released to the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.<sup>1</sup>*

Pollution prevention includes such techniques as toxics use reduction, raw material substitution, process or equipment modification, product redesign, training, improved inventory control, production planning and sequencing, and better management practices.

## Pollution Prevention Is Our National Policy

Acknowledging the importance of pollution prevention in the national environmental strategy, Congress passed the landmark Pollution Prevention Act of 1990. This Act establishes as national policy an environmental management hierarchy that sets pollution prevention as the option of first choice. For

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1. Pollution Prevention Act of 1990, 42 U.S.C. § 13101, et. seq.

those wastes that are not capable of being reduced at the source, this hierarchy considers recycling to be the next best management option. A waste generator should turn to treatment or disposal to solve a waste generation problem only after source reduction and recycling have been considered.

### **EPA's Leadership in Preventing Pollution**

The Pollution Prevention Act of 1990 reinforces EPA's continuing and aggressive effort to integrate pollution prevention into all of its programs and activities. Released in February 1991, EPA's "Pollution Prevention Strategy" provides guidance on incorporating pollution prevention into ongoing programs and emphasizes the need for continued strong regulatory and enforcement programs. The strategy includes a plan for achieving substantial voluntary reductions of targeted high risk industrial chemicals through pollution prevention. The plan, known as the 33/50 Program, is aimed at reducing 17 high risk chemicals 33 percent by the end of 1992 and at least 50 percent by the end of 1995 (see Section V: U.S. EPA Pollution Prevention Programs). The 33/50 Program is designed to maximize private sector initiatives while challenging industry to achieve ambitious prevention goals. The Agency's pollution prevention strategy also calls for the development of plans for the consumer, agricultural, energy, transportation and Federal sectors.

Through these activities EPA strives to promote pollution prevention efforts by other Federal agencies, States, local governments, industry, universities, nonprofit organizations, and the general public. The Agency's pollution prevention efforts include providing technical information transfer and exchange mechanisms, administering grant programs,

conducting research, and offering public outreach services (contact the PPIC for information about specific initiatives).

### **Updates to this Guide**

Because of the high visibility and rapid growth of this field, many pollution prevention efforts are in a state of flux. We worked to ensure that the information in this guide was as current as possible when the document was sent to press. Given the dynamic character of the field, however, some information will have changed since it was collected. We plan to expand and update this publication annually to include additional information called to our attention in the future.

Please submit any updates or corrections concerning your training opportunities, programs, calendar events, or training materials to:

Pollution Prevention Information Clearinghouse  
US Environmental Agency, PM-211A  
401 M. Street, SW, RM 2904  
Washington, D.C. 20460

(For your convenience, an addressed form letter follows this page.)

**Note:** The appearance in this guide of training courses and materials other than those produced or sponsored by EPA does not constitute an endorsement of their quality by the Agency. Many of the organizations sponsoring such training opportunities have pollution prevention policies that differ significantly from those of the EPA and, thus, do not reflect the Agency's position.

Please use this space for updates or corrections to EPA's **1993 Reference Guide to Pollution Prevention Resources**

Name \_\_\_\_\_

Title \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Please use this space to comment on the content, form, or use of this guide.

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Postage

**Pollution Prevention Information Clearinghouse  
Environmental Protection Agency  
401 M Street, SW, PM-211A  
Washington, D.C. 20460**

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# 1

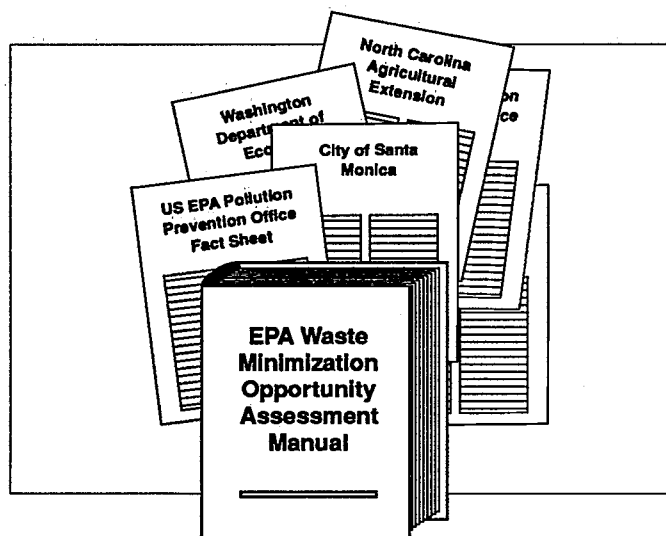
## Section 1 Pollution Prevention Documents

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*This section describes a variety of publications that provide general and industry-specific pollution prevention information. These documents can be used by plant environmental staff, workshop instructors, or anyone interested in learning more about pollution prevention techniques. Documents listed in this section are available for use in the U.S. EPA Headquarters Library, Washington, D.C.*

To order U.S. EPA publications call the Center for Environmental Research Information (CERI), (See section 7 for a description of services) or call the Pollution Prevention Information Clearinghouse (PPIC - see section 7) as noted in the citation.

To order documents not marked as available from PPIC, contact the organization that produced the publication.



## 1.A Facility Planning and General Pollution Prevention Manuals

### AUDIT AND REDUCTION MANUAL FOR INDUSTRIAL EMISSIONS AND WASTES

The United Nations Environment Programme (UNEP) and the United Nations Industrial Development Office (UNIDO) jointly developed this document to assist in the identification of industrial emission and waste sources. UNEP/UNIDO adapted the OWMC assessment manual to better meet the needs of a wider international audience. The manual addresses the following topics: Introduction to Waste Auditing, the Audit Procedure, Preassessment, Material Balance: Process Inputs and Outputs, and Synthesis. Additional information includes three technical case studies (beer production, leather manufacture, and printed circuit board manufacture), a resource section, and a removable quick reference audit guide. This audit manual is designed as a working document for use by factory personnel at all levels, consultants reporting to industrial clients, and government personnel reviewing existing factory operations.

*UNEP and UNIDO, 1991*

*UNEP*

*1889 F Street, NW*

*Washington, D.C. 20006*

*(202) 289-8456*

*Cost: Contact UNEP for cost and availability information*

### COSTING AND FINANCIAL ANALYSIS OF POLLUTION PREVENTION PROJECTS: A TRAINING PACKET

This packet was written to introduce state pollution prevention staff to concepts and methods of conducting financial analysis for pollution prevention projects so they can more effectively discuss these methods with industry representatives. The case studies and report provide supporting information to the curriculum for those teaching or participating in the workshop.

*Northeast Waste Management Officials Association*

*85 Merrimac Street*

*Boston, Massachusetts 02114*

*617-367-8558*

*Cost: \$40 (\$20 for nonprofits and government agencies)*

### CURRICULUM FOR TOXICS USE REDUCTION PLANNERS

This curriculum is intended to serve as the basis for advanced educational programs for the training of toxics use reduction planners. A primary objective of this training is to assure that professionals can assist Massachusetts companies in complying with the state's 1989 Toxics Use Reduction Act.

*Toxics Use Reduction Institute, 1991*

*University of Massachusetts, Lowell*

*1 University Avenue*

*Lowell, Massachusetts 01854*

*(508) 934-3275*

*Cost: Contact the Institute for cost and availability information.*

### FACILITY POLLUTION PREVENTION GUIDE (EPA/600/R-92/088)

This manual describes EPA's recommended procedure for identifying hazardous waste pollution prevention opportunities. It was designed to promote EPA's preferred waste management strategy, which ranks source reduction and recycling first and second, respectively. The manual describes in detail how to conduct a waste assessment, from the planning/organization phase, through the assessment and feasibility analysis, to final implementation of the pollution prevention options. The manual contains numerous appendices, including worksheets, sample waste assessment, causes and sources of waste, pollution prevention techniques, lists of government-sponsored assistance programs, and discussions of economic evaluation methods. The Facility Pollution Prevention Guide is targeted at both those responsible for reducing waste streams and those interested in general information about pollution prevention. This manual is suitable for use as a primary text in a training course or as part of a technical assistance outreach effort.

*U.S. EPA, Office of Research and Development, May 1992*

*Center for Environmental Research Information*

*26 West Martin Luther King Drive*

*Cincinnati, Ohio 45268*

*513-569-7562*

*Cost: Free from CERI (see section 7)*

## INDUSTRIAL WASTE MINIMIZATION MANUAL

This manual, the third edition and revision of the award-winning Hazardous Waste Minimization Manual, provides information and guidance to all industrial waste generators on pollution prevention practices and suggested compliance requirements for all generators under the Resource Conservation and Recovery Act (RCRA) and other related Federal acts. The manual presents case histories of waste minimization practices that have increased profits and waste minimization ideas for the petroleum, steel, and paper & pulp industries. The manual covers the following subjects: the advantages of pollution prevention; the regulatory environment for waste reduction; pollution prevention approaches; how to conduct a waste audit; general, industry-specific, and waste-specific pollution prevention practices; and ways to finance a waste reduction program. Finally, information on sources of pollution prevention information are included, as well as appendices covering regulatory issues relevant to waste generators.

*Center for Hazardous Materials Research, October 1989*  
*University of Pittsburgh Applied Research Center*  
*320 William Pitt Way*  
*Pittsburgh, Pennsylvania 15238*  
*412-826-5320 • 1 (800) 334-CHMR*  
*Cost: \$40*

## INDUSTRIAL WASTE AUDIT AND REDUCTION MANUAL

The first step to effective waste reduction is a systematic audit of plant processes. The Industrial Waste Audit and Reduction Manual explains each step of the audit process, including determining the origin, characteristics, and volume of wastes being produced; evaluating waste disposal methods and costs; weighing the costs and benefits of different waste reduction measures; and deciding on the best, most cost-effective methods for your operation. This manual is targeted at small- and medium-sized companies and can be used by both technical and nontechnical staff. It includes example waste audit case studies from printed circuit board manufacturing, steel pickling, and detergent manufacturing companies. In addition, the publication devotes one section to sources of pollution prevention information and assistance.

*Ontario Waste Management Corporation, 1989*  
*Attention: John Richmond • 2 Bloor Street West, 11th Floor*  
*Toronto, Ontario, Canada M4W3E2*  
*416-923-2918*  
*Cost: \$40*

## INDUSTRIAL WASTE PREVENTION

This practical guide provides step-by-step instructions for developing an effective waste minimization program. It includes forms, worksheets, and original waste prevention ideas that are relatively inexpensive and do not require major changes in your plant. The guide, designed for in-plant use for the prevention of hazardous and solid industrial waste, covers the following topics: the environmental manager's role, waste prevention planning, formation of a waste prevention committee, waste generation costs, and the development of waste prevention ideas.

*Waste Advantage, Inc., 1988*  
*17117 West Nine Mile Road, Suite 902*  
*Southfield, Michigan 48075*  
*313-569-8150*  
*Cost: \$195 (includes access to technical assistance hotline)*

*also from Waste Advantage*

## GreenSTAR™, SOURCE TRACKING AND REDUCTION SYSTEM

This new turn-key system combines knowledge of waste prevention with computer technology. GreenSTAR tracks waste by cost, quantity, source, and material and provides cost cutting solutions. It also produces detailed data spread sheet and 3-D color charts and graphs. Complete regulatory reports.

*Waste Advantage Inc. Software Division*  
*1915 Orangewood Avenue, Suite 219*  
*Orange, California 92668*  
*714-939-5501*  
*Cost: Prices start at \$25,000*

## INDUSTRIAL WASTE REDUCTION

This Environmental Engineering Curriculum is designed for a three-credit college course. Divided into 15 sessions of 2 hours and 40 minutes each, the course serves as an overview of waste reduction concepts and applications in Alaska and elsewhere in the U.S. It covers audits, programs, technologies, waste disposal, regulations, worker safety and health, and background on the development of waste management/reduction in the States.

*Alaska Health Project, 1991*  
*1818 W. Northern Lights, Suite 103*  
*Anchorage, Alaska 99517*  
*907-276-2864*  
*Cost: \$30*

### **LIFE-CYCLE ASSESSMENT: INVENTORY GUIDELINES AND PRINCIPLES (EPA/600/R-92/036)**

This document is written in a manner useful to a broad audience. By providing a template for generalizing the inventory development process and describing a set of rules to assist in making necessary assumptions regarding, for example, assessment boundaries, data quality and coverage, and equivalency of use in a consistent fashion, the guide should reduce the tendency for studies to be published with apparently contradictory conclusions.

*U.S. EPA, Office of Research and Development, 1992  
Center for Environmental Research Information  
26 West Martin Luther King Drive  
Cincinnati, Ohio 45268  
513-569-7562  
Cost: Free from CERI (see section 7)*

### **MANAGEMENT AND MINIMIZATION OF HAZARDOUS WASTE UNDER RCRA**

This manual was written as a teaching aid for workshops designed to meet the training requirements of the Resource Conservation and Recovery Act (RCRA) for North Carolina industries. Although its focus lies with educating generators about the Act's regulatory requirements, it promotes pollution prevention as the best means to avoid the legal and economic burdens of waste generation. The manual discusses how to plan a waste reduction program and conduct an audit, use operating practices conducive to preventing pollution, and motivate people to alter their behavior and adopt a waste reduction mentality.

*North Carolina State University, September 1989  
Industrial Extension Service, College of Engineering  
P.O. Box 7909, Raleigh, North Carolina 27695-7909  
919-737-2303  
Cost: Contact the University for cost and availability information.*

### **MANAGEMENT TRAINING IN POLLUTION PREVENTION AND CONTROL IN THE METAL FINISHING INDUSTRY**

(See description in Section 2, Pollution Prevention Videos)

### **MANUAL FOR HAZARDOUS WASTE REDUCTION PLANNING AND REPORTING**

This manual was designed to assist hazardous waste generators in Rhode Island in complying with the state's waste reduction policy, and to provide information and forms necessary to assist generators in complying with the reporting requirements.

*Rhode Island Department of Environmental Management, 1991  
Office of Environmental Coordination  
83 Park Street  
Providence, Rhode Island 02903  
401-277-3434  
Cost: Contact the DEM for cost and availability information*

### **MINNESOTA GUIDE TO POLLUTION PREVENTION PLANNING**

This guide takes the reader, step by step, through the process of pollution prevention planning. It can be used to meet the planning requirement of the Minnesota Toxic Pollution Prevention Act.

*Minnesota Office of Waste Management, 1991  
1350 Energy Lane  
St. Paul, Minnesota 55108  
612-649-5795  
Cost: Contact the OWM for cost and availability information*

### **NEW YORK STATE WASTE REDUCTION GUIDANCE MANUAL**

Prepared specifically for businesses located in New York, this manual provides detailed descriptions of waste reduction techniques for major waste-generating processes used by state industries. Both in-State and out-of-state businesses can use the document to learn more about waste reduction benefits, waste reduction techniques that may be applicable to their processes and waste streams, and ways to conduct a waste reduction audit. The publication introduces the concepts necessary to undertake waste reduction, including starting and sustaining a waste reduction effort, investigating opportunities, identifying options, and performing a feasibility analysis. Appendices provide additional sources of information, worksheets, a glossary, and applicable rules and regulations.

*New York State Department of Environmental Conservation,  
March 1989  
Division of Hazardous Substances Regulation,  
Bureau of Pollution Prevention  
50 Wolf Road • Albany, New York 12233-7253  
518-485-8400  
Cost: Contact the DEC for cost and availability information*

## **NORTHEAST STATES POLLUTION PREVENTION ROUNDTABLE TRAINING HANDBOOK**

This handbook is designed to provide agendas, case studies and exercises for state environmental programs in the Northeast to use in designing and conducting training on pollution prevention. This handbook was written to complement the EPA Instructor Training Manual.

*Northeast Waste Management Officials Association  
85 Merrimac Street  
Boston, Massachusetts 02114-4715  
617-367-8558*

*Cost: Call NEWMOA for prices (see section 7)*

## **POLLUTION PREVENTION 1991: PROGRESS ON REDUCING INDUSTRIAL POLLUTANTS (21P-3003) NTIS #: PB 93-157725**

Pollution Prevention 1991 provides an overview of the range of activities occurring in pollution prevention nationally. The report focuses on trends in industrial pollution reduction, and highlights the Federal Government, States, localities and universities pollution prevention programs.

*U.S. EPA, Office of Pollution Prevention, October 1991  
Pollution Prevention Information Clearinghouse (PPIC)  
401 M. Street, SW PM-211A  
Washington, D.C. 20460  
202-260-1023*

*Cost: \$27 hard copy  
\$12.50 microfiche from NTIS (703-487-4650)*

## **POLLUTION PREVENTION: A GUIDE TO PROGRAM IMPLEMENTATION**

This manual is a general, easy-to-use guide designed to help Illinois companies integrate and implement a pollution prevention program into their way of doing business in order to produce quality products, protect employees and the environment, and meet regulatory requirements. The manual presents an eight step method for developing, initiating, and sustaining a facility or company wide pollution prevention program. The manual also contains a list of Illinois resources for further assistance.

*Illinois Hazardous Waste Research and Information Center (HWRIC), 1993  
One E. Hazelwood Dr.  
Champaign, Illinois 61820  
217-333-8940*

*Cost: Contact HWRIC for cost and availability information*

## **POLLUTION PREVENTION CASE STUDIES COMPENDIUM (EPA/600/R-92/046)**

As a major part of the effort to disseminate the results of its research in the area of pollution prevention, EPA's Risk Reduction Engineering Laboratory has produced this compilation of case studies. The studies are a collection of summaries of pollution prevention demonstrations, assessments and research projects conducted with the Branch. The compendium highlights four programs: The Waste Reduction Innovative Technology Evaluations Program; The Waste Reduction Evaluations at Federal Sites Program; The Waste Minimization Assessments Program; and the University-Based Assessments Program. An overview of each program is provided at the beginning of each section of the compendium.

*U.S. EPA, Office of Research and Development, April 1992  
Risk Reduction Engineering Laboratory  
Cincinnati, Ohio 45268  
Cost: Free from CERL (513-569-7562)*

## **POLLUTION PREVENTION: HOMEWORK AND DESIGN PROBLEMS FOR ENGINEERING CURRICULA**

This manual was designed to be integrated into existing courses leading to chemical and other undergraduate engineering degrees, ranging from sophomore-level material balances to senior-level process design. The problems are directed at increasing students' awareness of, interest in, and knowledge of waste reduction concepts that should become a permanent feature of industrial practice. Pollution prevention, figured in as an integral part of engineering solutions, can provide new engineers with insights into industrial situations they are likely to encounter.

*American Institute of Chemical Engineers, 1992  
Publications Department  
345 East 47th Street  
New York, New York 10017  
212-705-7407  
Cost: \$35*

## **POLLUTION PREVENTION PAYS INSTRUCTION MANUAL**

The Pollution Prevention Pays Instruction Manual was developed to introduce the concept of pollution prevention and cost savings to individuals entering the

industrial work force. "Pollution Prevention Pays," or PPP, is a management approach that results in a change from end-of-the-pipe measures for controlling pollution to preventative measures that (1) minimize or eliminate the production of pollution and (2) result in savings to a company.

The manual concentrates on (1) current legal and environmental issues that create the need for an industrial pollution-reduction program and (2) an innovative systems approach to industrial-resource management that can reduce pollution and increase profits. The document includes activity plans, materials, and information for instructors that focus on a basic problem-solving approach to waste reduction and management. The activities emphasize elimination of pollution at its source through process modification, product reformulation, recycling, and conservation of raw materials.

*Western Carolina University, North Carolina Department of Natural Resources, North Carolina Pollution Prevention Pays Program, and the Gildea Foundation, June 1988*

*Dr. Susan Smith*

*Center for Improving Mountain Living  
Bird Building*

*Western Carolina University  
Cullowhee, North Carolina 28723  
704-227-7492  
Cost: \$28*

### **POLLUTION PREVENTION RESOURCE MANUAL**

This manual was designed for use by industry personnel of all levels who are involved with planning or implementing a pollution prevention program. The manual provides an overview of the pollution prevention concept and describes elements that constitute such a program: the statutory and regulatory framework; incentives; how to start, track, and evaluate a waste reduction program; and how to conduct a waste assessment. The publication, which follows the Chemical Manufacturers Association Pollution Prevention Code, discusses all 14 practices of the code in detail. In addition, the manual addresses electronic reporting and provides a self-evaluation form.

*Chemical Manufacturers Association, September 1991  
2501 M Street, N.W., Washington, D.C. 20037  
202-887-1100  
Cost: \$50 (member), \$75 (non-member)*

### **A PRACTICAL GUIDE TO POLLUTION PREVENTION IN THE NORTHEAST**

The purpose of this Guide is to help businesses develop a pollution prevention program that makes sense both in terms of environmental protection and corporate competitiveness. The Guide has been designed for use by all types of facilities and institutions which use hazardous substances and generate hazardous waste. Small and medium-sized facilities should find this Guide particularly useful as a do-it-yourself manual using in-house expertise. It will also be useful for service industries and larger firms.

*Northeast Waste Management Officials Association  
85 Merrimac Street  
Boston, Massachusetts 02114-4715  
617-367-8558  
Cost: Call for prices*

### **A PRACTICAL GUIDE TO TOXICS USE REDUCTION, BENEFITTING FROM TUR AT YOUR WORKPLACE**

The aim of this Guide is to help businesses in a variety of industries to launch successful and cost-effective Toxics Use Reduction (TUR) program. TUR refocuses attention away from treatment of toxic wastes which have already been produced and toward the elimination or reduction of toxics at the point of production. Because it deals with toxic substances at the source, before they have a chance to become pollutants or contaminants, TUR represents the most environmentally responsible approach to the management of industrial toxics.

*Northeast Waste Management Officials Association  
85 Merrimac Street  
Boston, Massachusetts 02114-4715  
617-367-8558  
Cost: Call for prices*

### **PROFITING FROM WASTE REDUCTION IN YOUR SMALL BUSINESS**

Profiting from Waste Reduction in Your Small Business helps small business managers and their employees work together to identify and implement methods to reduce industrial wastes. The publication is designed to help managers and employees see their

industrial waste as a financial resource rather than an unavoidable byproduct of their business process. This manual shows how to organize a business to promote waste reduction, review business plans for waste reduction potential, conduct a waste reduction audit, evaluate a waste reduction program, and learn specific strategies for nine common business processes. It includes a section covering waste reduction resources for small businesses.

*Alaska Health Project, 1988*  
1818 W. Northern Lights, Suite 103  
Anchorage, Alaska 99517  
907-276-2864

### **SOURCE REDUCTION OF TOXIC METALS IN HOUSEHOLD BATTERIES: FEDERAL, STATE AND INDUSTRY INITIATIVES**

This report presents several policy options for reducing the toxicity of household batteries through source reduction. It includes information on the constituents of batteries, historic reductions in mercury and cadmium in batteries, State and Federal regulations and legislation, and policy options for addressing the toxic metal content of batteries.

*Northeast Waste Management Officials Association*  
85 Merrimac Street  
Boston, Massachusetts 02114-4715  
617-367-8558  
Cost: \$30 (\$15 for nonprofits and government agencies)

### **TOTAL COST ASSESSMENT: ACCELERATING INDUSTRIAL POLLUTION PREVENTION THROUGH INNOVATIVE PROJECT FINANCIAL ANALYSIS (EPA/741/R-92/002)**

This manual examines the economic/financial barriers linked to methods of investment analysis that act to impede pollution prevention projects in favor of end-of-pipe alternatives. Total Cost Assessment describes the concepts and methods of a comprehensive, long-term financial analysis of pollution prevention projects. By using two case studies from the pulp and paper sector, this document illustrates how different definition, measurement, and allocation of project costs/savings, longer time horizons, and the use of multiple profitability indices may remove the biases inherent to conventional analytical methods thereby enhancing the estimated profitability of a prevention strategy.

*U.S. EPA Office of Pollution Prevention and Toxics*  
Pollution Prevention Division  
401 M. Street, SW  
Washington, D.C. 20460  
Cost: Free (available through PPIC)  
202-260-1023

### **TOXICS USE REDUCTION GUIDE**

This guide was developed to educate Colorado industries about the benefits of reducing the generation of toxic chemicals. It advocates a waste management strategy based on pollution prevention — not end-of-pipe treatment — that can lead to economic savings, reduced regulatory requirements, improved worker health, and protection of the environment. These claims are reinforced in a case study of Polaroid Corporation's pollution prevention successes. The Toxics Use Reduction Guide includes a section that explains how any company can establish its own waste reduction program, from the planning stage to implementation. A list of pollution prevention contacts is also included.

*Colorado Public Interest Research Group (CoPIRG), 1989*  
1724 Gilpin Street  
Denver, Colorado 80218  
303-355-1861  
Cost: \$2

### **WASTE MINIMIZATION: MANUFACTURERS' STRATEGIES FOR SUCCESS**

The purpose of this guide is to inform both small and large manufacturers about ways to curtail waste generation and prevent the release of pollutants into the environment. The publication emphasizes the need for widespread voluntary initiatives to reduce hazardous waste generation. Answering such questions as, "What is waste minimization?" and "Why should I establish and implement a waste reduction program?" the document then explains how manufacturers can establish their own pollution prevention programs. The guide briefly describes success stories from corporate and industry-specific programs and includes appendices on assistance resources, recommended reading, and terminology.

*National Association of Manufacturers, 1989*  
1331 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004-1703  
202-637-3000  
Cost: \$19.95 (member); \$29.95 (non-member)

## **WASTE MINIMIZATION AND POLLUTION PREVENTION: SELF-AUDIT MANUAL FOR METAL FINISHING**

This manual was designed to provide companies with a starting point for examining their facilities and finding ways to minimize hazardous waste.

*Connecticut Technical Assistance Program (ConnTAP), 1991*  
900 Asylum Avenue  
Suite 360  
Hartford, Connecticut 06105-1904  
203-421-0777  
Cost: \$10

## **WASTE MINIMIZATION TRAINING MODULES**

The Alternative Technology Division of the California Department of Health Services is currently developing three pollution prevention training modules. Each module, identified below, will consist of a workbook (which includes a text and self-testing exercises) and a supporting video.

- Module 1 — Introduction to Waste Minimization for Hazardous Materials Inspectors with self-testing exercises
- Module 2 (Two Units)
  - Unit 1 — Waste Minimization Assessment Procedures for the Inspectors with self-testing exercises
  - Unit 2 — Waste Minimization Assessment Procedures for the Generator
- Module 3 — Inspector Training on Waste Minimization for the Metal Finishing Industry.

A 43-minute videotape of a slide show accompanies the three modules, providing an introduction to waste minimization and an overview of the modules.

*Department of Toxic Substances Control, 1991*  
Attn: Robert Ludwig  
Alternative Technology Division  
714/744 P Street  
P.O. Box 806  
Sacramento, California 95512-0806  
916-324-1807 or 916-322-3670

## **WASTE REDUCTION ASSESSMENT AND TECHNOLOGY TRANSFER (WRATT) TRAINING MANUAL (SECOND EDITION)**

This manual was originally developed by the University of North Carolina at Asheville's Environmental Quality Institute, with funding provided by EPA Region IV and

the Tennessee Valley Authority. A second edition has been compiled and edited by the University of Tennessee's Center for Industrial Services. The manual was designed to train retired engineers, State employees, and affiliated university personnel to design or implement a waste reduction technical assistance program, but it is also suitable for businesses and waste assessment teams. The WRATT Training Manual concentrates on procedures that motivate people to search, screen, and put into practice measures involving administrative, material, or technology changes that result in decreased waste generation. It includes information on waste reduction awareness and incentives, Federal safety standards, State and Federal regulations, how to establish a waste reduction program and conduct a waste assessment, and waste reduction approaches for specific industries and waste types. The manual includes an industry preassessment checklist packet and appendices including sources of pollution prevention information, bibliographies, a directory of pollution prevention-related services, and a list of waste exchanges.

*Tennessee Valley Authority, October 1989*  
Russell Allen  
Bicentennial Volunteers, Inc.  
600 Summit Hill Drive  
Knoxville, Tennessee 37902  
615-632-8089  
or  
George Smelcer  
Center for Industrial Services  
University of Tennessee  
266 Capitol Boulevard Building  
Suite 606  
Nashville, Tennessee 37219-1804  
615-242-2456

## **WASTE REDUCTION IN YOUR BUSINESS**

This manual was prepared to assist Washington State businesses in reducing the amount of hazardous waste they produce. It is intended to be a tool that business managers and their employees can use to understand the benefit of waste reduction, learn how to start a waste reduction program, conduct a waste reduction audit, evaluate waste reduction options, and know whom to call for assistance.

*Washington State Department of Ecology, November 1989*  
Publications Office  
Mail Stop PV-11  
Olympia, Washington 98504-8711  
206-438-7472



## 1.B Industry-Specific Guides and Fact Sheets

### ■ Industry-Specific Pollution Prevention Opportunity Assessment Materials and Fact Sheets

In addition to the generic pollution prevention instruction manuals noted in the previous section, numerous industry-specific assessment materials are now available that can be used for guidance in setting up a pollution prevention program tailored to a given industry or process.

The current PPIC holdings include assessment publications specific to the industries identified below. PPIC's document development, research, and information-gathering efforts produce a continual influx of material into the clearinghouse. For this reason, the list provided should be regarded as representative rather than exhaustive. Anyone is welcome to visit the U.S. EPA Headquarters Library (401 M Street, Washington, D.C., Room M2904) to use this collection and other Library resources. Fact sheets and a number of EPA publications are available, free of charge, from the clearinghouse. For other material, Interlibrary loan is available.

INDUSTRY/PROCESS	SIC CODE
Automotive Repair .....	7538
Automotive Paint .....	7535
Aviation Facility .....	4582
Boat Building and Maintenance .....	3732
Building and Construction .....	1500
Dairy Plant .....	2044, 2046
Dry Cleaning .....	7216
Electroplating .....	3471
Fiberglass .....	2221
Fur Dressing/Tanning .....	3111
General Medical and Surgical Hospitals .....	8062
Heavy Equipment Maintenance .....	7699
Manufacturing/Distribution Co. ....	3900
Metal Finishing .....	3471
Paint Manufacturing/Formulating .....	2851
Pesticide Formulating .....	2879
Pharmaceutical Preparations .....	2834
Photofinishing/Photoprocessing .....	7395
Poultry Processing .....	2016
Precious Metal Platers .....	3911, 3914
Printed Circuit Board Manufacturing .....	3672
Printing .....	2700
Pulp and Paper Products .....	2600
Research and Education Institutions .....	8732, 8733
Research Laboratories .....	7391
Seafood Processing .....	2091
Textile Manufacturing .....	2200
Vehicle Maintenance .....	7500
Vocational Shops .....	8249
Wood Treating/Preserving .....	2491

## ■ **Industry-Specific Pollution Prevention Guidance Manuals**

The Pollution Prevention Research Branch of EPA's Office of Research and Development, in Cincinnati, OH, is publishing a series of industry-specific pollution prevention guidance manuals. 16 manuals in the series have been published for the industrial categories designated in the titles provided below.

The manuals supplement the EPA's generic waste

reduction manual entitled, Facility Pollution Prevention Guide (see Section 1, General Pollution Prevention Instruction Manuals). Both the general manual and the industry-specific guides are available free of charge from CERL: 513-569-7562 or Fax 513-569-7566 (see Section 7).

### **Guidance Manuals Currently Available**

<i>Guides to Pollution Prevention:</i>	<i>Automotive Refinishing Industry</i>	<i>EPA/625/7-91/016</i>
<i>Guides to Pollution Prevention:</i>	<i>Auto Repair Industry</i>	<i>EPA/625/7-91/013</i>
<i>Guides to Pollution Prevention:</i>	<i>The Commercial Printing Industry</i>	<i>EPA/625/7-90/008</i>
<i>Guides to Pollution Prevention:</i>	<i>The Fabricated Metal Industry</i>	<i>EPA/625/7-90/006</i>
<i>Guides to Pollution Prevention:</i>	<i>Fiberglass Reinforced and Composite Plastics</i>	<i>EPA/625/7-91/014</i>
<i>Guides to Pollution Prevention:</i>	<i>Marine Maintenance and Repair</i>	<i>EPA/625/7-91/015</i>
<i>Guides to Pollution Prevention:</i>	<i>Mechanical Equipment Repair Industry</i>	<i>EPA/625/R-92/008</i>
<i>Guides to Pollution Prevention:</i>	<i>Metal Casting and Heat Treating Industry</i>	<i>EPA/625/R-92/009</i>
<i>Guides to Pollution Prevention:</i>	<i>Metal Finishing Industry</i>	<i>EPA/625/R-92/011</i>
<i>Guides to Pollution Prevention:</i>	<i>The Paint Manufacturing Industry</i>	<i>EPA/625/7-90/005</i>
<i>Guides to Pollution Prevention:</i>	<i>The Pesticide Formulating Industry</i>	<i>EPA/625/7-90/004</i>
<i>Guides to Pollution Prevention:</i>	<i>Pharmaceutical Preparation</i>	<i>EPA/625/7-91/017</i>
<i>Guides to Pollution Prevention:</i>	<i>Photoprocessing Industry</i>	<i>EPA/625/7-91/012</i>
<i>Guides to Pollution Prevention:</i>	<i>The Printed Circuit Board Manufacturing Industry</i>	<i>EPA/625/7-90/002</i>
<i>Guides to Pollution Prevention:</i>	<i>Research and Educational Institutions</i>	<i>EPA/625/7-90/010</i>
<i>Guides to Pollution Prevention:</i>	<i>Selected Hospital Waste Streams</i>	<i>EPA/625/7-90/009</i>

*\*Note: additional guidance manuals on Thermal Metal Working and  
Municipal Pretreatment Programs are scheduled for release in 1993*

The Source Reduction Research Partnership (SRRP) has published a report entitled Potential for Source Reduction and Recycling of Halogenated Solvents.

This report is a result of a five year collaborative effort between the Environmental Defense Fund (EDF) and the Metropolitan Water District of Southern California. The report consists of 12 separate volumes: a comprehensive summary volume, a separate lifecycle inventory and tradeoff analysis, and ten industry-specific technical support reports. The objectives of the SRRP study include a survey and evaluation of existing and potential techniques for reducing the generation of halogenated solvent wastes, and thus their potential release into the environment, across a wide range of the industrial users of these solvents.

Each of the industry-specific volumes begins with a description of the industry and processes where halogenated solvents are used. Sources and causes of releases are described and regulatory regimes discussed for waste streams of concern. Subsequent sections focus on source reduction opportunities through chemical substitution, process modification, product substitution and recovery/reuse.

Each volume is \$10 and can be ordered from:

Environmental Defense Fund  
Rockridge Market Hall  
5655 College Avenue  
Oakland, California 94618  
510-658-8008 FAX 510-658-0630

### The Following Volumes are Available

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Source Reduction of Halogenated Solvents:*

*Summary Report*

*Lifecycle Inventory and Tradeoff Analysis*

*Adhesives*

*Aerosols*

*Chemical Intermediates*

*Dry Cleaning of Fabrics*

*Electronic Products*

*Flexible Foam*

*Paint Stripping*

*Parts Cleaning*

*Pharmaceuticals*

*Textiles*

## ■ Fact Sheets

The fact sheets listed below contain overviews, tips, and/or guidelines for pollution prevention. Some provide only general information or advice on how to set up programs, while others identify pollution prevention opportunities for specific industries, processes, or materials. EPA, state agencies, and local governments produced these

fact sheets. In many cases, multiple sources have published fact sheets on a particular topic. Fact sheets on the topic areas listed below are available from the Pollution Prevention Information Clearinghouse (see Section 7). **Orders are limited to 10 items per request.**

### EPA Pollution Prevention Fact Sheets

- ACE: Agriculture in Concert with the Environment
- Design for the Environment: Chemical Design Project
- Design for the Environment: Cleaner Technology for a Safer Future
- Design for the Environment: Dry Cleaning Project
- Design for the Environment: Printing Project
- EPA's 33/50 Program
- EPA's 33/50 Program: Forging an Alliance for Pollution Prevention
- EPA's Pollution Prevention Enforcement Settlement Strategy
- EPA's Pollution Prevention Incentives for States
- EPA's Pollution Prevention Strategy
- Guides to Pollution Prevention
- Local Governments and Pollution Prevention
- National Pollution Prevention Center for Higher Education
- National Pollution Prevention Environmental Education Project
- New Form R Reporting Requirements
- Pollution Prevention Act of 1990
- Pollution Prevention Grant Programs
- Pollution Prevention Information Clearinghouse
- Preventing Pollution Through Efficient Water Use
- Pollution Prevention Training and Education
- Recent Publications
- Setting up a Pollution Prevention Program
- Source Reduction Review Project
- You Can Make a Difference

### Fact Sheet Topic Areas

#### **General Pollution Prevention Information**

##### **Aerospace**

#### **Automotive Repair, Maintenance, Salvage Yards, Painting, Radiators**

#### **Facility Audit Checklists**

- Chemical Manufacturing
- Cleaning
- Coating/Painting
- Dry Cleaning
- Formulators
- Machining
- Metal Industry
- Operating Procedures
- Petroleum Industry
- Photoprocessing
- Printed Circuit Board Industry
- Radiator Repair

##### **Chemicals**

##### **Circuit Boards**

##### **Coal Mining**

##### **Cooling Towers**

##### **Dry Cleaning**

##### **Electroplating**

##### **Food and Kindred Products - Poultry, Dairy, and Shrimp**

##### **Financial**

**Local Government - policies of and guides for**  
**Lumber, Wood Products and Furniture**  
**Paint**  
**Paper**  
**Pesticides**  
**Petroleum Refining, Fossil Fuel for Electric Power**  
**Generation and Oil Cleanup**  
**Plastics and Fiberglass**  
**Primary Metal Industries - Metal Finishing,**  
**Manufacturing, Machine Toolers, Metal**  
**Recovery**  
**Printing, Publishing, and Photoprocessing**  
**Recycling and Recycling Markets**  
**Solvents**  
**Steel and Foundry**  
**Textiles - Mills, Manufacturing**  
**Waste Water Treatment**

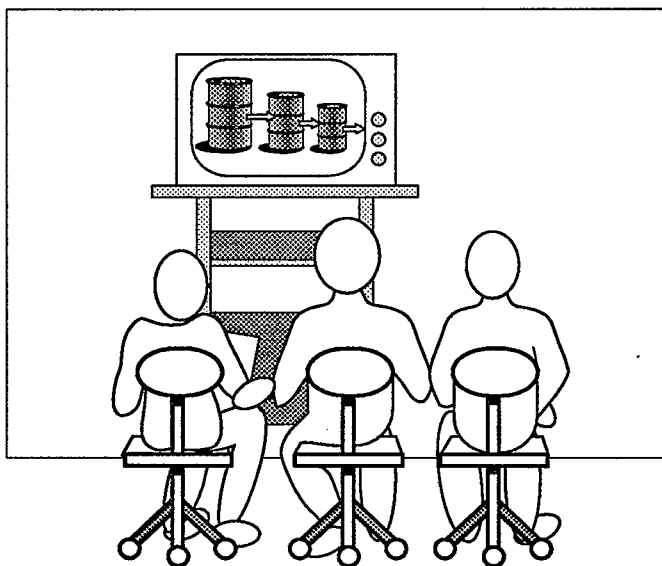


# 2

## Section 2 Pollution Prevention Videos

*The videos on this list are suitable for use as supplements to a training course or workshop or as sources of background information.*

To obtain these videos, contact the source directly. The PPIC (see section 7) may have some of these titles available for viewing at the EPA Headquarters Library (Room M2904, 401 M. Street, SW, Washington, D.C.). Contact the PPIC for availability of these services.



## **3M'S POLLUTION PREVENTION PAYS PROGRAM**

(9 min.)

and

## **CHALLENGE TO INNOVATION**

(8:30 min.)

*3M Corporation, 1984, 1987*

*Environmental Engineering and Pollution Control*

*Building 2-3E-OA, Box 33331*

*St. Paul, Minnesota 55133*

*612-778-4791*

*Cost: Contact 3M for cost and availability information*

The first video highlights the achievements and strategy of 3M's highly successful, corporate-wide pollution prevention program, which is based on source reduction and the reclamation and reuse of process waste. Challenge to Innovation is intended to encourage formulating chemists and other key players in 3M laboratories to eliminate or reduce waste in products.

## **1990 CLEAN AIR ACT OVERVIEW**

(20 min.)

*Sylvia Gordon*

*WRATT Case Studies*

*University of Tennessee, 1991*

*Center for Telecommunications and Video*

*Suite 61, 1345 Circle Park Drive*

*Knoxville, Tennessee 37996-0312*

*615-974-1313*

*Cost: \$25 purchase (available only from the producer)*

A representative of the Halogenated Solvents Industry Alliance describes the new Clean Air Act, especially Titles 1,3,4, and 6. Pollution prevention implications are discussed.

## **BEYOND BUSINESS AS USUAL: MEETING THE CHALLENGE OF HAZARDOUS WASTE**

(28:30 min.)

*U.S. EPA Region VIII*

*999 18th Street, Suite 500*

*Denver, Colorado 80202-2405*

*303-293-1603*

*Cost: Contact EPA Region VIII for cost and availability information*

This video promotes source reduction and recycling as the best hazardous waste management options. It

offers treatment as an alternative only after all pollution prevention opportunities have been realized. Beyond Business as Usual supports its case with success stories from industry, Federal agencies, and State and local government programs. The video stresses that successful pollution prevention requires both industrial initiatives and governmental direction. It includes a short discussion of the Federal legislative foundation for this strategy and presents the opinions of a cross section of individuals involved in hazardous waste management.

## **CLEANING METAL WITH WATER**

(65 min.)

*Sylvia Gordon*

*WRATT Case Studies*

*University of Tennessee, 1991*

*Center for Telecommunications and Video*

*Suite 61, 1345 Circle Park Drive*

*Knoxville, Tennessee 37996-0312*

*615-974-1313*

*Cost: \$45 purchase (available only from the producer)*

This tape is a series of case studies that look at various water-based techniques for cleaning metal parts. Carlos Bowden, Bowden Industries, described his company's alkaline cleaner, turbo washing systems. Gary Butler, Lincoln Brass Works, and Ken Warden, ABB Power Transmissions, Inc., showcase their washing operations based on water-alkaline cleaning systems. Also, Frank Hartmana and Rad Clanton describe TRW-Ross Gear Division's three different water-based cleaning systems that replaced their TCE solvent degreaser.

## **CLEANING UP TOXICS AT HOME**

(25 min.)

and

## **CLEANING UP TOXICS IN BUSINESS**

(25 min.)

*League of Women Voters, 1990*

*The Video Project*

*5332 College Avenue, Suite 101*

*Oakland, California 94618*

*800-475-2638*

*Cost: Rent \$20.00 each; Series Price \$49.95*

*Individuals/Low Income Groups: Sale \$29.95 each*

*Institutions: Sale \$59.95 each; Series Price: \$99.95 (Available only from the producer)*



This two-part how-to series is produced by the League of Women Voters. Cleaning Up Toxics At Home gives simple, practical advice on how to reduce pollution from households. The tape emphasizes safe use, proper disposal, recycling, and reduction of the most common household toxics: motor oil, paints, strippers, pesticides, automotive products, and oven and drain cleaners. Highlights include discussions of community programs that collect and recycle or dispose of oil, pesticides, and paint; a demonstration of simple ways to prevent poisoning and injury from the misuse of household chemicals; and tips from professional housecleaners who use mild soaps and baking soda instead of more toxic and expensive cleaning products.

Cleaning Up Toxics In Business shows how small businesses can use a variety of innovative solutions to comply with increasingly strict environmental regulations. Businesses, from a brass bed manufacturer to a termite control service, are finding ways to stop pollution before it starts — substituting less hazardous materials or techniques. Others, such as dry cleaners, are investing in new equipment that recaptures and reuses virtually all toxic chemicals in their shops. This is a stimulating program of special interest to business owners and their customers, as well as public policy makers, regulatory agencies, and environmental studies classes.

### **THE COMPETITIVE EDGE**

(17:50 min.)

*Ontario Waste Management Corporation, 1989  
2 Bloor Street West, 11th Floor  
Toronto, Ontario, Canada M4W3E2  
416-923-2918*

*Cost: \$24 purchase (available only from the producer)*

The Competitive Edge is designed to acquaint employees with the industrial auditing process. The video explains the six steps of an audit in clear and simple terms. The video can be shown for general information or as a training tool to be used with OWMC's Industrial Waste Audit and Reduction Manual (see Section 1, Pollution Prevention Instruction Manuals).

### **CONNTAP AND ACTION CIRCUITS: A CASE STUDY OF WASTE MINIMIZATION**

(11:40 min.)

*Barbara Barbieri  
Connecticut Technical Assistance Program (ConnTAP), 1991  
900 Asylum Avenue  
Suite 360  
Hartford, Connecticut 06105-1904  
203-241-0777  
Cost: \$10 purchase (available only from the producer)*

This video describes how a small to medium-sized printed circuit board manufacturing facility, with the assistance of a grant from ConnTAP, implemented a variety of source reduction methods and recovery/reuse techniques to reduce wastewater and hazardous waste generation by approximately 90 percent. The techniques used included material substitution, process equipment modification, improved rinsing efficiency, waste stream segregation, point source treatment, and metal recovery using various technologies. The video also describes ConnTAP's services.

### **HAZARDOUS WASTE REDUCTION: ITS YOUR BUSINESS**

(8 min.)

*Denise Christensen  
Washington Department of Ecology, 1987  
WRRLC  
Mail Stop 7600  
Olympia, Washington 98504-7600  
206-438-7585  
Cost: Contact WRRLC for cost and availability information*

### **HAZARDOUS WASTE REDUCTION OPTIONS FOR OREGON BUSINESS**

(8:40 min)

*Oregon Department of Environmental Quality, 1988  
Hazardous Waste Reduction Program  
811 S.W. Sixth Street  
Portland, Oregon 97204-1390  
503-229-5913  
Cost: Contact Oregon DEQ for cost and availability information*

This video describes how businesses can reduce or eliminate disposal costs and liability through pollution

prevention. Case studies of two large companies (an electronics manufacturer and a silicon wafer manufacturer) and two small companies (a metal plater and an automotive repair shop) illustrate various pollution prevention strategies, including process redesign, better management practices, chemical substitution, and onsite recycling. Although this video was intended for Oregon businesses, the concepts are applicable to industry in any location.

### **LESS IS MORE: POLLUTION PREVENTION IS GOOD BUSINESS**

(23:13 min.)

*Films for Educators, Inc., 1990  
420 E. 55th Street, Suite 6U  
New York, New York 10022  
212-486-6577  
Cost: \$22.95*

Less Is More highlights industry success stories proving that pollution prevention is the best alternative to costly end-of-the-pipe waste management strategies, such as treatment and disposal. The success stories draw from the experiences of both large and small industries, which include electroplating, ink manufacturing, metal parts manufacturing, pesticide formulating, and polyethylene producing concerns. The video describes three needs essential to successful pollution prevention programs: top-down corporate commitment to lead the way, employee involvement, and procedures to track costs and potential liabilities. Less Is More demonstrates that with regard to pollution prevention, company innovation — not regulation — is the key to cost savings, better worker health, and a cleaner environment. Preventing industrial waste generation is a "win-win" situation in which government and industry can work as partners for a safer, cleaner world.

### **MANAGEMENT TRAINING IN POLLUTION PREVENTION AND CONTROL IN THE METAL FINISHING INDUSTRY**

*Environment Canada, 1991  
Canadian Water and Wastewater Association  
24 Clarence Street, 3rd Floor  
Ottawa, Ontario, Canada K1N 5P3  
613-238-5692  
Cost: \$225 purchase (available only from the producer)*

This new course for the metal finishing industry has been designed to assist managers, supervisors, and foremen, as well as owners/operators of smaller facilities, in gaining a better understanding of pollution prevention and control at their plants. The materials in this course — four videotapes, a two-volume student workbook, and an Administration Guide — can be presented to a group of 15 to 20 students in approximately 18 hours. The objectives of the program are to highlight the increasingly critical environmental and regulatory requirements for pollution control, to emphasize and explain the importance of training staff in pollution control and prevention techniques, to discuss the economics and cost benefits of pollution control and treatment techniques, to describe a means for assessing and planning for pollution prevention, and to address waste control methods and approaches to wastewater treatment in metal finishing plants.

The course is organized into eight sections:

- Part 1: Requirements for Pollution Prevention is designed to motivate the student and to identify the problems, economic and regulatory requirements, and management responsibilities associated with pollution prevention (home study).
- Part 2: Regulations and Guideline Requirements covers Canadian Federal, provincial, and municipal regulations, guidelines, and bylaws that concern the metal finishing industry (home study).
- Part 3: Waste Generation, Pollution Prevention and Your Pocketbook examines the economic arguments for pollution prevention and control (home study).
- Part 4: Pollution Sources describes the industrial processes used in the metal finishing industry, as well as the types of pollutants generated by each process (video and workbook).
- Part 5: Planning for Pollution Control demonstrates the procedures for a plant assessment, including mass balance, sampling, analysis, and flow measurement (video and workbook).
- Part 6: In Plant Control for Pollution Prevention covers waste reduction, water conservation or recycling, and in-plant modifications. Included are sections on good housekeeping, segregation, substitution, dumps and leaks, water use, factors affecting drag-out and drainage, rinsing efficiency, reclamation, regeneration, recovery, and reuse (video and workbook).

- Part 7: Methods of Wastewater Treatment describes conventional wastewater treatment systems (video and workbook).
- Part 8: Evaluating Costs of Wastewater Treatment provides costs for typical treatment processes and goes through a detailed cost analysis for a typical plant (home study).

## **MONEY DOWN THE DRAIN**

(18:10 min.)

*Ontario Waste Management Corporation, 1989  
2 Bloor Street West, 11th Floor  
Toronto, Ontario, Canada M4W3E2  
416-923-2918*

*Cost: \$24 purchase (available only from the producer)*

Businesses looking for alternatives to costly offsite treatment and disposal can benefit from the experience of other businesses. In Money Down The Drain, five Ontario manufacturers tell how they applied reduction, reuse, recycling, and recovery to their liquid industrial and hazardous wastes, leading to impressive cost savings. This video is suitable for in-plant use and for more general audiences with an interest in industrial waste reduction.

## **NEGAWATTS – A GOLDMINE OF OPPORTUNITY**

(20 min.)

and

## **TRANSPORTATION 2000 – MOVING BEYOND AUTO AMERICA**

(30 min.)

*U.S. EPA Region VIII and Rocky Mountain Institute, 1991  
Rocky Mountain Institute  
1739 Snowmass Creek Road  
Snowmass, Colorado 81654-9199  
303-927-3851*

*Cost: Negawatts \$20 purchase (available only from the producer)*

*Transportation 2000 \$30 purchase (available only from the producer)*

These two videos are usable as general introductions to their respective environmental sectors.

Negawatts describes how corporations can join in the energy-efficiency revolution yielding economic and

environmental benefits throughout the world. Aggressive energy efficiency programs are enabling many leading corporations to improve bottom-line performance while meeting customer demands for greater corporate responsibility. Energy efficient devices can generate electric savings (negawatts) to displace the output of up to 500 typical power plants. As an added benefit, these technologies prevent pollution by wringing more work out of each unit of energy. Energy efficiency also creates jobs and reduces dependence on foreign oil.

Transportation 2000 discusses different technologies for producing more efficient automobiles.

## **PAINT STRIPPING WITHOUT SOLVENTS**

(45 min.)

*Sylvia Gordon  
WRATT Case Studies  
University of Tennessee, 1991  
Center for Telecommunications and Video  
Suite 61, 1345 Circle Park Drive  
Knoxville, Tennessee 37996-0312  
615-974-1313*

*Cost: \$35 purchase (available only from the producer)*

This video presents alternative methods being used by the Air Force to strip paint without using solvents. Mikle Haas from the San Antonio Air Logistics Center describes the use of a bicarbonate soda (baking soda) stripping system. John Carey of Tinker Air Force Base talks about CO<sub>2</sub> blast paint stripping.

## **POLLUTION PREVENTION: THE BOTTOM LINE**

(24 min.)

and

## **POLLUTION PREVENTION: REDUCING WASTE IN THE WORKPLACE**

(24 min.)

*Coastal Video Communications Corporation  
3083 Brickhouse Court  
Virginia Beach, Virginia 23452  
800-767-7703*

*Cost: The Bottom Line*

*\$295 purchase for business/industry (available only from the producer)*

*\$195 purchase for schools, municipalities, and most nonprofits (available only from the producer)*

*Reducing Waste in the Workplace*

*\$495 purchase (available only from the producer)*

This series, produced in association with the Environmental Protection Agency, leads managers, supervisors, and workers through the complexity of terms and practices associated with pollution prevention. The Bottom Line includes interviews with officials of major international corporations, such as Dow, DuPont, and Chevron, regarding methods of waste prevention. Many corporate examples help demonstrate waste prevention principles at work in the marketplace. The program deals with environmental legislation, cost motivation, and the identification and implementation of pollution prevention techniques. Partially funded by Citibank, the video has received the endorsement of the United Nations Environment Program. Reducing Waste in the Workplace deals with material handling and inventory control, equipment operation and scheduling, cleaning and maintenance, and waste collection and management.

### **THE POWER TO PROTECT: THREE STORIES ABOUT GROUNDWATER**

(30 min.)

*Massachusetts Audubon Society, 1991  
Education Department  
South Great Road  
Lincoln, Massachusetts 01773  
800-677-9453  
Cost: \$25 (\$10 to rent)*

This video explores the complex groundwater issues in your community and uses real-life examples to demonstrate how your community can protect one of its most valuable resources: water. The video covers a wide range of issues from pesticide contamination and hazardous waste management to septic and wastewater treatment systems, and from the concerns of rural communities to the problems facing large towns with industrial and commercial development. In addition, the case studies provide useful and realistic techniques for managing groundwater concerns. A workbook accompanies this video which will provide step by step guidance in developing a groundwater protection plan for your community. The workbook also includes a directory and resource guide tailored to your state.

### **RINSING PROCESS MODIFICATIONS FOR METAL FINISHERS**

(30 min.)

*U.S. EPA Region IX, Terrence Foecke and Peer Consultants  
Release date to be announced  
Attention: Ben Machol  
Library  
U.S. EPA Region IX  
75 Hawthorne St., 13th Floor  
San Francisco, CA 94105  
415-744-1941  
Cost: Contact EPA Region IX for cost and availability information*

The basis of this video is footage from a November 1989 workshop sponsored by Santa Clara County on waste reduction practices for metal finishers and electroplaters. Focused on small quantity generators, it summarizes the success stories of selected metal finishers.

### **SMART MOVES**

(21:26 min.)

*Chevron Corporation, 1991  
Attention: Jennifer Snyder  
Corporate Communications Division, Public Affairs  
225 Bush Street  
San Francisco, California 94104  
415-894-3145  
Cost: Contact the Chevron Corporation for cost and availability information*

This video describes Chevron's successful waste reduction program, entitled "Save Money and Reduce Toxics."

### **SUSTAINING AMERICA'S AGRICULTURE (HIGH TECH AND HORSE SENSE)**

(29 min.)

*National Association of Conservation Districts  
P.O. Box 855  
League City, Texas 77574-09855  
1-800-825-5547  
Cost: \$10  
also available on loan from conservation district offices, EPA Region VIII  
David Wann  
303-293-1621*

A video about how America's farmers and ranchers minimize environmental impacts while maximizing production.

### **TURNING THE TIDE: KEEPING POLLUTION AT BAY**

(31 min.)

*New England Interstate Environmental Training Center, 1991  
2 Fort Road  
South Portland, Maine 04106  
207-767-2539  
Cost: \$25 (\$10 to rent)*

The New England Office of EPA has just released this documentary program about coastal protection. This 30-minute video explores the non-point source pollution problems of Buzzards Bay, Massachusetts, and the work of individuals, and local and regional governments in restoring and protecting the water of the Bay. The program is intended to educate and motivate citizens, organizations and elected officials in all coastal areas whose day-to-day decisions impact the quality of our precious coastal resources.

### **USING SOLVENTS WISELY**

(65 min.)

*Sylvia Gordon  
WRATT Case Studies  
University of Tennessee, 1991  
Center for Telecommunications and Video  
Suite 62, 1345 Circle Park Drive  
Knoxville, Tennessee 37996-0312  
615-974-1313  
Cost: \$45 purchase (available only from the producers)*

Three speakers discuss various ways to use solvents in an environmentally friendly manner. Jim Mertons of Dow Chemical describes how to reduce solvent emissions in degreasing operations. Bob Carter of the Waste Reduction Resource Center for the Southeast speaks on HCFCs. Lisa Thompson from the DOE facility at Oak Ridge, TN, presents a study comparing different cleaning materials, including solvents, terpenes, and ultrasonic cleaning.

### **WASTE MINIMIZATION TRAINING MODULES**

*California Department of Toxic Substances Control, 1991  
Attention: Pat Lopez  
Alternative Technology Division  
P.O. Box 806  
Sacramento, CA 95812-0806  
916-322-3670 or 324-1807  
Cost: \$15 purchase (available only from the producer)*

This video consists of three sections that correspond to two of the "Waste Minimization Training Modules" listed in Section 1, Pollution Prevention Documents.

#### **Section 1 (Corresponds to Module I) - Waste Minimization: An Introduction**

Provides an introduction to waste minimization and source reduction terms and strategies for regulatory inspectors and businesses.

#### **Section 2 (Corresponds to Module III) - Waste Minimization in the Metal Finishing Industry**

An overview of how to plan, arrange, and conduct a waste minimization assessment of a local business.

#### **Section 3 (Corresponds to Module III) - Waste Minimization in the Metal Finishing Industry**

Provides inspectors with an excellent overview of the processes involved in metal cleansing, metal finishing and printed circuit board manufacturing, and the potential for waste minimization within each of these activities.

### **WASTE NOT**

(35 min.)

*Umbrella Films, 1988  
60 Blake Road  
Brookline, Massachusetts 02146  
617-277-6639  
Cost: \$350*

In a series of company profiles, Waste Not examines activities and programs within industry that have been designed to reduce or eliminate the generation of hazardous waste at the source. Company spokespersons describe how reducing waste has helped them lower costs and liabilities. Profiles include small, medium, and large manufacturers of electroplated, rubber, and photographic products. Although basically

nontechnical, the tape includes an overview of waste reduction methods and emphasizes the need to relate waste reduction to manufacturing in terms of processes, costs, and design.

### **WASTE NOT...WANT NOT**

(15 min.)

*U.S. EPA Region IV, 1989  
345 Courtland Street, N.E.  
Atlanta, Georgia 30365  
404-347-7109*

*Cost: Contact EPA Region IV for cost and availability information*

Overconsumption, consumer preference for disposable products, and an "out of sight, out of mind" mentality among the public have led to the Nation's current municipal solid waste crisis. The U.S. generates 160 million tons of this waste each year. This amount, compounded by shrinking landfill space and the "not in my backyard" syndrome, leaves few waste management options. Waste Not...Want Not offers EPA's solution: a waste management hierarchy led by source reduction and recycling. The video stresses that government, industry, and the public must work cooperatively if the national waste reduction goal of 25 percent by 1992 is to be met. Industry leadership in preventing pollution is illustrated in highlights of 3M's Pollution Prevention Pays Program.

### **WASTE REDUCTION ASSESSMENT OPPORTUNITIES**

(32 min.)

*Tennessee Valley Authority, University of Tennessee-CIS  
University of North Carolina Asheville-EQI, 1989  
Attention: Carroll Duggan  
Waste Technology Program • 2F 71B Old City Hall Building  
Knoxville, Tennessee 37902  
615-632-3160  
Cost: \$25*

This video summarizes the multimedia waste reduction assessment procedure and its application at several Tennessee businesses. The film uses footage shot during the Waste Reduction Assessment and Technology Transfer (WRATT) course provided by the Tennessee Valley Authority and the University of Tennessee Center for Industrial Services for retired engineers and scientists during March 1989.

### **WASTE REDUCTION ASSESSMENT AND TECHNOLOGY TRANSFER TELECONFERENCE** (15 hours)

*Sylvia Gordon  
WRATT Case Studies*

*University of Tennessee, 1990  
Center for Telecommunications and Video  
Suite 61, 1345 Circle Park Drive  
Knoxville, Tennessee 37996-0312  
615-974-1313*

*Cost: Entire teleconference \$395; individual videos \$29-\$39  
(purchase available only from the producer)*

The training materials for this teleconference were designed to give industry and State waste reduction program and regulatory personnel practical information on how to approach and implement a multimedia waste reduction program. The teleconference addresses the need to train both industrial and regulatory personnel. A portion of the teleconference addresses the national strategy for pollution prevention, strengthening State waste reduction programs and opportunities for local governments to promote pollution prevention. Another portion of the teleconference outlines the incentives for industry to implement waste reduction plans with successful company case studies. These eight case studies detail how the companies determined waste reduction options and implemented the methods and techniques identified. Finally, the teleconference covers waste reduction assessment procedures that motivate people to search, screen, and put into practice measures that result in decreased waste generation. Different sessions of the teleconference can be used as stand-alone training courses. The teleconference's training materials are on the cutting edge of identified waste reduction needs for industry and State programs.

The following videos were developed from the teleconference as individual subjects. To order the entire teleconference or individual videotapes, please contact the University of Tennessee — Center for Telecommunications and Video.

#### **30708 Arcata Graphics (14:16 min.)**

*Large Printing Operation: Better Operating and Paper Segregation Procedures/Employee Training/Ink Recycling with Mill Presented by Joe Buba, Director of Safety and Environment, Arcata Graphics/Baird Ward, Nashville, Tennessee*

**30708 Circuit Sciences (7:12 min.)**

*Printed Circuit Board Manufacturing: Doug Campbell, President, Circuit Sciences. Rinse water reuse is demonstrated with water savings of 25 percent from repiping rinse tanks. Savings of 15 percent in raw material usage is a result of better analytical procedures for plating baths.*

**30708 Materials Change (8:20 min.)**

*Discussion by Cam Metcalf, CIS Waste Reduction Engineer, on issues relevant to raw material changes or substitutions. Good examples of successful substitutions are found in TRW and CLEO Wrap Case Studies.*

**30708 CLEO Wrap (25:07 min.)**

*Printing Operation Material Change: Solvent-Based Inks to Water-Based Inks: Walter Langford, Executive Vice President and General Manager, Cleo Wrap, Memphis, Tennessee.*

**30710 Metal Working Fluids (25:08 min.)**

*Waste Reduction Management for Metal Working Fluids Case Study: Tim Lafever, Manufacturing Supervisor, the Duriron Company, Inc., Cookeville, TN. Also included are two videotapes on proper mixing and annual cleaning programs for coolants.*

**30709 TRW (18:10 min.)**

*Tennessee Governor's Award Winner for Waste Reduction (1988), presented by Frank Hartman, Environmental Coordinator, TRW Ross Gear Division, Greenville, TN. Case study of replacing a TCE degreaser with an ultrasonic, alkaline degreasing unit.*

**30707 EPA/ORD (23:18 min.)**

*Harry Freeman, EPA, ORD, Cincinnati, OH. A description of EPA's Pollution Prevention Branch research activities.*

**30709 Fun Factory (29:04 min.)**

*Fun Factory Training Demonstration: Hands-on Training Procedure using CIS/TVA-Training Retirees. Using a mock industrial process, this tape is designed to involve management and employees in communicating better about waste reduction.*

**30710 Waste Reduction Assessment Procedures (32:24 min.)**

*Panel Discussion: CIS Staff and CIS/TVA-Trained Retirees. Discussion of waste reduction assessment field experience pertaining to collecting data and setting up a waste reduction program.*

**TVA/CIS #1 Waste Reduction Plan—A Program in Place (30:00 min.)**

*Generators of hazardous waste can benefit from activities designed to reduce hazardous waste by implementing a systematic plan to accomplish waste reduction goals. This videotape presents incentives for reducing wastes and the elements of a waste reduction program. The new Tennessee Waste Reduction Act is discussed.*

**TVA/CIS #2 Waste Reduction Plan — Assessment and Employee Involvement (30:30 min.)**

*Employees of hazardous waste generators often have unique insights into solving waste reduction problems. To reduce wastes successfully, in-house assessment teams should be formed with all levels of employees as members. This program describes a logical sequence of events to complete a waste reduction assessment.*

**WHY WASTE? WASTE MINIMIZATION FOR TODAY'S BUSINESSES (28 min)**

*California Department of Toxic Substances Control, 1990*

*Attention: Kathy Barwick  
Alternative Technology Division  
Technology Clearinghouse Unit  
P.O. Box 806  
Sacramento, California 95812-0806  
916-324-1807*

*Cost: \$15 Purchase (only available from the producer)*

Why Waste? Waste Minimization for Today's Businesses defines waste minimization and illustrates waste reduction successes in several different types of businesses. Source reduction and recycling case studies illustrate the environmental and economic benefits of implementing waste minimization programs. This video will be useful for training sessions and seminars focusing on innovative ways for reducing hazardous waste.

## **THE 1990 WRAP AWARDS**

(8:36 min.)

*Dow Chemical, 1990*

*Attn: Dan Fellner, Environmental Communications*

*2020 Dow Center*

*Midland, Michigan 48674*

*517-636-5765*

*Cost: Contact Dow Chemical for cost and availability information*

This video presents a brief overview of Dow Chemical's 1988 Waste Reduction Always Pays (WRAP) awards, which are presented to Dow divisions that demonstrate innovative pollution prevention programs. The video identifies employee initiative, team effort, and a waste reduction mentality as essential ingredients in preventing the generation of industrial wastes. The winners include divisions producing chloralkalai, styron, herbicide, chlorine, agricultural chemicals, and hydrochloric acid.

## **WRATT II TELECONFERENCE — SOLVENTS: THE GOOD, THE BAD, AND THE BANNED**

(6 hrs.)

*Sylvia Gordon*

*WRATT Case Studies*

*University of Tennessee, 1991*

*Center for Telecommunications and Video*

*Suite 61, 1345 Circle Park Drive*

*Knoxville, Tennessee 37996-0312*

*615-974-1313*

*Cost: \$250 purchase (available only from the producer)*

This set of videos contains the complete WRATT teleconference broadcast on March 13, 1991. Included are presentations and case studies that examine ways to reduce solvent usage in industrial applications. Additional presentations discuss the 1990 Clean Air Act and other legal ramifications with using solvents.

## **WRATT III TELECONFERENCE - IN LIVING COLOR: PAINTING CHALLENGES FOR THE 90'S**

(5 hrs.)

*Sylvia Gordon*

*WRATT Case Studies*

*University of Tennessee, 1991*

*Center for Telecommunications and Video*

*Suite 61, 1345 Circle Park Drive*

*Knoxville, Tennessee 37996-0312*

*615-974-1313*

*Cost: \$350 purchase (available only from the producer)*

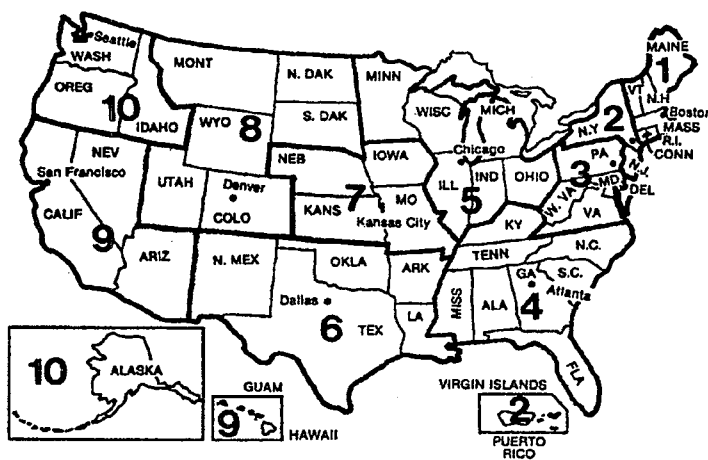
This video set comprises the complete teleconference on painting techniques that reduce waste generation, with specific attention given to alternative painting technologies and material substitutions.



# 3

## Section 3 State Pollution Prevention Programs

*This section provides information on pollution prevention services available through states. In addition to grants, technical assistance, information transfer and awards, many states offer training courses either directly or through extension services and academic centers. More extensive information on pollution prevention research and public assistance at academic centers can be found in Section 4.*



## ALABAMA



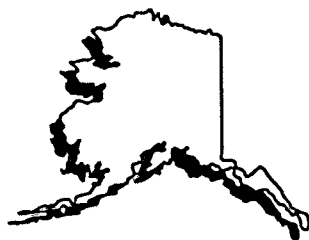
### ALABAMA WASTE REDUCTION AND TECHNOLOGY TRANSFER (WRATT) PROGRAM

#### Key Program Elements

- Free, voluntary, non-regulatory, confidential waste reduction assessments for public and private entities in Alabama conducted by retired engineers and scientists
- Speakers Bureau, run by the Waste Minimization Advisory Committee (WMAC), of which the Department of Environmental Management is a member
- Waste reduction assessor training provided to five states; program development/implementation assistance provided to one state, contact established by twelve other states for similar training and assistance
- Workshops and conferences for businesses on pollution prevention; offered through the Auburn University Extension Service in cooperation with the Alabama Business Council

**Contact:** Daniel E. Cooper, Chief  
Special Projects  
Alabama Department of Environmental Management  
1751 Congressman William L. Dickinson Drive  
Montgomery, Alabama 36130  
205-260-2779

## ALASKA



### POLLUTION PREVENTION OFFICE

#### Key Program Elements

- Waste reduction workshops and onsite assessments for local communities and community organizations and for individual businesses (many workshops are industry-specific for businesses that express an interest in the pollution prevention program)
- Municipal Pollution Prevention Roundtable, which meets quarterly and provides pollution prevention training to local governments
- Information clearinghouse, resource library, hotline, newsletter
- Waste reduction matching grants

**Contact:** David Wigglesworth, Chief  
Pollution Prevention Office  
Alaska Department of Environmental Conservation  
P.O. Box O  
Juneau, Alaska 99811-1800  
907-465-5275

### WASTE REDUCTION ASSISTANCE PROGRAM (WRAP)

#### Key Program Elements

- Onsite consultation audits for small quantity generators
- Assistance to small quantity generators in complying with state hazardous waste regulations
- Support of a graduate engineering student intern program
- Hotline, newsletter, publications and guides, curriculum, speakers

**Contact:** Kristine Benson  
Alaska Health Project  
1818 West Northern Lights Boulevard  
Suite 103  
Anchorage, Alaska 99517  
907-276-2864

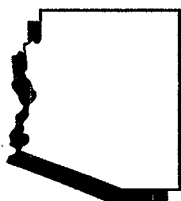
### **SMALL BUSINESS HAZARDOUS MATERIAL MANAGEMENT PROJECT (HMMP)**

#### **Key Program Elements**

- Seminars conducted in cooperation with the Small Business Development Center
- A 12-hour Community Hazardous Materials Evaluation training program
- Published guides for small businesses and local communities on hazardous waste reduction and management

**Contact:** Kristine Benson  
(see above)

## **ARIZONA**



### **ARIZONA WASTE MINIMIZATION PROGRAM**

#### **Key Program Elements**

- Data base operation
- Dissemination of waste minimization information to the public and industries
- Assistance to industry through the use of a clearinghouse
- Program monitoring through research and studies
- Sponsorship of waste minimization seminars and teleconferences in cooperation with universities

**Contacts:** Sandra Eberhardt, Manager  
Pollution Prevention Unit  
Arizona Department of Environmental Quality  
3033 North Central Avenue, Rm. 558  
Phoenix, Arizona 85012  
602-207-4210

## **ARKANSAS**



### **ARKANSAS POLLUTION PREVENTION PROGRAM**

#### **Key Program Elements**

- Technical assistance to small and medium-sized businesses and institutions on pollution prevention
- Seminars on hazardous waste minimization for small quantity generators
- Locally produced film series of network quality addressing environmental concerns and pollution prevention techniques and benefits for household wastes, agricultural wastes, and wastes from 18 targeted industries
- Manufacturers' exchange (sponsored by Arkansas Industrial Development Commission)

- Participation in Industrial Materials Exchange Service (Illinois-based)

**Contact:** Robert J. Finn  
Hazardous Waste Division  
Arkansas Department of Pollution Prevention and Ecology  
P.O. Box 8913  
Little Rock, Arkansas 72219-8913  
501-570-2861

## **BIOMASS RESOURCE RECOVERY PROGRAM**

### **Key Program Elements**

- Technical assistance to targeted industries
- Information clearinghouse
- Waste audits
- Manufacturers' exchange (sponsored by Arkansas Industrial Development Commission)
- Participation in Industrial Materials Exchange Service

**Contact:** Ed Davis  
Arkansas Energy Office  
One State Capital Mall  
Little Rock, Arkansas 72201  
501-682-7322

## **CALIFORNIA**



## **DEPARTMENT OF TOXIC SUBSTANCES CONTROL**

### **Key Program Elements**

- Incinerable Waste Minimization Project involving pollution prevention in state's top generators of incinerable waste
- Waste stream-specific studies of hazardous waste to identify waste minimization opportunities
- Hazardous waste reduction grant program and industry specific audit studies
- Research development and demonstration programs to promote waste minimization, recycling, and treatment technologies for California's hazardous waste generating industries
- Evaluation of technologies for minimizing hazardous waste generation, under EPA's Waste Reduction Innovative Technology Evaluation (WRITE) project
- Hazardous Waste Technology, Research, Development, and Demonstration Program being developed to provide grants to local governments
- California Waste Exchange — Newsletter/Catalog
- Directory of Industry Recycling
- Hazardous Waste Recycling Report
- Small business loans and grants
- Technology clearinghouse and transfer, and technical reference library

**Contacts:**

Mr. Kim Wilhelm  
Department of Toxic Substances Control  
Pollution Prevention, Public and Regulatory Assistance Division  
400 P Street  
P.O. Box 806  
Sacramento, California 95812-0806  
916-322-3670

Tony Eulo  
Local Government Commission  
909 12th Street  
Suite 205  
Sacramento, California 95814  
916-448-1198

California Integrated Waste Management Board  
8800 Cal Center Drive  
Sacramento, California 95826  
Recycling Hotline: 800-553-2962  
General Public Information: 916-255-2289

## COLORADO



### POLLUTION PREVENTION AND WASTE REDUCTION PROGRAM

**Key Program Elements**

- Policy development through incorporating pollution prevention into regulatory programs, such as permitting and enforcement
- Technical assistance program with information center and onsite assistance
- Sponsorship of workshops
- Information clearinghouse and technical library
- Speakers Bureau

**Contacts:**

Kate Kramer, Program Manager  
Pollution Prevention Waste Reduction Program  
Colorado Department of Health  
4300 Cherry Creek Drive South  
Denver, Colorado 80220  
303-692-3003 FAX 303-782-4969

Michael Nemecek  
Colorado Public Interest Research Group (COPIRG)  
1724 Gilpin Street  
Denver, Colorado 80218  
303-355-1861

## CONNECTICUT CONNECTICUT TECHNICAL ASSISTANCE PROGRAM (CONNTAP)



### Key Program Elements

- Technical Assistance
  - Resource center
  - Site visits
- Financial Assistance
  - Matching Challenge Grant Program
  - Loans
- Sponsorship of conferences and workshops

**Contact:** Andrew Vecchio  
Connecticut Technical Assistance Program (ConnTAP)  
Connecticut Hazardous Waste Management Service  
900 Asylum Avenue  
Suite 360  
Hartford, Connecticut 06105-1904  
203-241-0777

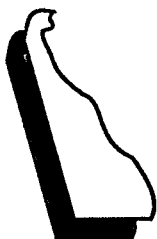
## CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

### Key Program Elements

- Conferences and workshops
- Training
- Information dissemination
- Development of improved management practices for hazardous waste

**Contact:** Liz Napier  
Bureau of Waste Management  
Connecticut Department of Environmental Protection  
165 Capitol Avenue  
Hartford, Connecticut 06106  
203-566-5217

## DELAWARE



## DELAWARE POLLUTION PREVENTION PROGRAM

### Key Program Elements

- Onsite technical assistance through the University of Delaware
- Industry-specific pollution prevention guides
- Waste reduction self-evaluation manual for manufacturers
- Information clearinghouse located in the Delaware Development Office
- Industry and public workshops and talks
- Pollution prevention curriculum distributed to grades K-8
- Voluntary TRI emissions reduction initiative
- Pollution Prevention Industry Roundtable
- Sponsorship of the Northeast Industrial Waste Exchange
- Development of multimedia permitting and compliance program
- Usable By-products Advisory Group
- Green Industries Initiative (financing, tax credit, and regulatory assistance program)

**Contacts:**

Philip J. Cherry  
Andrea K. Farrell  
Pollution Prevention Program  
Department of Natural Resources and Environmental Control  
P.O. Box 1401  
Kings Highway  
Dover, Delaware 19903  
302-739-5071/3822

Herb Allen  
Department of Civil Engineering  
University of Delaware  
Newark, Delaware 19716  
302-451-8522/8449

## **DISTRICT OF COLUMBIA**

### **OFFICE OF RECYCLING**

#### **Key Program Elements**

- Curbside recycling
- Newsletter
- Technical assistance to haulers, commercial property owners, and city government

**Contacts:**

Evelyn Shields, Recycling Coordinator  
D.C. Department of Public Works  
65 K Street, NE  
Washington, D.C. 20002  
202-727-5887 FAX 202-727-5872

George Nichols  
Department of Environmental Programs  
Council of Governments  
777 North Capitol St., NE  
Suite 300  
Washington, D.C. 20002-4201  
202-962-3355 FAX 202-962-3201

Kenneth Laden  
Environmental Policy Division  
D.C. Department of Public Works  
2000 14th St., NW  
Washington, D.C. 20009  
202-939-8115 FAX 202-939-7185

Ms. Ferial Bishop, Administrator  
Environmental Regulation Administration  
D.C. Department of Consumer and Regulatory Affairs  
2100 MLK Avenue, SE  
Suite 203  
Washington, D.C. 20020  
202-404-1136 FAX 202-404-1150

## FLORIDA



### WASTE REDUCTION ASSISTANCE PROGRAM (WRAP)

#### Key Program Elements

- Multimedia non-regulatory help to reduce emissions to air, water, and land
- Computerized waste reduction information clearinghouse
- Onsite pollution prevention technical assistance
- Technology transfer and environmental education
- Industry-specific workshops
- Training of local government/inspectors and retired engineers to provide waste reduction information to businesses
- Uses talents of retired engineers and scientists

**Contact:** Janeth A. Campbell, Director  
Waste Reduction Assistance Program  
Florida Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
904-488-0300

## GEORGIA



### GEORGIA MULTIMEDIA SOURCE REDUCTION AND RECYCLING PROGRAM

#### Key Program Elements

- Multimedia pollution prevention information resource package
- Workshops and seminars for the general public, industry groups, professional and environmental organizations
- Developing a program to further integrate pollution prevention into regulation activities; resource materials disseminated to staff
- Telephone consultations with industry and city, county and state government officials and public

**Contact:** Susan Hendricks, Program Coordinator  
Environmental Protection Division  
Georgia Department of Natural Resources  
4244 International Parkway, Suite 104  
Atlanta, Georgia 30334  
404-362-2537

## HAWAII



### HAZARDOUS WASTE MINIMIZATION PROGRAM

#### Key Program Elements

- Educational programs targeting small and conditionally exempt small quantity generators of hazardous wastes
- Clearinghouse of information for local businesses
- Publish quarterly newsletter
- Booklet on resources for proper hazardous waste management, including local haulers and recyclers



- Workshops on hazardous waste reduction techniques and onsite audits of hazardous waste management and reduction

**Contact:** Jane Dewell  
Waste Minimization Coordinator  
State of Hawaii Department of Health  
Solid and Hazardous Waste Branch  
Five Waterfront Plaza, Suite 250  
500 Ala Moana Blvd  
Honolulu, Hawaii 96813  
808-586-4226

John Harder  
Department of Health  
Office of Solid Waste  
5 Waterfront Place, Suite 250  
500 Ala Moana Blvd.  
Honolulu, Hawaii 96813  
808-586-4373

## IDAHO



### DIVISION OF ENVIRONMENTAL QUALITY

#### Key Program Elements

- State Training Action Plan
  - Provision of a 5-year framework for developing and implementing training and technical assistance activities associated with hazardous waste regulation
  - Compilation and distribution of information in the form of guidebooks for five specific industries
  - Presentation of workshops for specific industries
- Participation in the Pacific Northwest Hazardous Waste Advisory Council that encouraged:
  - Creation of the Northwest Regional Roundtable for Pollution Prevention
  - Development of a Pacific Northwest Memorandum of Understanding
  - Establishment of the Pacific Northwest Pollution Prevention Research Center

**Contacts:** Joy Palmer  
Katie Sewell  
Division of Environmental Quality  
Idaho Department of Health and Welfare  
1410 North Hilton Street  
Boise, Idaho 83720-9000  
208-334-5879

## ILLINOIS



### ILLINOIS HAZARDOUS WASTE RESEARCH AND INFORMATION CENTER (HWRIC)

#### Key Program Elements

- Onsite pollution prevention assistance, including program development
- Sponsor pilot projects to develop and demonstrate pollution prevention technologies onsite and in HWRIC's pilot laboratory
- Pollution prevention curriculum development for educational institutions
- Recognition through annual Governor's Pollution Prevention Awards
- Conduct pollution prevention workshops and seminars for trade associations, community groups, industry, etc.
- Provide case study examples and other literature through the computerized Waste Reduction Advisory System (WRAS) and clearinghouse.

**Contact:** Dr. David Thomas, Director  
Illinois Hazardous Waste Research and Information Center  
One East Hazelwood Drive  
Champaign, Illinois 61820  
217-333-8940

### OFFICE OF POLLUTION PREVENTION

#### Key Program Elements

- Voluntary Toxic Pollution Prevention Innovation Plan Program
  - Support to industry's pollution prevention efforts on approval from the innovation plan, as outlined in the Toxic Pollution Prevention Act, through expediting review of permit applications and supporting variance petitions
- IEPA Pollution Prevention Internship Program
  - Match of engineer interns with Illinois industry on pollution prevention projects
  - Training and provision of technical support to the interns
  - Help to determine pollution prevention goals for the targeted industry
- Illinois Industrial Materials Exchange Services (IMES)
  - Maintenance of an information clearinghouse and a directory
  - Facilitation of a market for hazardous and nonhazardous materials through waste exchange information and referral
  - Distribution of published materials to its subscribers

**Contacts:** Mike Hayes  
Illinois Environmental Protection Agency  
Office of Pollution Prevention  
2200 Churchill Road  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
217-785-0533

Michael Nechvatal  
Solid Waste Division Manager  
Illinois Environmental Protection Agency  
2200 Churchill Road  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
217-785-8604

## INDIANA



### OFFICE OF POLLUTION PREVENTION AND TECHNICAL ASSISTANCE

#### Key Program Elements

- Waste exchange catalog
- Waste minimization conferences
- Workshops that introduce pollution prevention concepts for a particular industry, present successful case studies for alternative technologies, and provide references of technical experts who can help institute pollution prevention practices
- Governor's award program
- Quarterly technical bulletin
- Pollution prevention opportunity assessments
- Technology transfer
- Information clearinghouse

**Contacts:** Joanne Joice, Director  
Charles Sullivan, Environmental Manager  
Office of Pollution Prevention and Technical Assistance  
Indiana Department of Environmental Management  
105 South Meridian Street  
P.O. Box 6015  
Indianapolis, Indiana 46225  
317-232-8172

### INDIANA POLLUTION PREVENTION PROGRAM

#### Key Program Elements

- Onsite technical assistance
- General and industry-specific conferences and workshops on pollution prevention and recycling
- Information on pollution prevention and recycling
- Pollution prevention research and information for agricultural industries

**Contacts:** Rick Bossingham, Coordinator  
Jeff Burbrink, Agricultural Pollution Prevention Coordinator  
Environmental Management and Education Program  
2129 Civil Engineering Building  
Purdue University  
West Lafayette, Indiana 47907-1284  
317-494-5038

## IOWA



### IOWA WASTE REDUCTION CENTER (IWRC)

#### Key Program Elements

- Onsite waste assessment consultation for small businesses
- Waste Reduction Expert Access System (WREAS)
- Waste Reduction Initiative for Iowa Counties (WRIIC)
- General and industry-specific waste reduction workshops, conferences, and training courses.
- Waste exchange program
- Grant program
- Applied research on new and emerging waste reduction and recycling techniques

**Contacts:** John Konefes, Director  
Kim Gunderson, Environmental Specialist  
Iowa Waste Reduction Center  
University of Northern Iowa  
Cedar Falls, Iowa 50614-0185  
319-273-2079

### WASTE MANAGEMENT AUTHORITY DIVISION

#### Key Program Elements

- Onsite waste reduction opportunity assessments
- Information clearinghouse
- Grant program
- Development of recycling markets
- Waste reduction workshop series

**Contacts:** Tom Blewett, Bureau Chief  
Scott Cahail, Environmental Specialist  
Waste Management Authority Division  
Department of Natural Resources  
Wallace State Office Building  
Des Moines, Iowa 50319  
515-281-8941

## KANSAS



### STATE TECHNICAL ACTION PLAN (STAP)

#### Key Program Elements

- Educational programs on hazardous waste minimization methods
- Alternative technology research for electroplaters
- Waste minimization newsletter, publications, and videotapes

**Contact:** Tom Gross, Bureau Chief  
State Technical Action Plan  
Kansas Department of Health and Environment  
Forbes Field, Building 740  
Topeka, Kansas 66620  
913-296-1603

## **KANSAS STATE UNIVERSITY RITTA PROGRAM**

### **Key Program Elements**

- Onsite technical assistance
- Quarterly newsletter
- Industry-specific waste minimization workshops
- Coordination of the Hazardous Waste Regulatory Training Conferences with the Kansas Department of Health and Environment. The conferences include waste minimization, regulatory compliance, and technology transfer components

**Contact:** Lani Himegarner, Program Manager  
Engineering Extension Programs  
133 Ward Hall  
Kansas State University  
Manhattan, Kansas 66506-2508  
913-532-6026

## **KENTUCKY**



## **KENTUCKY PARTNERS — STATE WASTE REDUCTION CENTER**

### **Key Program Elements**

- Onsite waste reduction opportunity assessments
- Waste reduction seminars and workshops
- Pollution prevention information center
- Quarterly newsletter
- Coordination of a network of industrial consultants

**Contact:** Joyce St. Clair, Executive Director  
Kentucky Partners — State Waste Reduction Center  
Ernst Hall, Room 312  
University of Louisville  
Louisville, Kentucky 40292  
502-588-7260

## **LOUISIANA**



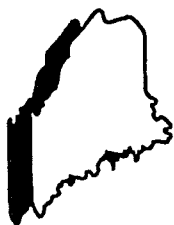
## **LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

### **Key Program Elements**

- Information clearinghouse
- Grant program
- Waste reduction technology assessment of Louisiana industries
- Index of hazardous and toxic wastes
- Pollution prevention conferences and workshops

**Contact:** Gary Johnson, Waste Minimization Coordinator  
Louisiana Department of Environmental Quality  
P.O. Box 82263  
Baton Rouge, Louisiana 70884-2263  
504-765-0720

## MAINE



### DEPARTMENT OF ENVIRONMENTAL PROTECTION

#### Key Program Elements

- Implements Maine's Toxics Use Reduction Law

**Contact:** Ronald Dyer  
Department of Environmental Protection  
State House Station #17  
Augusta, Maine 04333  
207-287-2811

### MAINE WASTE MANAGEMENT AGENCY

#### Key Program Elements

- Onsite waste reduction audits
- Model business/community program

**Contact:** Gayle Briggs  
Maine Waste Management Agency  
State House Station 154  
Augusta, Maine 04333  
207-287-5300

## MARYLAND



### WASTE MANAGEMENT ADMINISTRATION

#### Key Program Elements

- Information clearinghouse
- Technical assistance
- Waste audits

**Contact:** James Francis  
Hazardous Waste Program  
Waste Management Administration  
Maryland Department of the Environment  
2500 Broening Highway, Building 40  
Baltimore, Maryland 21224  
410-631-3344

### MARYLAND ENVIRONMENTAL SERVICES

#### Key Program Elements

- Information outreach program
- Waste reduction advisory system

**Contact:** George G. Perdikakis, Director  
Maryland Environmental Services  
2020 Industrial Drive  
Annapolis, Maryland 21401  
301-974-7281

## TECHNICAL EXTENSION SERVICE

### Key Program Elements

- Technical assistance
- Waste audits
- Waste minimization workshops

**Contact:** Travis Walton, Director  
Technical Extension Service  
Engineering Research Center  
University of Maryland  
College Park, Maryland 20742  
301-454-1941

## MASSACHUSETTS



## DEPARTMENT OF ENVIRONMENTAL PROTECTION

### Key Program Elements

- Implements Massachusetts' Toxic Use Reduction Act

**Contact:** Suzi Peck  
Massachusetts Department of Environmental Protection  
1 Winter Street  
Boston, Massachusetts 02108  
617-292-5870

## OFFICE OF TECHNICAL ASSISTANCE FOR TOXICS USE REDUCTION

### Key Program Elements

- Technical and policy clearinghouse
- Governor's award
- Waste minimization workshops
- Technical assistance to toxics users
- Program expertise for jewelry platers and metal-using industries

**Contacts:** Barbara Kelley, Director  
Richard Reibstein, Outreach Director  
Massachusetts Department of Environment  
Office of Technical Assistance  
100 Cambridge Street  
Boston, Massachusetts 02202  
617-727-3260

## TOXICS USE REDUCTION INSTITUTE

### Key Program Elements

- Toxics Use Reduction Planners Course
- Pollution prevention workshops, such as Material Substitution, Closed Loop Processes, and Toxics Use Audits
- Public education on pollution prevention and toxics use reduction
- Waste reduction research on toxic chemicals

**Contact:** Jack Luskin  
Director of Education and Outreach  
Toxics Use Reduction Institute  
University of Lowell  
1 University Avenue  
Lowell, Massachusetts 01854  
508-934-3262

## MICHIGAN



### OFFICE OF WASTE REDUCTION SERVICES

#### Key Program Elements

- Onsite technical assistance to firms in targeted industrial sectors
- Waste Reduction Information Clearinghouse and Resource Center
- Telephone consultation
- Waste reduction seminars and annual "Roundtable"
- Pollution prevention audit training for employees of state government and county health departments, as well as private companies
- Educational material development and dissemination
- Waste reduction research

**Contact:** Nan Merrill, Manager  
Office of Waste Reduction Services  
Environmental Services Division  
Michigan Departments of Commerce and Natural Resources  
116 West Allegan Street  
P.O. Box 30004  
Lansing, Michigan 48909-7504  
517-335-1178

## MINNESOTA



### MINNESOTA OFFICE OF WASTE MANAGEMENT

#### Key Program Elements

- Overall mission is to conserve resources and prevent pollution by developing projects and programs that reduce waste, recycle usable materials, recover resources from wastes, and treat waste to reduce the risk of pollution
- Provide matching grants to companies for projects that assess the feasibility of pollution prevention technologies
- Governor's Awards for Excellence in Pollution Prevention
- An Executive Order which directs state agencies to give priority to pollution prevention
- Assist Minnesota companies in developing their mandatory pollution prevention plans by providing a Guide to Pollution Prevention Planning
- Finance the Minnesota Technical Assistance Program (MnTAP) which provides non-regulatory assistance to Minnesota industry



**Contact:** Kevin McDonald, Sr., Pollution Prevention Planner  
Minnesota Office of Waste Management  
1350 Energy Lane  
Suite 201  
St. Paul, Minnesota 55108-5272  
612-649-5750/5744

### **MINNESOTA POLLUTION CONTROL AGENCY (MPCA)**

#### **Key Program Elements**

- Technical assistance to hazardous waste generators
- Training programs for RCRA compliance
- Waste minimization pilot project for waste solvent generation
- Waste reduction fact sheets

**Contact:** Eric Kilberg, Pollution Prevention Coordinator  
Environmental Assessment Office  
Minnesota Pollution Control Agency  
520 Lafayette Road  
St. Paul, Minnesota 55155  
612-296-8643

### **MINNESOTA TECHNICAL ASSISTANCE PROGRAM (MNTAP)**

#### **Key Program Elements**

- Telephone and onsite consultations
- Student intern program
- WRITE Program — research modified rinsing techniques for metal finishing
- Information clearinghouse
- Development of education and training programs

**Contact:** Cindy McComas, Director  
Minnesota Technical Assistance Program  
Environmental Health School of Public Health  
University of Minnesota  
1313 5th Street, S.E., Suite 207  
Minneapolis, Minnesota 55414  
612-627-4555/4646

## **MISSISSIPPI**



### **MISSISSIPPI WASTE REDUCTION/WASTE MINIMIZATION PROGRAM, MISSISSIPPI TECHNICAL ASSISTANCE PROGRAM (MISSTAP) AND MISSISSIPPI SOLID WASTE REDUCTION ASSISTANCE PROGRAM (MSSWRAP)**

#### **Key Program Elements**

- Pollution prevention research
- Onsite waste assessments
- Pollution prevention conferences and workshops for industries, businesses, municipalities, and the general public
- Waste exchange data base
- Information clearinghouse

**Contacts:** Dr. Caroline Hill  
Mississippi Technical Assistance Program and  
Mississippi Solid Waste Reduction Assistance  
P.O. Drawer CN  
Mississippi State, Mississippi 39762  
601-325-8454

Thomas E. Whitten, Director  
Waste Reduction/Waste Minimization Program  
Mississippi Department of Environmental Quality  
P.O. Box 10385  
Jackson, Mississippi 39289-0385  
601-961-5171

## MISSOURI



### WASTE MANAGEMENT PROGRAM (WMP)

#### Key Program Elements

- Agriculture-based information clearinghouse
- Presentation of educational/information projects focusing on agrichemical dealers
- Cosponsor with the University of Missouri of pollution prevention workshops for businesses

**Contact:** Becky Shannon, Pollution Prevention Coordinator  
Hazardous Waste Program  
Division of Environmental Quality  
Missouri Department of Natural Resources  
205 Jefferson Street  
P.O. Box 176  
Jefferson City, Missouri 65102  
314-751-3176

### ENVIRONMENTAL IMPROVEMENT AND ENERGY RESOURCES AUTHORITY (EIERA)

#### Key Program Elements

- Financing for pollution prevention projects
- Waste exchange service in cooperation with the Industrial Materials Exchange Service
- Household Hazardous Waste Project

**Contacts:** Steve Mahfood, Director  
Tom Welch, Assistant for Planning and Project Development  
Environmental Improvement and Energy Resources Authority  
225 Madison Street  
P.O. Box 744  
Jefferson City, Missouri 65102  
314-751-4919

## MONTANA



### SOLID AND HAZARDOUS WASTE BUREAU

#### Key Program Elements

- Industry-specific pollution prevention workshops
- Solvent users assistance
- Waste audits
- Montana Industrial Waste Exchange program

**Contacts:** Dan Fraser  
Water Quality Bureau Chief  
Department of Health and Environmental Sciences  
Room A-206  
Cogswell Building  
Helena, Montana 59620  
406-444-2406

Jeff Jacobsen  
Montana State University Extension Service  
807 Leon Johnson Hall  
Bozeman, Montana 59717-0312  
406-994-5683 FAX 406-994-3933

## NEBRASKA



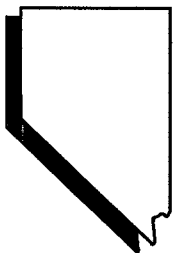
### HAZARDOUS WASTE SECTION

#### Key Program Elements

- Waste minimization counseling
- Waste minimization/RCRA regulation workshops
- Waste exchanges
- Information clearinghouse

**Contact:** Teri Swarts, Waste Minimization Coordinator  
Hazardous Waste Section  
Nebraska Department of Environmental Control  
301 Centennial Mall South  
P.O. Box 98922  
Lincoln, Nebraska 68509  
402-471-4217

## NEVADA



### BUSINESS ENVIRONMENTAL PROGRAM

#### Key Program Elements

- Technical assistance program for small quantity generators
- Hazardous waste hotline
- Quarterly newsletter
- Coordination of seminars with the Nevada Division of Environmental Protection on hazardous waste regulations, waste management, and waste minimization; seminars offered throughout the State
- Information clearinghouse

**Contact:** Kevin Dick, Manager  
Business Environmental Program  
Nevada Small Business Development Center  
University of Nevada — Reno  
Reno, Nevada 89557-0100  
702-784-1717

Doug Martin  
Bureau of Waste Management  
Division of Environmental Protection  
123 West Nye Lane 89710  
Carson City, Nevada  
702-687-5872

### **NEVADA ENERGY CONSERVATION PROGRAM**

#### **Key Program Elements**

- Information clearinghouse for recycling
- Funding for recycling projects

**Contact:** Curtis Framel, Manager  
Nevada Energy Conservation Program  
Office of Community Services  
Capitol Complex  
201 South Fall Street  
Carson City, Nevada 89710  
702-885-4420

## **NEW HAMPSHIRE**



### **NEW HAMPSHIRE BUSINESS AND INDUSTRY ASSOCIATION**

#### **Key Program Elements**

- Onsite technical assistance
- Computer software to help businesses recycle
- Newsletter and conferences to promote pollution prevention for business

**Contact:** Emily Hess  
New Hampshire Waste Cap  
New Hampshire Business and Industry Association  
122 North Main Street  
Concord, New Hampshire 03301  
603-224-5388

## NEW JERSEY



### NEW HAMPSHIRE POLLUTION PREVENTION PROGRAM

#### Key Program Elements

- Onsite technical assistance
- Pollution prevention information clearinghouse
- Participation in the Northeast Industrial Waste Exchange

**Contact:** Vincent R. Perelli and Paul Lockwood  
Waste Management Division  
New Hampshire Department of Environmental Services  
6 Hazen Drive  
Concord, New Hampshire 03301-6509  
603-271-2902

### NEW JERSEY OFFICE OF POLLUTION PREVENTION

#### Key Program Elements

- Development of legislation, rules, and regulations
- Governor's award
- Preparation of industry profiles for pollution prevention trend analysis

**Contact:** Jean Herb, Director  
Office of Pollution Prevention  
New Jersey Department of Environmental Protection  
CN-402  
401 East State Street  
Trenton, New Jersey 08625  
609-777-0518

### NEW JERSEY TECHNICAL ASSISTANCE PROGRAM (NJTAP)

#### Key Program Elements

- Technical assistance to industries
- Onsite assessments at industrial facilities
- Hazardous waste reuse program
- Northeast Industrial Waste Exchange
- Governor's award

**Contact:** Kevin Gashlin, Director  
New Jersey Technical Assistance Program  
New Jersey Institute of Technology  
Hazardous Substance Management Research Center  
Center for Environmental and Engineering Sciences  
323 Martin Luther King Boulevard  
Newark, New Jersey 07102  
201-596-5864

## NEW MEXICO



### MUNICIPAL WATER POLLUTION PREVENTION PROGRAM

#### Key Program Elements

- Technical assistance to municipal wastewater utilities to prevent surface- and ground-water pollution

**Contact:** Alex Puglisi, Program Manager  
Municipal Water Pollution Prevention Program  
Facility Operations Section, Surface Water Quality Bureau  
New Mexico Environment Department  
1190 St. Francis Drive  
P.O. Box 26110  
Santa Fe, New Mexico 87502  
505-827-2804

## NEW YORK



### BUREAU OF POLLUTION PREVENTION

#### Key Program Elements

- Waste reduction manuals
- Pollution prevention fact sheets
- Industry-specific workshops for small and medium quantity generators
- Information clearinghouse
- Annual waste reduction conference
- Northeast Industrial Waste Exchange
- Public outreach programs
- Technical assistance

**Contact:** John Ianotti, Director  
Bureau of Pollution Prevention  
Division of Hazardous Substances Regulation and the  
Division of Solid Waste  
New York State Department of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233-7253  
518-457-7276

### NEW YORK STATE ENVIRONMENTAL FACILITIES CORPORATION

#### Key Program Elements

- Technical assistance for private industry, local government, and state agencies
- Information clearinghouse
- Industrial Finance Program

**Contact:** Harold Snow, Program Manager  
New York State Environmental Facilities Corporation  
50 Wolf Road  
Albany, New York 12205  
518-457-4138

## **ERIE COUNTY OFFICE OF POLLUTION PREVENTION (ECOPP)**

### **Key Program Elements**

- Technical assistance for small to medium sized businesses
- Onsite consultations
- Information clearinghouse
- Waste minimization workshops targeted at local government, public institutions, business, and the agricultural community
- Industry-specific small quantity hazardous waste minimization workshops

**Contact:** Thomas Hersey, Pollution Prevention Coordinator  
Erie County Office of Pollution Prevention  
Erie County Office Building  
95 Franklin Street  
Buffalo, New York 14202  
716-858-6231

## **NORTH CAROLINA**



## **POLLUTION PREVENTION PROGRAM**

### **Key Program Elements**

- Non-regulatory multi-media technical assistance to industries, local governments, and state agencies
- Information clearinghouse
- Industry-specific waste reduction reports
- Onsite technical assistance
- Outreach, training and education programs
- Matching grants
- Research grants

**Contacts:** Gary Hunt, Director  
Stephanie Richardson, Manager  
Pollution Prevention Program  
Office of Waste Reduction  
North Carolina Department of Environment, Health, and Natural Resources  
P.O. Box 27687  
Raleigh, North Carolina 27611-7687  
919-571-4100

## **NORTH DAKOTA**



### **No formal state program to date**

**Contact:** Jeffrey L. Burgess  
Environmental Health Section  
North Dakota Department of Health and Consolidated Laboratories  
1200 Missouri Ave., Room 201  
P.O. Box 5520  
Bismarck, North Dakota 58502  
701-221-5150 FAX 701-221-5200

## OHIO



### OHIO TECHNOLOGY TRANSFER ORGANIZATION (OTTO)

#### Key Program Elements

- Pollution prevention workshops, seminars, and technology forums in association with Ohio colleges
- Conferences on industrial solid waste reduction and recycling
- Onsite technical assistance for businesses and industries
- Information clearinghouse
- Research and development

**Contacts:** Jeff Shick, State Coordinator  
Jackie Rudolf  
Ohio Technology Transfer Organization  
Ohio Department of Development  
77 South High Street, 26th Floor  
Columbus, Ohio 43255-0330  
614-644-4286

### THOMAS EDISON PROGRAM

#### Key Program Elements

- Pollution prevention grants for businesses, industry, and universities

**Contact:** Dan Berglund  
Ohio's Thomas Edison Program  
77 South High Street, 26th Floor  
Columbus, Ohio 43215  
614-466-3887

### OHIO ENVIRONMENTAL PROTECTION AGENCY

#### Key Program Elements

- Review and development of pollution prevention legislation
- Activities relating to permitting and inspections
- Pollution prevention data collection and analysis
- Demonstration projects for industry
- Participation in conferences and seminars
- Outreach and information dissemination

**Contacts:** Roger Hannahs  
Michael W. Kelley  
Anthony Sasson  
Pollution Prevention Section  
Division of Hazardous Waste Management  
Ohio Environmental Protection Agency  
P.O. Box 1049  
Columbus, Ohio 43266-0149  
614-644-3969



## OHIO DEPARTMENT OF NATURAL RESOURCES

### Key Program Elements

- Litter prevention and recycling grants to local governments and state agencies
- Technical assistance to communities and businesses
- Education/ public outreach and research

**Contact:** Helen L. Hurlburt  
Division of Litter Prevention and Recycling  
Fountain Square Court, Building F2  
Columbus, Ohio 43224-1387  
614-265-6333

## OKLAHOMA



## ENVIRONMENTAL QUALITY COUNCIL

### Key Program Elements

- Government, industry, and community representatives advise the Governor on options, such as pollution prevention, for improving environmental quality
- Development of pollution prevention/waste minimization incentives and awards programs for industry and businesses.

**Contacts:** Ellen Bussert  
Mary Jane Calvey  
Environmental Health Administration - 0200  
1000 North East 10th St.  
Oklahoma State Department of Health  
Oklahoma City, Oklahoma 73117-1299  
405-271-7353

## POLLUTION PREVENTION TECHNICAL ASSISTANCE PROGRAM

### Key Program Elements

- Waste audits and technical assistance for industries
- Workshops on waste minimization for general audiences (future workshops will be industry specific)
- Resources center for information and case studies

**Contact:** Chris Varga  
Hazardous Waste Management Service, 0205  
Oklahoma State Department of Health  
1000 Northeast 10th Street  
Oklahoma City, Oklahoma 73117-1299  
405-271-7047

## OREGON



### WASTE REDUCTION ASSISTANCE PROGRAM (WRAP)

#### Key Program Elements

- Workshops for hazardous waste generators and specific industries with sessions devoted to waste reduction topics, such as "Developing Waste Reduction Plans," "Conducting Waste Assessments," and "Oregon's Toxic Use Act"
- Technical assistance for hazardous waste generators and transporters, large users of SARA 313 listed chemicals, and businesses
- Waste reduction audits
- Technical resource library and clearinghouse
- RCRA program development
- Capacity assurance planning
- Publications
- Awards program
- Hotline

**Contacts:** Roy W. Brower, Manager  
David Rozell, Pollution Prevention Specialist  
Phil Berry, Pollution Prevention Specialist  
Hazardous Waste Reduction and Technical Assistance Program  
Hazardous and Solid Waste Division  
Oregon Department of Environmental Quality  
811 S.W. Sixth Avenue  
Portland, Oregon 97204  
503-229-6585

### WRAP COLLABORATION WITH OREGON STATE UNIVERSITY

#### Key Program Elements

- Revision of engineering curriculum to incorporate waste reduction technologies
- Training courses at the community college level on pollution prevention topics, such as hazardous materials management and toxic substance use reduction and planning

**Contact:** Dr. Ken Williamson  
Environmental Engineering Office  
Civil Engineering Department  
Oregon State University  
Apperson 206  
Corvallis, Oregon 97331-2302  
503-754-2751

## PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES



#### Key Program Elements

- Grants for hazardous waste recycling equipment
- Technical assistance, outreach, and information exchange
- Annual Waste Minimization Award
- Funding for the Center for Hazardous Materials Management
- Hazardous waste facilities planning

**Contacts:** Meredith Hill  
Assistant to Deputy Secretary  
Office of Air and Waste Management  
Pennsylvania Department of Environmental Resources  
P.O. Box 2063  
Harrisburg, Pennsylvania 17105-2063  
717-772-2724 FAX 717-783-8965

David Pipozar  
Assistant Director  
Allegheny Health Department  
3333 Forbes Avenue  
Pittsburgh, Pennsylvania 15213  
412-578-8030 FAX 412-578-8325

## **CENTER FOR HAZARDOUS MATERIALS RESEARCH**

### **Key Program Elements**

- Pollution prevention workshops for industrial representatives, consultants, engineering students, and regulatory personnel
- Pollution prevention speakers bureau providing experts for conferences of trade associations, business groups, community organizations, and local governments
- Onsite waste audits and technical assistance
- Quarterly newsletter, industry-specific manuals and fact sheets, and other publications
- Pesticide research and education
- Regulatory information and technical assistance hotline

**Contact:** Roger Price  
Center for Hazardous Materials Research  
University of Pittsburgh Applied Research Center  
320 William Pitt Way  
Pittsburgh, Pennsylvania 15238  
412-826-5320  
1-800-334-CHMR

## **PENNSYLVANIA TECHNICAL ASSISTANCE PROGRAM (PENNTAP)**

### **Key Program Elements**

- Technical assistance for industries
- Access to pollution prevention information
- Networking to provide key contacts
- Linkages to other resources and expertise
- Sponsorship of seminars

**Contact:** Jack Gido, Director  
PENNTAP  
Penn State University  
110 Barbara Building II  
810 North University Drive  
University Park, Pennsylvania 16802  
814-865-0427 FAX 814-865-5909

## NATIONAL TECHNOLOGY APPLICATIONS CORPORATION (NETAC)

### Key Program Elements

- Pollution prevention training and education for industry, government, and university representatives
- Applied pollution prevention research
- Testing and demonstrations
- Regulatory and business development
- Technology transfer

**Contact:** Devon Streit  
NETAC  
University of Pittsburgh Applied Research Center  
615 William Pitt Way  
Pittsburgh, Pennsylvania 15238  
412-826-5511

## RHODE ISLAND



## HAZARDOUS WASTE REDUCTION PROGRAM

### Key Program Elements

- Conferences and workshops that include pollution prevention topics
- Technical assistance for industries and businesses
- Onsite waste reduction assessments
- Waste reduction information clearinghouse
- Newsletter and other publications
- Hazardous waste technology, research, development, and demonstration with University of Rhode Island and industries
- Awards program

**Contacts:** Richard Enander, Chief  
Janet Keller  
Office of Environmental Coordination  
Rhode Island Department of Environmental Management  
83 Park Street  
Providence, Rhode Island 02903-1037  
401-277-3434

Eugene Pepper, Senior Environmental Planner  
Hazardous Waste Reduction Section  
Office of Environmental Coordination  
Rhode Island Department of Environmental Management  
83 Park Street  
Providence, Rhode Island 02903  
401-277-3434 SOUTH

## **SOUTH CAROLINA**



### **HAZARDOUS WASTE MANAGEMENT RESEARCH FUND**

#### **Key Program Elements**

- Sponsors workshops and seminars on waste minimization offered by the continuing engineering education office at Clemson University
- Workshop topics for 1993 including waste reduction for vehicle/auto service shops, textile manufacturers, metal fabricators, machine shops, painting and coating shops, solvent users and the development of site-specific waste reduction programs
- Sponsors waste minimization research and development programs
- Awards programs
- Training assistance including videotapes
- Quarterly newsletter "Options"

**Contact:** Eric Snider, Ph.D., P.E., Director  
Continuing Engineering Education  
Clemson University  
P.O. Drawer 1607  
Clemson, South Carolina 29633  
803-656-3308

### **CENTER FOR WASTE MINIMIZATION**

#### **Key Program Elements**

- Waste minimization seminars for business and industry representatives
- Technical assistance primarily for small and medium sized companies
- Telephone and onsite waste reduction assessments
- Information clearinghouse including expert referral services
- Research fund

**Contact:** Ray Guerrein  
Center for Waste Minimization  
South Carolina Department of Health and Environmental Control  
2600 Bull Street  
Columbia, South Carolina 29201  
802-734-4715

## **SOUTH DAKOTA**



### **WASTE MANAGEMENT PROGRAM**

#### **Key Program Elements**

- Workshops and seminars on various waste management topics
- Technical assistance primarily focused on source reduction
- Onsite technical assistance and waste audits for industries and businesses
- Data base of small quantity generator case histories
- Awards program

**Contacts:** Wayne Houtcooper  
Department of Environment and Natural Resources  
Joe Foss Building  
523 E. Capitol Ave  
Pierre, South Dakota 57501-3181  
605-773-4216 FAX 605-773-6035

## TENNESSEE



### DEPARTMENT OF HEALTH AND ENVIRONMENT

#### Key Program Elements

- Pollution prevention workshops, seminars, and conferences
- Technical assistance for industries, small communities, and government agencies
- Free, confidential, onsite waste reduction audits
- Information clearinghouse
- Challenge grants for hazardous waste generators
- Award program

**Contact:** Paul Evan Davis  
Bureau of Environment  
Tennessee Department of Health and Environment  
14th Floor, L & C Building  
401 Church Street  
Nashville, Tennessee 37243-0455  
615-741-3657

### WASTE REDUCTION ASSESSMENT AND TECHNOLOGY TRANSFER TRAINING PROGRAM (WRATT)

#### Key Program Elements

- Waste reduction assessment training program offered by the University of Tennessee Center for Industrial Services; includes industry-specific workshops, as well as workshops for State and Federal agency staff
- National teleconferences on waste reduction opportunities
- Videos of previous teleconferences
- Interactive video training modules
- Comprehensive training manuals
- Onsite waste reduction assessments by full-time field engineers and retired engineers

**Contacts:** George Smelcer, Director  
Waste Reduction Assistance Program  
Cam Metcalf (Suite 606)  
Center for Industrial Services  
University of Tennessee  
226 Capitol Boulevard Building  
Nashville, Tennessee 37219-1804  
615-242-2456

Carroll Dugan, Section Manager  
Waste Reduction and Management Section  
Tennessee Valley Authority  
Mail Code HB 2G-C  
311 Broad Street  
Chattanooga, Tennessee 37406  
615-751-4574

Steve Hillenbrand  
Tennessee Valley Authority  
Mail Code OCH 2B-K  
602 West Summit Hill Drive  
Knoxville, Tennessee 37902  
615-632-8489

## TEXAS



### TEXAS WATER COMMISSION

#### Key Program Elements

- Training for the regulated community on the requirements of RCRA and State hazardous and solid waste legislation and rules
- Compliance assistance through bulletins, manuals, seminars, and an annual hazardous waste trade fair and conference
- Pollution prevention training emphasizing waste minimization plan preparation, goal setting, waste stream identification (onsite audits), options analysis, waste accounting, and implementation
- Resource Exchange Network for Eliminating Waste
- Information clearinghouse of treatment and recovery methods for hazardous and solid waste

**Contact:** Nancy R. Worst, Director  
Office of Pollution Prevention and Conservation  
Texas Water Commission  
P.O. Box 13087, Capitol Station  
Austin, Texas 78711-3087  
512-463-7869

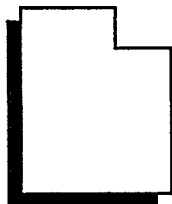
### CENTER FOR HAZARDOUS AND TOXIC WASTE STUDIES

#### Key Program Elements

- Incorporation of pollution prevention concepts into existing engineering courses at Texas Tech University
- Several graduate and undergraduate courses that address waste minimization topics, such as chemical process modifications for the petroleum, petrochemical, and chemical industries, as well as feedstock alternatives
- Research and development
- Onsite waste audits

**Contact:** John R. Bradford, Director  
Center for Hazardous and Toxic Waste Studies  
Texas Tech University  
P.O. Box 4679  
Lubbock, Texas 79409-3121  
806-742-1413

## UTAH



### DEPARTMENT OF ENVIRONMENTAL QUALITY

#### Key Program Elements

- Establishing a coordinated, multi-media pollution prevention program statewide
- Emphasizing education of Utah's businesses, industries, and the public about the importance of pollution prevention
- Industrial Pollution Prevention Workgroup
- Small Business Assistance Program
- Electronic Pollution Prevention Bulletin Board Service
- Environmental Training Series
- Sustainable Agriculture Program
- Adopt-A-Waterbody Program
- Pollution Prevention Outreach Program and Library

**Contacts:** Sonja Wallace, Pollution Prevention Co-Coordinator  
Stephanie Bernkopf, Pollution Prevention Co-Coordinator  
Office of Executive Director  
Utah Department of Environmental Quality  
168 North 1950 West Street  
Salt Lake City, Utah 84114-4810  
801-536-4480 FAX 801-538-6016

## VERMONT



### POLLUTION PREVENTION PROGRAM

#### Key Program Elements

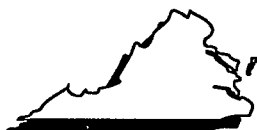
- Conferences and industry-specific workshops and seminars that address pollution prevention topics
- Presentations at public forums intended to assist the private sector in developing and implementing pollution prevention strategies
- Review of toxic use and hazardous waste reduction plans submitted by industry
- Onsite technical assistance and waste reduction audits
- Information clearinghouse

**Contacts:** Gary Gulka  
Pollution Prevention Division  
Vermont Department of Environmental Conservation  
103 South Main Street  
Waterbury, Vermont 05676  
802-244-8702

Paul Maskowitz, Chief  
Recycling and Resource Conservation Section  
Vermont Department of Environmental Conservation  
103 South Main Street  
Waterbury, Vermont 05676  
802-244-8702



## VIRGINIA



### WASTE MINIMIZATION PROGRAM

#### Key Program Elements

- Outreach programs targeted at specific industries, local and State government, institutions, laboratories, and other generators of solid and hazardous wastes
- Workshops will address the ship repair, furniture manufacturing, and printing industries, as well as urban pesticide use issues
- Source reduction conference
- Technical assistance and onsite waste reduction audits
- Hazardous waste information hotline
- Information clearinghouse
- Governor's Award

**Contact:** Sharon Kenneally-Baxter, Director  
Waste Minimization Program  
Virginia Department of Waste Management  
Monroe Building, 11th Floor  
101 N. 14th Street  
Richmond, Virginia 23219  
804-371-8716

### UNIVERSITY CENTER FOR ENVIRONMENTAL AND HAZARDOUS MATERIALS STUDIES

#### Key Program Elements

- Interdisciplinary research on environmental topics, including pollution prevention
- Technical assistance

**Contact:** Virginia Polytechnic Institute and State University  
Blacksburg, Virginia 24061-0113  
703-231-7508

## WASHINGTON



### WASTE REDUCTION, RECYCLING AND LITTER CONTROL PROGRAM

#### Key Program Elements

- Public education, including workshops and seminars for industries and communities
- Technical assistance for business, industry, and local government
- Toxic substance use and waste generation reduction, planning, and assistance
- Information clearinghouse/ Information coordination among State agencies
- Grants for small quantity generators and local governments

**Contacts:** Stan Springer  
Joy St. Germain  
Peggy Morgan  
Waste Reduction, Recycling and Litter Control Program  
Washington Department of Ecology  
Mail Stop PV-11  
Olympia, Washington 98504-8711  
206-438-7541

## WEST VIRGINIA



### POLLUTION PREVENTION AND OPEN DUMP PROGRAM (PPOD)

#### Key Program Elements

- Administration of the solid waste reclamation and environmental response fund
- Monitoring of hazardous waste generation
- Integrated education and technical assistance for industries and State employees designed to promote waste reduction

**Contact:** Richard Ferrell, Environmental Analyst  
Waste Management Section  
West Virginia Division of Natural Resources  
1356 Hansford Street  
Charleston, West Virginia 25301  
304-558-4000

### GENERATOR ASSISTANCE PROGRAM

#### Key Program Elements

- Industry-specific outreach and education
- Onsite technical assistance for generators of hazardous waste
- Waste reduction computer modeling
- Capacity assurance planning
- Annual reports
- Joint program with the National Institute for Chemical Studies to provide technical assistance and education to a hierarchy of generators in the Kanawha Valley

**Contact:** Randy Huffman  
Generator Assistance Program  
Waste Management Section  
West Virginia Division of Natural Resources  
1356 Hansford Street  
Charleston, West Virginia 25301  
304-558-6350

## WISCONSIN



### HAZARDOUS POLLUTION PREVENTION AUDIT GRANT PROGRAM

#### Key Program Elements

- Onsite waste reduction assessments and audits
- Grants to provide financial assistance for waste reduction/ process modifications

**Contact:** Phil Albert  
Wisconsin Department of Development  
123 West Washington Avenue  
P.O. Box 7979  
Madison, Wisconsin 53707  
608-266-3075

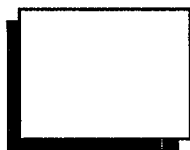
## DEPARTMENT OF NATURAL RESOURCES

### Key Program Elements

- Workshops for State agency personnel on pollution prevention
- Waste reduction course and seminars for specific businesses, industries, and process users
- Hazardous Waste Minimization Technical Assistance Program
- Site-specific waste audits
- Regulatory compliance assistance
- Information clearinghouse
- Newsletters, brochures, and fact sheets
- Waste reduction and recycling demonstration grants to industry
- Awards program

**Contacts:** Lynn Persson, Hazardous Waste Reduction and Recycling Coordinator  
Kate Cooper, Assistance Recycling Coordinator  
Bureau of Solid and Hazardous Waste Management  
Wisconsin Department of Natural Resources  
P.O. Box 7921 (SW/3)  
Madison, Wisconsin 53707-7921  
608-267-3763

## WYOMING



## DEPARTMENT OF ENVIRONMENTAL QUALITY

### Key Program Elements

- Integration of pollution prevention concepts into all relevant agency programs
- Resource center/ information clearinghouse
- Waste audits upon request for businesses
- Waste exchange

**Contacts:** David Finley, Manager  
Pat Gallagher, Senior Environmental Analyst  
Solid Waste Management Program  
Wyoming Department of Environmental Quality  
122 West 25th Street  
Herschler Building  
Cheyenne, Wyoming 82002  
307-777-7752 FAX 307-634-0799

## ISLANDS AND TERRITORIES

## AMERICAN SAMOA

### Key Program Elements

- Policy development through incorporating pollution prevention into regulatory programs, such as permitting and enforcement
- Comprehensive Island-wide waste oil collection and recycling project

**Contacts:** American Samoa Environmental Protection Agency  
Office of the Governor  
American Samoa Government  
Pago Pago, American Samoa 96799  
684-633-2304

Office of Pacific Island and Native American Programs (E-4)  
Norman Lovelace, Chief  
U.S. EPA Region IX  
75 Hawthorne Street  
San Francisco, California 94105  
415-744-1599

## **COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS**

### **Key Program Elements**

- Policy development through incorporating pollution prevention into regulatory programs, such as permitting and enforcement

**Contacts:** Division of Environmental Quality  
Dr. Torres Hospital  
P.O. Box 1304  
Saipan, MP 96950  
670-322-9371

## **GUAM**

### **Key Program Elements**

- Policy development through incorporating pollution prevention into regulatory programs, such as permitting and enforcement
- Small Quantity Generator Waste Audits

**Contacts:** Guam Environmental Protection Agency  
D-107 Harmon Plaza  
130 Rojas Street  
Harmon, Guam 96911  
671-646-8863

Office of Pacific Island and Native American Programs (E-4)  
Norman Lovelace, Chief  
U.S. EPA Region IX  
75 Hawthorne Street  
San Francisco, California 94105  
415-744-1599

## **REPUBLIC OF PALAU**

### **Key Program Elements**

- Policy development through incorporating pollution prevention into regulatory programs, such as permitting and enforcement

#### **Contacts:**

Palau Environmental Quality Protection Board  
Republic of Palau  
P.O. Box 100  
Koror, PW 96940  
680-488-1639

Office of Pacific Island and Native American Programs (E-4)  
Norman Lovelace, Chief  
U.S. EPA Region IX  
75 Hawthorne Street  
San Francisco, California 94105  
415-744-1599

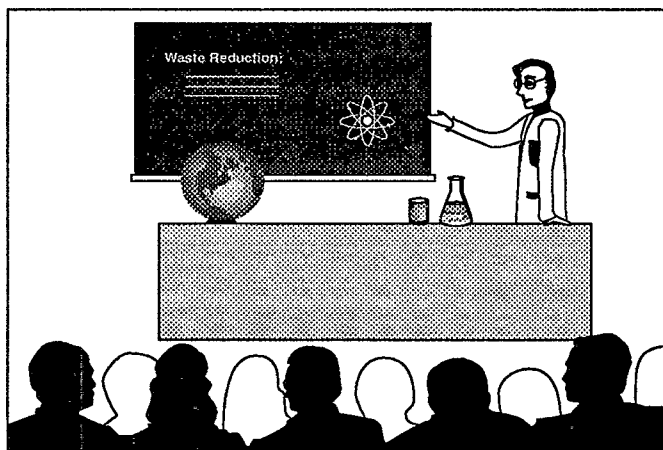


# 4

## Section 4 University-Affiliated Pollution Prevention/ Research and Training Assistance Centers

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*This section lists organizations involved in more research or training in source reduction and recycling. Some programs may provide assistance to small and/or medium sized businesses. Although these university centers are often partially funded by EPA or State agencies, they operate as independent entities.*



## **ALABAMA**

### **University of Alabama**

**Environmental Institute for Waste Management Studies (EI WMS)**  
Activities include policy research, technology transfer, and basic research. Their Hazardous Material & Management and Resource Recovery (HAMMARR) program provides regulatory information, waste exchange and technical assistance for waste minimization, and workshops for small quantity generators and local businesses. Many of the 1992 workshops will focus specifically on the metal casings industry. The University's College of Continuing Education also offers courses on pollution prevention.

Contact: Dr. Robert Griffin, Director  
Hazardous Materials Management and Resource  
Recovery Program (HAMMARR)  
University of Alabama  
275 Mineral Industries Building  
Box 870203  
Tuscaloosa, Alabama 35487-0203  
205-348-8403

### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

The University of Alabama is a member of the GCHSRC, which is located at Lamar University in Beaumont, Texas (see the listing under Texas).

## **CALIFORNIA**

### **University of California**

#### **Environmental Hazards Management Program**

The University of California at Berkeley, Davis, Irvine, Los Angeles, Santa Cruz, Riverside, Santa Barbara, and San Diego offers post-graduate continuing education courses on toxic materials that devote some time to pollution prevention issues. Many of the courses give certificates in hazardous material management and air quality management. Some locations offer environmental auditing and other related topics.

Contact: Jon Kindschy, Statewide Coordinator  
Environmental Hazards Management Program  
University of California Extension  
Riverside, California 92521-0112  
714-787-5804

### **University of California at Los Angeles**

#### **Center for Waste Reduction Technologies**

The center conducts industry-supported research into waste reduction technology.

Contact: Dr. David Allen  
University of California, Los Angeles  
Los Angeles, California 90024  
213-206-0300



## **COLORADO**

### **Colorado State University**

#### **Waste Minimization Assessment Center (WMAC)**

WMAC is managed through the University City Science Center of Philadelphia. The center conducts detailed waste minimization assessments at small- to medium-sized manufacturing companies, training workshops for the Department of Health personnel, and training for EPA Region VIII RCRA inspectors. The center is also performing solvent use reduction audits at two manufacturing plants and will develop technical information on solvent use practices for small- to medium-sized manufacturing plants. In addition, the Center conducts training workshops for Department of Health personnel to develop technical expertise in pollution prevention. Contact Region VIII for information on these workshops.

Contacts: Dr. Harry Edwards, Director  
Waste Minimization Assessment Center  
Mechanical Engineering Department  
Colorado State University  
Fort Collins, Colorado 80523  
303-491-5317

Marie Zanowich, Project Officer  
U.S. EPA Region VIII  
999 18th Street, Suite 500  
Denver, Colorado 80202-2505  
303-294-1065

## **CONNECTICUT**

### **University of Connecticut**

#### **Pollution Prevention Research and Development Center (PPRDC)**

An EPA funded research center, the PPRDC will support state government and industry in reducing toxic emissions by encouraging existing and start up companies to provide services and equipment necessary for pollution prevention technologies, and by creating new jobs to meet the demands of this industry. PPRDC's goal is to work with industry to develop pollution prevention technology and a manufacturing base in the region.

Contact: Dr. George Hoag  
Director, Pollution Prevention  
Research and Development Center  
Environmental Research Institute  
Box U-120, Route 44, Longley Building 146  
University of Connecticut  
Storrs, Connecticut 06269-3210  
203-486-4015 FAX 203-486-2269

## **Waterbury State Technical College**

### **Industrial Environmental Management (IEM)**

Waterbury State Technical College offers a waste minimization course as part of its Industrial Environmental Management certificate level and associate degree level programs. Other courses include environmental regulations, safe handling of hazardous wastes, and environmental control processes.

Contact: Cynthia Donaldson, Chairperson  
Industrial Environmental Management  
Waterbury State Technical College  
750 Chase Parkway  
Waterbury, Connecticut 06708-3089  
203-596-8703/575-8089

## **DISTRICT OF COLUMBIA**

### **Howard University**

#### **The Great Lakes and Mid-Atlantic Hazardous Substance Research Center**

The center is funded by EPA and focuses on the unique problems of EPA Regions III and V. Research is conducted on hazardous substances and related environmental problems. Among other projects, the center is developing materials for a hazardous waste workshop and videotapes on waste minimization information and training. The University of Michigan and Michigan State University are also members of the center.

Contact: Dr. James H. Johnson, Jr., Assistant Director  
The Great Lakes and Mid-Atlantic Hazardous  
Substance Research Center  
Department of Civil Engineering  
Howard University  
Washington, D.C. 20059  
202-806-6570

## **FLORIDA**

### **Florida Institute of Technology**

#### **Research Center for Waste Utilization**

The center offers classroom training in waste utilization at the undergraduate and graduate levels. In addition, the center is involved in research in the areas of municipal solid waste (MSW), industrial solid waste, and pollution prevention. Specific studies include heavy metal sources in the MSW stream, uses of ash from waste-to-energy plants, biological

toxicity of ash residues, and degradable plastics characteristics after disposal.

Contact: Edwin Korzun, Executive Director  
Research Center for Waste Utilization  
Department of Marine and Environmental  
Sciences  
Florida Institute of Technology  
150 West University Boulevard  
Melbourne, Florida 32901-6988  
305-768-8000

### **University of Central Florida**

#### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

The University of Central Florida is a member of the GCHSRC, which is located at Lamar University in Beaumont, Texas (see the listing under Texas).

### **University of Florida**

#### **Center for Training, Research, and Education for Environmental Occupations**

The center's activities include developing a statewide training action plan for business, government, and the public; providing RCRA hazardous waste regulation training; developing a university-level waste reduction curriculum; sponsoring a 2-day symposium; and developing a training program for three specific industries.

Contact: Dr. James O. Bryant, Jr., Director  
Center for Training, Research, and Education for  
Environmental Occupations  
Division of Continuing Education  
University of Florida  
3900 S.W. 63rd Boulevard  
Gainesville, Florida 32608-3848  
904-392-9570

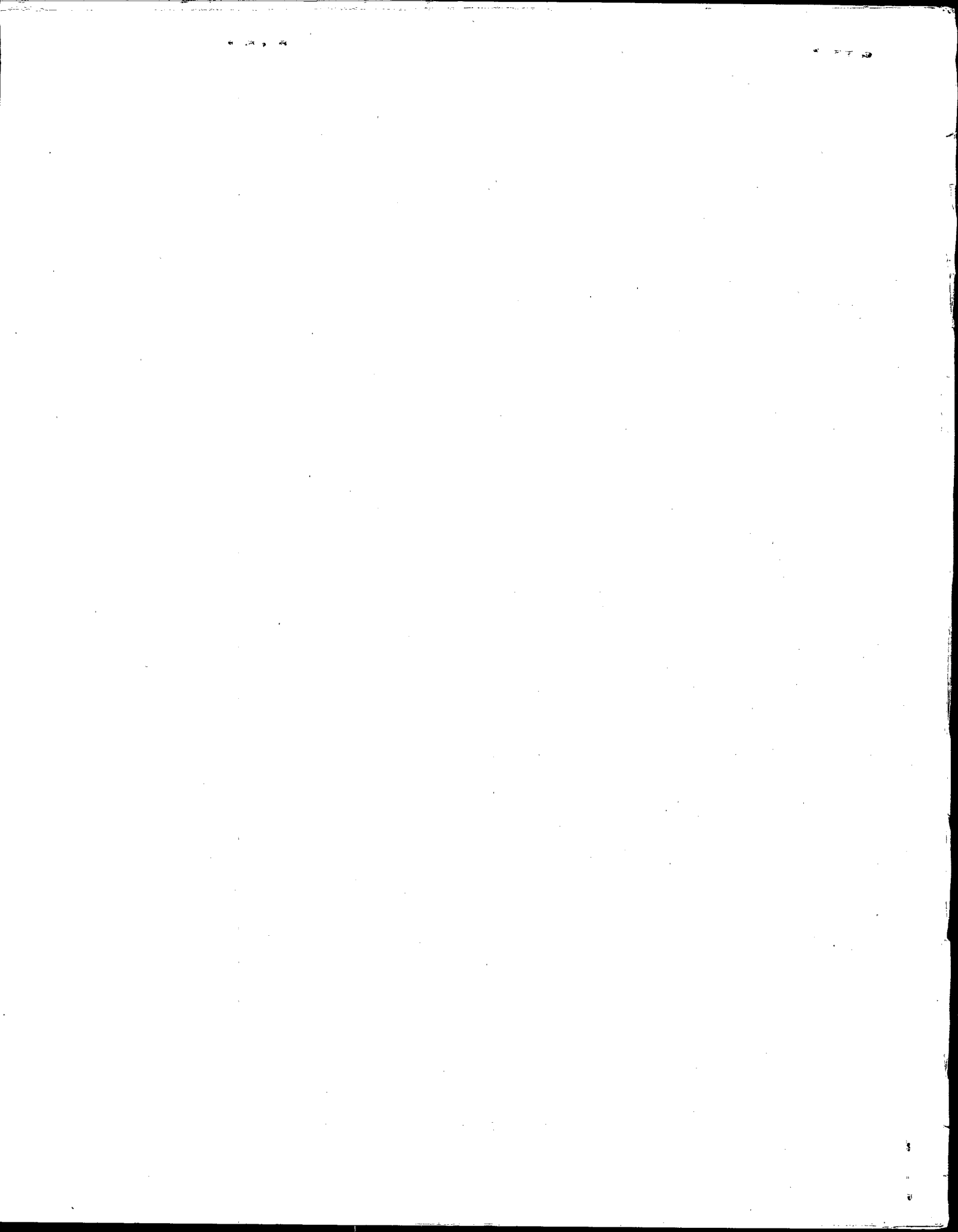
### **Florida Center for Solid & Hazardous Waste Management**

The Center coordinates the State's solid and hazardous waste research efforts, including management practices for waste reduction, reuse, recycling, and improved conventional disposal methods.

Contact: Dr. James O. Bryant, Jr.  
Florida Center for Solid and Hazardous Waste  
Management  
University of Florida  
3900 S.W. 63rd Boulevard  
Gainesville, Florida 32608-3848  
904-392-9570

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## GEORGIA

### Georgia Institute of Technology (Georgia Tech)

#### Environmental Science and Technology Laboratory

The institute provides continuing education workshops on a wide variety of waste reduction and pollution prevention topics, including hazardous waste reduction planning requirements. As part of a U.S. EPA grant with the Georgia Hazardous Waste Management Authority, the institute is offering workshops to help industry write proposals for grants implementing new waste minimization technologies. Within the Hazardous Materials Group of the Laboratory are the Hazardous Waste Technical Assistance Program (HWTAP) and the Pollution Prevention Program. These programs provide technical assistance to Georgia industry to encourage voluntary waste reduction and minimization, as well as compliance with hazardous waste regulations. Activities include onsite assistance, telephone consultations, information dissemination, multimedia information releases, short courses, and annual seminars. The Pollution Prevention Program is funded by EPA grants, while HWTAP is paid for through general funds.

Contact: Carol Foley  
Georgia Tech Research Institute  
Environmental Science and Technology  
Laboratory  
Atlanta, Georgia 30332  
404-894-3806

## ILLINOIS

### Illinois Institute of Technology

#### Industry Waste Elimination Research Center (IWERC)

The center's research priorities include recycling or reusing industrial byproducts and developing manufacturing processes that avoid generating wastes or pollutants. In conjunction with the Department of Environmental Engineering, graduate programs are offered with an option in hazardous waste management.

Contact: Dr. Kenneth E. Noll, Director  
Industrial Waste Elimination Research Center  
Pritzker Department of Environmental  
Engineering  
IIT Center  
Chicago, Illinois 60616  
312-567-3536

## **University of Illinois**

### **Hazardous Waste Research & Information Center (HWRIC)**

The center combines research, education, and technical assistance in a multidisciplinary approach to manage and reduce hazardous waste. HWRIC collects and shares information through its library/clearinghouse and a computerized Waste Reduction Advisory System (see description in Section 7, Pollution Prevention Clearinghouses and Associations).

Contact: Dr. David Thomas, Director  
Hazardous Waste Research and Information  
Center  
One East Hazelwood Drive  
Champaign, Illinois 61820  
217-333-8940

## **INDIANA**

### **Purdue University**

#### **Pollution Prevention Program**

The Pollution Prevention Program provides outreach and technical assistance efforts to industry (including onsite assessments conducted by graduate students) on pollution prevention opportunities. Purdue University and the Indiana Department of Environmental Management sponsor both general and specific workshops on pollution prevention and recycling.

Contact: Rick Bossingham, Coordinator  
Pollution Prevention Program  
Purdue University  
2129 Civil Engineering Building  
West Lafayette, Indiana 47907-1284  
317-494-5038

## **IOWA**

### **University of Northern Iowa**

#### **Iowa Waste Reduction Center**

This EPA funded center is designed to be a technology transfer center, utilizing research findings from across the globe to benefit existing and potentially new Iowa businesses and industries.

Contact: Dr. John L. Konefes  
Director, Recycling and Reuse Technology  
Transfer Center  
Iowa Waste Reduction Center  
75 BRC  
University of Northern Iowa  
Cedar Falls, Iowa 50614-0185  
319-273-2079 FAX 319-273-6494

## KANSAS

### Kansas State University

#### Hazardous Substance Research Center (HSRC)

This EPA-funded center provides research and technology transfer services for pollution prevention and other waste management techniques. HSRC programs include outreach to industry, assistance to government, videos, radio programs, written materials, data bases, and workshops on pollution prevention and hazardous waste remediation. One pollution prevention focus of this center is on soils and mining waste.

Contact: Dr. Larry E. Erickson, Director  
Hazardous Substance Research Center  
Durland Hall, Room 105  
Kansas State University  
Manhattan, Kansas 66506-5102  
913-532-5584

### University of Kansas

#### Center for Environmental Education and Training

In cooperation with the Kansas Department of Health and Environment, the center offers Hazardous Waste Regulatory Training Conferences. Conference topics include waste minimization, regulatory compliance, and technology transfer components.

Contact: Lani Heimgardner  
Center for Environmental Education and  
Training  
Division of Continuing Education  
University of Kansas  
6330 College Boulevard  
Overland Park, Kansas 66211  
913-491-0810

## KENTUCKY

### University of Louisville

#### Kentucky PARTNERS — State Waste Reduction Center

This center conducts general and industry-specific seminars and workshops on environmental regulations and pollution prevention methods. Another service is free, non-regulatory pollution prevention services for all Kentucky industries and business. In addition, Kentucky PARTNERS publishes a newsletter and performs onsite assessments.



Contact: Joyce St. Clair  
Executive Director  
Kentucky PARTNERS - State Waste Reduction  
Center  
Ernst Hall, Room 312  
University of Louisville  
Louisville, Kentucky 40292  
502-588-7260

### **Waste Minimization Assessment Center**

WMAC is managed through the University City Science Center in Philadelphia. The center conducts quantitative, on-site, waste minimization assessments for small to medium sized generators located within a 150 mile radius of Louisville. In addition, the center incorporates risk reduction and pollution prevention into the undergraduate and graduate engineering curricula. Professionals are encouraged to participate in these courses. Engineering students also conduct waste minimization projects at manufacturing plants.

Contact: Marvin Fleischman, Director  
Waste Minimization Assessment Center  
Department of Chemical Engineering  
University of Louisville  
Louisville, Kentucky 40292  
502-588-6357

## **LOUISIANA**

### **Louisiana State University (Shreveport)**

#### **Hazardous Waste Research Center (HWRC)**

Categories of research conducted by faculty and students include incineration and combustion, alternative methods of treatment and destruction, and transport of leachate and wastes from pits and spills.

Contact: David Constant, Director  
Hazardous Waste Research Center  
3418 CEBA Building  
Louisiana State University  
Baton Rouge, Louisiana 70803  
504-388-6770

### **Louisiana State University (LSU)**

#### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

LSU is a member of the GCHSRC, which is located at Lamar University in Beaumont, Texas (see the listing under Texas).

## **Southern University at Baton Rouge**

### **Center for Energy and Environmental Studies**

The center will support individual pollution prevention, treatment technology and socio-economic policy research projects.

Contact: Dr. Robert L. Ford  
Director, Center for Energy and  
Environmental Studies  
Southern University at Baton Rouge  
Cottage #8, P.O. Box 9764  
Baton Rouge, Louisiana 70813  
504-771-4723 FAX 504-771-4722

## **MAINE**

### **University of Maine (UM)**

#### **Chemicals in the Environment Information Center**

The Center provides courses, conferences, presentations and brochures emphasizing pollution prevention. Courses are *Issues in Environmental Pollution*; *Pollution Prevention--Changing Ourselves and Changing Society* (Honors students); and *Pollution Prevention through Understanding and Managing the Chemicals in Our Lives* (teachers). Conferences are for business, e.g. *Pollution Prevention in the Home, Workplace and Community*. Work is carried out in cooperation with state agencies, Cooperative Extension and Maine Waste and Toxics Use Reduction Committee.

Contact: Marquita K. Hill, PhD, Director  
University of Maine  
5737 Jenness Hall  
Orono, Maine 04469-5737  
207-581-2301

## **MASSACHUSETTS**

### **Massachusetts Institute of Technology (MIT)**

#### **Center for Technology, Policy and Industrial Development**

Along with the Center, the Technology, Business and the Environment Group conducts research and offers workshops in pollution prevention. Pollution prevention concepts are also included in some undergraduate and graduate courses.

Contact: John Ehrenfeld  
Technology, Business and the Environment  
Group  
Center for Technology, Policy and Industrial  
Development  
E40-241  
Massachusetts Institute of Technology  
Cambridge, Massachusetts 02139  
617-253-7753

## **Tufts University**

### **Tufts Environmental Literacy Institute (TELI)**

The Institute is conducting a demonstration project, Tufts CLEAN to analyze the energy and materials flow at the university. Funded by EPA's Office of Pollution Prevention, this project involves students in audit design, data collection and analysis, implementation, and evaluation.

Contact: Dr. Anthony Cortese  
Dean of Environmental Programs  
Tufts University  
Office of Environmental Programs  
474 Boston Avenue, Curtis Hall  
Medford, Massachusetts 02155  
617-627-3452

### **The Center for Environmental Management**

The purpose of this center is to develop a multidisciplinary approach to environmental problems through health effects research, technology research, policy analysis, education and training programs, and information transfer. Pollution prevention is emphasized throughout center programs.

Contact: Dr. Kurt Fischer  
Tufts University  
Center for Environmental Management  
474 Boston Avenue, Curtis Hall  
Medford, Massachusetts 02155  
617-627-3452 FAX 617-627-3084

## **University of Massachusetts • Lowell**

### **Toxics Use Reduction Institute**

The Massachusetts Toxics Use Reduction Institute promotes reduction in the use of toxic chemicals or the generation of toxic by-products in Massachusetts industry. The Institute is a multi-disciplinary research, education, training and technical support center located at the University of Massachusetts • Lowell.

Contact: Dr. Jack Luskin  
Associate Director for Education and Training  
Toxics Use Reduction Institute  
University of Massachusetts • Lowell  
Lowell, Massachusetts 01854-2881  
508-934-3275 Fax: 508-453-2332

## MICHIGAN

### Grand Valley State University

#### Waste Reduction and Management Program (WRMP)

The WRMP is a university-based pollution prevention program that conducts research and provides technical assistance to Michigan industry. "Design for Recycling: Solving Tomorrow's Problems Today," a 1-year waste reduction research and demonstration project, is funded by the Padnos Foundation and the Michigan Department of Natural Resources as part of the Quality of Life Bond Program. The overall objective of the project is to reduce the future generation of solid waste by infusing undergraduate engineering curricula with the concept of design for the entire product lifecycle. This project includes the following activities: identifying and prioritizing 10 products that have the greatest potential for design change to promote recycling; and developing a series of seminars to focus Michigan manufacturers, engineers, and engineering faculty on "cutting edge" design approaches; developing engineering curricular materials to assist faculty in developing student awareness and skill in designing products with end-stage product management in mind.

Contact: Dr. Paul Johnson, Associate Professor  
Grand Valley State University  
School of Engineering  
301 W. Fulton, Room 617  
Grand Rapids, Michigan 49504  
616-771-6750

1400 Townsend Drive  
Houghton, Michigan 49931  
906-487-2098

### Michigan Technological University

#### Center for Clean Industrial and Treatment Technologies (CCITT)

The emphasis of this center is pollution prevention through identification of alternatives, balanced assessment and targeted research and development. Ultimately, the goal is to develop and advocate methods to fully utilize raw materials and produce products which are largely recyclable and/or exhibit minimal lifetime environmental risk. This is to be accomplished by acting as a sort of "analytical bridge" between industry, government and academia to promote practical means of total quality management and environmental equity.

Contact: Dr. John C. Crittenden, Director  
Environmental Engineering Center  
Michigan Technological University  
1400 Townsend Drive  
Houghton, Michigan 49931  
906-487-3143 FAX 906-487-2061

## **University of Detroit Mercy**

### **Center of Excellence in Polymer Research and Environmental Study**

The Center is a partnership of university, industry, and government whose purpose it is to conduct high technology research that addresses environmental problems related to polymer wastes and proposes the development of new environmentally responsible and safe polymer products. The center is also committed to the transfer of pollution prevention and waste management technologies to commercial application in products and processes through their industry partners.

Contact: Dr. Daniel Klemper  
Director, Center of Excellence in Polymer  
Research and Environmental Study  
University of Detroit Mercy  
4001 W. McNichols Road  
Detroit, Michigan 48219-3599  
313-993-1270 FAX 313-993-1409

## **University of Michigan**

### **EPA Pollution Prevention Center for Curriculum Development and Dissemination**

The purpose of this center is to develop pollution prevention curriculum modules for undergraduate and graduate courses in engineering business and science (see description in Section 6, U.S. EPA's Environmental Education Activities).

Contact: Dr. Gregory A. Keoleian, Manager  
School of Natural Resources  
University of Michigan  
Dana Building  
430 E. University  
Ann Arbor, Michigan 48109-1115  
313-764-1412

### **The Great Lakes and Mid-Atlantic Hazardous Substance Research Center (GLMA-HSRC)**

A cooperative research consortium comprising the University of Michigan, Michigan State University, and Howard University, this center supports hazardous substance training, technology transfer, and research.

Contact: Dr. Walter Weber  
Director  
Hazardous Substance Research Center  
University of Michigan  
Suite 181 Engineering 1-A  
Ann Arbor, Michigan 48109-2125  
313-763-2274

## **MINNESOTA**

### **University of Minnesota**

#### **Minnesota Technical Assistance Program**

Using EPA's Toxic Release Inventory (TRI), the program provides technical transfer, workshops, and fact sheets encouraging decreased use of TRI chemicals through use of alternatives and waste minimization.

Contact: David Simmons  
Public Relations Representative  
Minnesota Technical Assistance Program  
1315 5th St., S.E., Suite 207  
University of Minnesota  
Minneapolis, Minnesota 55414-4504  
612-627-4646

## **MISSISSIPPI**

### **Mississippi State University**

#### **Mississippi Technical Assistance Program and Mississippi Solid Waste Reduction Assistance Program**

These programs work cooperatively to provide pollution prevention research, onsite waste assessments, workshops, conferences, employee and student education materials, a waste exchange, technology data bases, and a monthly newsletter.

Contact: Dr. Don Hill, Dr. Caroline Hill,  
or Dr. June Carpenter  
Mississippi Technical Assistance Program and  
Mississippi Solid Waste Reduction Assistance  
Program  
P.O. Drawer CN  
Mississippi State University, Mississippi 39762  
601-325-8454

### **Mississippi State University**

#### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

MSU is a member of the GCHSRC, which is located at Lamar University in Beaumont, Texas (see the listing under Texas).

## **NEVADA**

### **University of Nevada at Reno**

#### **Nevada Small Business Development Center**

The Nevada Small Business Development Center, in cooperation with the Nevada Division of Environmental Protection, offers free pollution

prevention services to industry and businesses, including seminars, workshops, onsite evaluations, fact sheets, and a newsletter. The center also maintains a Hazardous Waste Information Line, assisting businesses with regulations, alternative product use, and pollution prevention.

Contact: Kevin Dick, Manager  
Business Environmental Program  
Nevada Small Business Development Center  
University of Nevada - Reno  
Reno, Nevada 89557-0100  
702-784-1717

## **NEW JERSEY**

### **New Jersey Institute of Technology**

#### **Hazardous Substance Management Research Center**

Areas of research include incineration, biological/chemical treatment, physical treatment, site assessment remediation, health effects assessment, and public policy/education.

Contact: Dick Magee  
Advanced Technology Center Building  
323 Martin Luther King Boulevard  
University Heights  
Newark, New Jersey 07102  
201-596-5864

## **NEW MEXICO**

### **New Mexico State University**

#### **Waste-Management Education and Research Consortium (WERC)**

WERC is a waste management education and research consortium established by New Mexico State University (NMSU) under a U.S. Department of Energy grant in 1990. Consortium members include NMSU, the University of New Mexico, the New Mexico Institute of Mining and Technology, the Navajo Community College, the Los Alamos National Laboratories, and the Sandia National Laboratories. The mission of WERC is to expand the Nation's capability to address the issues related to management of all types of waste (hazardous, solid, and radioactive). WERC activities involve all waste management options, including pollution prevention. Some of the major programs undertaken by WERC are the following:

- Education and curricula development in waste management by the consortium universities (graduate, undergraduate, and associate degrees)

with concentrations in environmental management)

- A professional development teleconference series for industry and government
- Research programs that provide training to faculty and students.

Contact: John S. Townsend, Assistant Director  
WERC  
New Mexico State University  
Box 30001  
Department 3805  
Las Cruces, New Mexico 88003-0001  
505-646-2038

## NEW YORK

### Clarkson University

#### Hazardous Waste and Toxic Substance Research and Management Center

This center coordinates and mobilizes funding for multi-disciplinary research at Clarkson University. Projects currently being conducted include a wide range of basic research, applied engineering, and technology development topics. Many of these projects address waste minimization and pollution prevention either directly or indirectly.

Contact: Thomas L. Theis, Director  
Hazardous Waste and Toxic Substance Research  
and Management Center  
Rowley Laboratories  
Clarkson University  
Potsdam, New York 13699  
315-268-6542

### Cornell University

#### Waste Management Institute

The institute coordinates interdisciplinary research on waste reduction and management options for hazardous, agricultural, solid, industrial, and sludge wastes. Numerous fact sheets and publications are made available on topics ranging from source reduction opportunities for shoppers to waste minimization opportunity assessment for communities and businesses.

Contact: Richard Schuler, Director  
Waste Management Institute  
313 Hollister Hall  
Cornell University  
Ithaca, New York 14853  
607-255-8674



## **NORTH CAROLINA    North Carolina State University**

### **EPA Research Center for Waste Minimization and Management**

U.S. EPA is sponsoring a major university-based research center that focuses specifically on the challenge to minimize and manage hazardous substances. Located at North Carolina State University, the center involves Texas A&M University and the University of North Carolina at Chapel Hill. The mission of the center is to develop practical means for industry to eliminate the use and generation of hazardous substances, treat those wastes that cannot be eliminated, and provide secure containment for treatment residues. The major research focus at the center will be the elimination or reduction in discharge of hazardous substances to all environmental media. A strong commitment also will be made to technology transfer and training.

Contacts:    Dr. Michael Overcash  
                 Dr. Cliff Kaufman  
                 Center for Waste Minimization and  
                 Management  
                 North Carolina State University  
                 Box 7905  
                 Raleigh, North Carolina 27695-2325  
                 919-515-2325

## **University of North Carolina - Chapel Hill**

### **EPA Research Center for Waste Minimization and Management**

The University of North Carolina at Chapel Hill is a member of the U.S. EPA Research Center located at North Carolina State University in Raleigh, North Carolina (see the listing under "North Carolina State University".)

Contact:    Dr. William H. Glaze  
                 Department of Environmental Science  
                 & Engineering  
                 University of North Carolina - Chapel Hill  
                 Chapel Hill, North Carolina 27514  
                 919-966-1024

## **NORTH DAKOTA    University of North Dakota**

### **Energy and Environmental Research Center (EERC)**

The EERC features an integrated systems approach to energy and environmental research and technology development beginning with fundamental evaluation and characterization of earth resources, followed by research and development of innovative technologies to extract and utilize these resources in an efficient and environmentally acceptable manner, and

culminating in the utilization of safe disposal of wastes generated in using natural resources.

Contact: Dr. Gerald Groenwald  
Director, Energy and Environmental Research  
Center  
Center of Excellence for Toxic Metal Emissions  
University of North Dakota  
15 North 23rd Street, Box 8213  
University Station  
Grand Forks, North Dakota 58202-8213  
701-777-5131 FAX 701-777-5181

## OHIO

### University of Cincinnati

#### American Institute for Pollution Prevention (AIPP)

The AIPP is located at the University of Cincinnati (see description in Section 7, Pollution Prevention Clearinghouses and Associations).

Contact: Jean Boddoci, Director  
American Institute for Pollution Prevention  
(AIPP)  
Office of the University Dean for Research  
University of Cincinnati  
Cincinnati, Ohio 45221  
513-556-4532

### University of Findlay

#### RCRA Generator Training Program

Workshops introduce U.S. EPA's Pollution Prevention Program for personnel at industries and commercial businesses that generate hazardous waste. Training courses assist generators in developing waste minimization strategies such as source reduction with the goal of eliminating waste generation. Regulation and compliance are also discussed. Workshops consist of 2-3 day sessions.

Contact: George Kleevic  
Workshop Instructor  
RCRA Generator Training Program  
P.O. Box 538  
St. Clairsville, Ohio 43950  
614-695-5036

## OKLAHOMA

### Oklahoma State University

#### Center for Resource Conservation and Environmental Research (CRCER)

The goal of this Center is to establish and maintain a "center without walls" to provide Oklahoma, the Southwest region, and the nation with benefits of a coordinated, multi-disciplinary, multi-institutional research, analysis, and evaluation of the technical, policy and managerial issues related to

resource conservation and reduction; reduction/disposal of municipal and industrial wastes; and avoidance/correction of pollution of air, land and water. The Center will accomplish its technical studies and policy analyses primarily through the resources of Oklahoma State University, the University of Oklahoma, and the University of Tulsa.

Contact: Mr. Robert Fulton  
Vice President, Oklahoma Alliance for Public  
Policy Research  
2630 Northwest Expressway, Suite B  
Oklahoma City, Oklahoma 73112  
405-943-8989 FAX 405-840-0061

## **PENNSYLVANIA**

### **University of Pittsburgh**

#### **Center for Hazardous Materials Research (CHMR)**

The center conducts applied research, health and safety training, education, and international technology transfer projects involving hazardous and solid wastes. It also provides technical assistance, onsite assessments, and fact sheets and manuals on pollution prevention for industries in Pennsylvania.

Contact: Dr. Edgar Berkey  
Center for Hazardous Materials Research  
University of Pittsburgh Trust  
Applied Research Center  
320 William Pitt Way  
Pittsburgh, Pennsylvania 15238  
412-826-5320

## **RHODE ISLAND**

### **University of Rhode Island**

#### **Chemical Engineering Department**

Advanced students and their professors develop and evaluate pollution prevention engineering solutions for Rhode Island firms. These firms are referred by the Rhode Island Department of Environmental Management's voluntary pollution prevention technical assistance program.

Contact: Prof. Stanley M. Barnett, Chairman  
Chemical Engineering Department  
Crawford Hall  
University of Rhode Island  
Kingston, Rhode Island 02881  
(401) 792-2443

## **SOUTH CAROLINA**

### **University of South Carolina**

#### **Hazardous Waste Management Research Fund**

The fund sponsors research and educational programs in the area of hazardous waste reduction. Research priorities include technology transfer, assessment training, site remediation, recycling and reuse strategies, and

policy issues. Topics to be covered in the educational programs include vehicle/auto service shops, textiles, metal fabrication and machine shops, painting and coating, solvent use reduction, and developing a site specific waste reduction program. The fund has also established educational programs at Clemson University in Clemson, South Carolina.

Contact: Doug Dobson, Executive Director  
Institute of Public Affairs  
University of South Carolina  
Gambrell Hall, 4th Floor  
Columbia, South Carolina 29208  
803-777-8157

## **TENNESSEE**

### **University of Tennessee**

#### **Center for Industrial Services (CIS)**

The center sponsors an extensive waste reduction assessment training program that includes indepth waste reduction assessment courses. This training program was originally developed to instruct retired industrial engineers and managers, who became a highly skilled waste reduction assessment team. A key program for the center has been waste reduction assessments by full-time field engineers and retired engineers.

Contact: Cam Metcalf  
Center for Industrial Services  
University of Tennessee  
226 Capitol Boulevard Building  
Suite 606  
Nashville, Tennessee 37219  
615-242-2456

#### **Waste Minimization Assessment Center (WMAC)**

Managed by the University City Science Center in Philadelphia, WMAC is staffed by engineering students and faculty who have considerable expertise with process operations in manufacturing plants and who also have the skills needed to minimize waste generation. These staff members perform quantitative waste minimization assessments for small to medium sized generators.

Contact: Dr. Richard J. Jendrucko, Director  
Department of Engineering  
Science and Mechanics  
University of Tennessee  
310 Perkins Hall  
Knoxville, Tennessee 37996-2030  
615-974-7682

## **TEXAS**

### **Texas A & M University**

#### **EPA Research Center for Waste Minimization and Management**

Texas A & M University is a member of the U.S. EPA Research Center located at North Carolina State University in Raleigh, North Carolina (see the listing under North Carolina).

Contact: Dr. Kirk Brown  
Department of Soil and Crop Science  
Texas A & M University  
College Station, Texas 77843  
409-845-5251

#### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

Texas A & M is a member of the GCHSRC, which is located at Lamar University in Beaumont, Texas (see the listing under "Lamar University").

### **Texas Tech University**

#### **Center for Environmental Technologies**

The center coordinates conferences, short courses, and lectures that address environmental concerns, pollution prevention, pollution controls, and Federal, State, and local regulations. Conferences and short courses are offered for State and municipal audiences, professional and civic groups, and industry. The center is also conducting at least 15 different research projects involving pollution prevention in such areas as storm water discharge, ground-water monitoring, and pesticides.

Contact: Dr. John R. Bradford  
Center for Environmental Technologies  
Texas Tech University  
P.O. Box 43121  
Lubbock, Texas 79409-3121  
806-742-1413

### **Lamar University**

#### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

The GCHSRC is a research consortium of eight universities, with its center located at Lamar University. Its purpose is to conduct research to aid in more effective hazardous substance response and waste management. The center's efforts are concentrated in the areas of waste minimization and alternative technology development. The center receives funding from the U.S. EPA and the State of Texas, with a majority of those funds being pledged to pollution prevention for the petrochemical and microelectronic industries. At this time, the center has some 60 projects in progress in a joint Federal, State, and industry effort at Texas Universities, and at research

centers outside the State. The other members of the consortium are Louisiana State University, Mississippi State University, University of Alabama, University of Central Florida, University of Houston, University of Texas — Austin, and Texas A & M.

Contact: Mr. Tom Pinson, Assistant Director  
Gulf Coast Hazardous Substance Research  
Center  
Lamar University  
P.O. Box 10613  
Beaumont, Texas 77710  
409-880-8707 FAX 409-880-2397

### **University of Houston**

#### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

The University of Houston is a member of the GCHSRC, which is located at Lamar University in Beaumont, Texas (see the listing under Lamar University).

### **University of Texas — Arlington**

#### **Environmental Institute for Technology Transfer (EITT)**

EITT was established to facilitate research, technical assistance, and the dissemination of environmental knowledge to assist business and industry in finding cost-effective and environmentally acceptable solutions to compliance problems. In addition to offering training courses that address pollution prevention, the institute provides a forum for industry and regulators to address common concerns through workshops, seminars, and conferences.

Contacts: Dr. Gerald I. Nehman, Director  
Dr. Victorio Argento, Associate Director  
Environmental Institute for Technology Transfer  
University of Texas at Arlington  
Box 19050  
Arlington, Texas 76019  
817-273-2300

### **University of Texas — Austin**

#### **Gulf Coast Hazardous Substance Research Center (GCHSRC)**

The University of Texas — Austin is a member of the GCHSRC, which is located at Lamar University in Beaumont, Texas (see the listing under Lamar University).

## UTAH

### **Weber State University**

#### **Center for Environmental Service**

Environmental management training and technical assistance are available with a special emphasis on the needs of Northern Utah's small and medium- sized businesses and manufacturers as well as its cities and towns. Pollution Prevention opportunities are among the topics covered by the Center's services.

Contact: Dianne Siegfried, Director  
Barbara A. Wachocki, Director  
Center for Environmental Services  
Weber State University  
Ogden, Utah 84408-2502  
801-626-7559

## WISCONSIN

### **University of Wisconsin — Madison**

#### **Engineering Professional Development Program**

The College of Engineering offers intensive, short courses on waste minimization, environmental compliance, industrial environmental engineering, and pollution prevention from the design aspect.

Contact: Pat Eagan  
Engineering Professional Development Program  
College of Engineering  
University of Wisconsin at Madison  
432 North Lake Street  
Madison, Wisconsin 53706  
608-263-7429

#### **Solid and Hazardous Waste Education Center**

In cooperation with the Wisconsin Department of Natural Resources, the Extension Office offers workshops in solid waste reduction, recycling, composting, as well as general and industry-specific (electroplating and metal finishing, auto repair, local government, and schools) workshops on waste minimization and pollution prevention. The center also works directly with industry and government to provide technical assistance.

Contacts: David Liebel  
Wayne Pferdehirt  
Solid and Hazardous Waste Education Center  
University of Wisconsin - Extension  
529 Lowell Hall  
610 Langdon Street  
Madison, Wisconsin 53703  
608-265-2360





# 5

## **Section 5** **U.S. EPA Pollution Prevention Programs and Resources**

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*This section contains information about EPA pollution prevention assistance programs and other sources of information.*

### **Grant Programs:**

- Agriculture in Concert with the Environment (ACE) Program
- U.S. EPA's National Industrial Competitiveness through Efficiency: Energy, Environment and Economics (NICE<sup>3</sup>) Program
- U.S. EPA's Pollution Prevention Incentives for States (PPIS)

### **Other Programs:**

- U.S. EPA's 33/50 Program
- U.S. EPA's Design for the Environment (DfE) Program
- U.S. EPA's Office of Environmental Education
- U.S. EPA's Green Lights Program
- U.S. EPA Headquarters/Laboratory Contacts/Program Summaries
- U.S. EPA's Office of Air Small Business Assistance Program

### **Additional Resources:**

- U.S. EPA Libraries
- U.S. EPA Regional Office Pollution Prevention and 33/50 Program Contacts

# AGRICULTURE IN CONCERT WITH THE ENVIRONMENT (ACE)

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*The U.S. EPA and the Department of Agriculture (USDA) have joined together to undertake a grant program called Agriculture in Concert with the Environment (ACE). The primary purpose of the grant program is to promote the adoption of sustainable agriculture practices and reduce the use of highly toxic herbicides and other pesticides. Establishing a harmonious relationship between agriculture and the environment offers the opportunity for multiple gains on all sides - for farm owners, farm workers, consumers, and communities as a whole.*

## How does ACE Work?

ACE grants are distributed from a joint pool by EPA's Office of Pollution Prevention and the USDA Cooperative State Research Service (CSRS). Host institutions in four regions of the country (northeast, south, north central, and west) manage the evaluation, project selection, and distribution of funds for their regions.

## Management

ACE is jointly administered by USDA and EPA with the Sustainable Agriculture Research and Education Program (SAREP). Evaluation panels in each of the four regions include representatives from government, academic and other research institutions, the farming industry, the environmental community, and other private or public organizations.

*For general information on the ACE program, contact:*

Harry Wells  
Office of Pollution Prevention (7409)  
U.S.EPA  
401 M. Street, SW  
Washington, D.C. 20460  
202-260-4472

G.W. Bird  
Director, USDA Sustainable Agriculture  
Research and Education Program  
342 Aerospace Building  
14th and Independence Avenues  
Washington, D.C. 20250

Patrick Madden, PhD.  
Associate Director, USDA Sustainable Agriculture  
Research and Education Program  
P.O. Box 10338  
Glendale, California 91209

# U.S. EPA's National Industrial Competitiveness Through Efficiency: Energy, Environment and Economics (NICE<sup>3</sup>)

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## Who is Eligible?

Eligible industries are in SIC codes 26 (paper), 28 (chemicals), 29 (petroleum and coal products), and 33 (primary metal industries).

for more information contact:

David Bassett  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency  
401 M. Street, SW (7409)  
Washington, D.C. 20460  
202-260-2720

*A joint project of the Department of Energy (DOE) and EPA's Office of Pollution Prevention and Toxics (OPPT), the NICE<sup>3</sup> grant program strives to improve energy efficiency, advance industrial competitiveness, and reduce environmental emissions of industry. Large-scale research and demonstration projects are targeted at industries with the highest energy consumption and greatest levels of toxics and chemicals released.*

## How NICE<sup>3</sup> Works

Projects are expected to use the one-time grant funds as seed money to overcome start-up risks. It is expected that industry will finance continuation of projects past the initial grant funding period. As part of the grant-funded phase, awardees will design, test, demonstrate, and assess the feasibility of new processes and/or equipment which can significantly reduce generation of high-risk pollution.

## Management

DOE Regional Support Offices and EPA Regional Offices will work through state energy and environment offices to actively seek out interested state developmental, energy, and industry organizations.

# U.S. EPA's Pollution Prevention Incentives for States (PPIS)

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*The centerpiece of EPA's pollution prevention grant activities for the last four years is the ongoing Pollution Prevention Incentives for States (PPIS). PPIS is intended to build and support state pollution prevention capabilities and to test, at the state level, innovative pollution prevention approaches and methodologies.*

## What types of activities are included?

- Institutionalizing multimedia pollution prevention as an environmental management priority, establishing prevention goals, developing strategies to meet those goals, and integrating the pollution prevention ethic into state or regional institutions.
- Other multimedia pollution prevention activities, such as providing direct technical assistance to businesses; collecting and analyzing data; conducting outreach activities; developing measures to determine progress in pollution prevention; and identifying regulatory and non-regulatory barriers and incentives to pollution prevention.
- Initiating demonstration projects that test and support innovative pollution prevention approaches and methodologies.

## Who is eligible?

Eligible applicants are states and federally-recognized Indian tribes. Awards are made through EPA regional offices. Organizations selected for an award must support half of the total cost of the project in order to receive the 50% match required

by the Pollution Prevention Act. For example, for a total project costing \$100,000, EPA would fund \$50,000 with the receiving organization supporting \$50,000.

## National Eligibility Criteria

- Must be pollution prevention as defined by the Act.
- Multimedia opportunities and impacts should be identified
- Areas for significant risk reduction should be targeted
- Other pollution prevention efforts in the state should be leveraged and integrated into the project
- Measures of success are identified
- A plan for dissemination of project results should be identified

Along with the National Eligibility Criteria, regional pollution prevention offices may develop their own region specific guidances. **Interested applicants should contact their regional pollution prevention coordinator (see the end of this section) for more information.**

## Headquarters contact:

Lena Hann  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency  
401 M. Street, SW (TS-779)  
Washington, D.C. 20460  
202-260-2237

# U.S. EPA's 33/50 Program

*Announced early in 1991, EPA's 33/50 Program is a voluntary pollution prevention initiative seeking to achieve real reductions in pollution in a relatively short period of time.*

*Under this program, EPA has identified 17 high priority toxic chemicals. EPA's Administrator has set a goal of reducing the total amount of these chemicals released into the environment and transferred offsite by 33 percent at the end of 1992 and by 50 percent at the end of 1995.*

*EPA is seeking reductions primarily through pollution prevention practices going beyond regulatory requirements. EPA also will be encouraging industry to develop a preventive approach seeking continuous environmental improvement even beyond these reductions and these chemicals.*

## Expected Results

Success in the program will be measured by nationwide reductions, rather than results at each company or facility. This approach provides flexibility and allows participating companies to develop reduction strategies that are the most cost-effective for their facilities.

In numeric terms, the goal is to reduce the amount of releases and off-site transfers from the 1.4 billion pounds reported in 1988 to 700 million pounds by 1995. EPA's Toxic Release Inventory (TRI) will be used to track these reductions using 1988 data as a baseline.

As of mid-November 1992, there are more than 1000 companies participating in the Program.

## Selection of Chemicals

Each of the 17 chemicals was selected from TRI based on a number of factors, including high pro-

duction volume, high releases and offsite transfers of the chemical relative to total production, opportunities for pollution prevention, and potential for causing detrimental health and environmental effects.

## Implementation

EPA is contacting companies to provide them with information on the 33/50 Program and to solicit their participation. Companies are being asked to identify and implement cost-effective pollution prevention practices related to the 17 chemicals and to develop written commitments stating their reduction goals and how they plan to achieve them. Access to these written commitment statements is available at a public docket at EPA Headquarters.

## Relationship to Other Programs

The 33/50 Program is part of EPA's overall Pollution Prevention Strategy and the first of the Agency's new pollution prevention initiatives. It is also a major component of the Office of Pollution Prevention and Toxics' Existing Chemicals Revitalization Program.

All of the 33/50 Program chemicals are regulated under one or more existing environmental statutes, and the 33/50 Program is intended to complement, not replace, ongoing EPA programs. All 17 targeted chemicals will be subject to the Maximum Achievable Control Technology (MACT) standards of the new Clean Air Act (CAA). EPA believes that the incentive for early reductions offered by the MACT provisions will further the progress of the 33/50 Program.

## For More Information

For copies of a brochure on the 33/50 Program or other information, fax your request to the TSCA Assistance Service at 202-554-5603. Or call the TSCA Hotline at 202-554-1404 from 8:30 a.m. to 4:00 p.m. EST. Also, computer users may access the 33/50 mini-exchange in PIES (see Section 7 on PIES).

## ■ Bibliographic Reports on Pollution Prevention Options for 33/50 Program Companies

To assist companies in participating in the 33/50 Program, EPA is developing a series of bibliographic reports for many of the industries that are major releasers of the 17 targeted chemicals. Each report will:

- Summarize the types of processes within the industrial category primarily responsible for release of the chemicals of concern
- Describe general pollution prevention and recycling alternatives applicable to the industrial processes
- Provide a bibliography of documents that may provide detailed technical information on pollution prevention and recycling options for the industrial processes.

The reports also will provide education to the general public, EPA staff, and State and local government employees on pollution prevention options that may be available for various industrial processes.

Three reports are currently available:

- **Wood Manufacturing** — Covering industrial processes in Standard Industrial Classification code 25
- **Metal Fabrication** — Covering industrial processes in Standard Industrial Classification codes 34 through 38
- **Opportunities for Pollution Prevention Research to Support the 33/50 Program**  
EPA/600/R-92/175

### The 17 Target Chemicals

- |                                   |   |
|-----------------------------------|---|
| ■ Benzene                         | ■ Methyl Isobutyl Ketone                    |
| ■ Cadmium and Cadmium Compounds   | ■ Methylene Chloride (Dichloromethane)      |
| ■ Carbon Tetrachloride            | ■ Nickel and Nickel Compounds               |
| ■ Chloroform (Trichloromethane)   | ■ Tetrachloroethylene (Perchloroethylene)   |
| ■ Chromium and Chromium Compounds | ■ Toulene                                   |
| ■ Cyanide and Cyanide Compounds   | ■ 1,1,1-Trichloroethane (Methyl Chloroform) |
| ■ Lead and Lead Compounds         | ■ Trichloroethylene                         |
| ■ Mercury and Mercury Compounds   | ■ Xylene (all xylenes)                      |
| ■ Methyl Ethyl Ketone             |   |

# Design for the Environment (DfE)

*Established in October 1992, EPA's Design for the Environment Program (DfE) is a voluntary cooperative program which promotes the incorporation of environmental considerations, and especially risk reduction, at the earliest stages of product design.*

As part of the Office of Pollution Prevention and Toxics (OPPT), the DfE Program has initiated a number of wide-ranging projects which operate through two levels of involvement. Industry Cooperative projects work with specific industry segments to apply substitute assessment methodology, share regulatory and comparative risk information, and invoke behavioral change. Infrastructure projects are aimed at changing aspects of the general business environment which affect all industries in order to remove barriers to behavior change and provide models which encourage businesses to adopt green design strategies.

## Industry Cooperative Projects

EPA's DfE Program is working closely with trade associations and individuals in three specific industry segments. These cooperative projects will develop Substitute Assessments, which compare risk and environmental trade-offs associated with alternative chemicals, processes, and technologies and which will provide models for other businesses to follow when including environmental objectives in their designs.

## DfE Dry Cleaning Project

Two major dry cleaning associations which represent thousands of American dry cleaners have joined EPA in evaluating an alternative cleaning process and new advances in microwave dryers. This information will be part of the Substitute Assessment for Dry Cleaning.

## DfE Printing Project

Over 700 printers and the major printing trade associations are assisting the development of four Substitute Assessments - one for each major printing process. Work on a draft Substitute Assessments for Screen Reclamation and for Blanket Washes in Lithography are underway.

## DfE Computer Workstation Project

EPA is participating with several major computer electronics companies in an industry initiative to design a more environmentally friendly computer workstation. The project is using the Cleaner Technology Risk Scoring System and EPA information on regulatory costs to inform the design process.

## Infrastructure Projects

### Chemical Design Project

The DfE Program has awarded 6 grants to universities which fund research into alternate synthesis of important industrial chemical pathways. Results of the research will provide the chemical industry with tools for production which reduce risk and prevent pollution. The grants are providing a model for further National Science Foundation grants.

for more information contact:

Pollution Prevention Information Clearinghouse  
U.S. Environmental Protection Agency  
401 M. Street, SW (PM-211A)  
Washington, D.C. 20460  
202-260-1023

# U.S. EPA's Environmental Education Activities

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## *U.S. EPA's Office of Environmental Education*

The Agency has established an Office of Environmental Education as authorized by the recently enacted National Environmental Education Act of 1990. The office's mandate is to foster an enhanced environmental ethic in society by improving the environmental literacy of our youth and increasing the public's awareness of environmental problems. The Office will provide national leadership in these areas, and will build upon the ongoing work of public, nonprofit, and private sector groups already pursuing these goals. Agency environmental education programs will emphasize four specific themes: wise use of natural resources, prevention of environmental problems, the importance of environmentally sensitive personal behavior, and the need for additional action at the community level to address environmental problems.

The Office's focus will be primarily on the K-12 levels, and the program will be multimedia in its approach.

Office of Environmental Education  
U.S. EPA  
401 M St., SW (A-107)  
Washington, D.C. 20460  
202-260-4484

## *EPA Pollution Prevention Center for Curriculum Development and Dissemination*

In 1991 the University of Michigan was awarded funding for a national pollution prevention education center. This center will develop pollution prevention curriculum modules for undergraduate and graduate engineering, business, and natural resources classes, and for broad distribution to other universities nationwide.

The center conducts outreach efforts through short summer courses, offers pollution prevention internships for students at business and industrial facilities, and provides information and education for university faculty through departmental and interdepartmental seminars. The university has committed to support the center for 3 years with substantial supplemental funding. The award of this project, worth more than \$300,000, grows out of an EPA "2% Set-Aside" project initiated by EPA's Office of Toxic Substances.

Dr. Gregory A. Keoleian  
School of Natural Resources  
University of Michigan  
Dana Building  
430 E. University  
Ann Arbor, Michigan 48109-1115  
313-764-1412



***National Pollution  
Prevention  
Environmental  
Education Project***

The U.S. EPA, working in partnership with State and local governments, industry, educational institutions, textbook publishers, and other entities, is embarking on a project that would ultimately produce pollution prevention education materials for students and teachers. This project will contribute to the establishment of an environmental ethic and work toward improved environmental quality. The materials to be produced will concentrate on kindergarten through grade 12, or a specific segment of this broad group, and will emphasize that preventing pollution at the source is preferable to managing pollutants after they are produced.

A short-term goal is to provide our country's youth with an appreciation and an understanding of the potential benefits of pollution prevention, including conservation and recycling. The ultimate goal of the project is to instill in our future leaders an ethic for more integrated environmental decisionmaking, pollution prevention, and protection of human health and the environment.

This program is directed by an Agency-wide group, the National Pollution Prevention Environmental Education Task Force. This task force comprises membership from all EPA Regions, the Office of the Administrator, and the Office of Pollution Prevention.

The actual form of the materials to be produced will be determined with the assistance of an Advisory Board to the task force. The task force will also encourage the private production of complementing pollution prevention education materials, e.g., videos, films, computer software, teaching aids, textbooks, etc. Special emphasis and consideration will be given to the environmental education needs of urban and rural youths.

The National Pollution Prevention Environmental Education Task Force is co-chaired by:

Douglas Cooper  
Office of Federal Activities  
U.S. EPA  
401 M St. SW  
Washington, D.C. 20460  
202-260-5052

and

Rowena Michaels  
Director of Public Affairs  
U.S. EPA Region VII  
726 Minnesota Avenue  
Kansas City, Kansas 66101  
913-236-2803

***Educational  
Curriculum  
Information in  
the PPIC***

**Bibliographic Data Base of Educational Curriculum Material**

As the first project of the National Pollution Prevention Environmental Education Project, the Office of Pollution Prevention and Toxics has developed an annotated bibliographic data base of educational curriculum material. This purpose of this project is to identify the gaps in pollution prevention education materials and to avoid duplicative efforts. This bibliography contains approximately 2,500 references to pollution prevention, including recycling, resource recovery, source reduction, energy and water conservation, and composting. The data base is accessible to the public on the PIES and includes, as available, the following information: date of publication, a brief abstract, cost, and information on how to obtain the publication.

# U.S. EPA's Green Lights Program

*The U.S. EPA's Green Lights Program was officially launched on January 16, 1991. The program's goal is to prevent pollution by encouraging major U.S. institutions - businesses, governments, and other organizations - to use energy-efficient lighting. Because lighting consumes electricity (about 25 percent of the national total) and more than half the electricity used for lighting is wasted, the Green Lights program offers a substantial opportunity to prevent pollution, and to do so at a profit. Lighting upgrades reduce electric bills and maintenance costs and increase lighting quality; typically, investments in energy-efficient lighting yield 20 to 30 percent rates of return per year.*

## How Green Lights Works

U.S. EPA promotes energy-efficient lighting by asking major institutions to sign a Memorandum of Understanding (MOU) with the Agency; in this MOU, the signatory commits to install energy-efficient lighting in 90 percent of their space nationwide over a 5-year period, but only where it is profitable and where lighting quality is maintained or improved. The U.S. EPA, in turn, offers program participants a portfolio of technical support services to assist them in upgrading their buildings.

## The Green Lights Support Program

U.S. EPA commits to help Green Lights participants with technical support projects that benefit Green Lights Partners, help strengthen the infrastructure of the energy-efficient lighting industry, and lower the barriers to energy-efficient lighting.

A computerized decision supports system developed by U.S. EPA provides Green Lights corporations and governments a rapid way to survey

the lighting systems in their facilities, assess their retrofit options, and select the best energy-efficient lighting upgrades. The decision support system software produces reports suitable for use by facility managers, financial staff, and senior management.

The U.S. EPA has established a national lighting product information program in conjunction with utilities and other organizations. This program provides brand name information so that purchasers will be able to choose products with confidence. In addition, it will allow innovative products to be qualified rapidly, removing a significant barrier for new technologies.

As part of the support program, U.S. EPA helps Partners identify financing resources for energy-efficient lighting. Green Lights Partners receive a computerized directory of financing and incentive programs offered by electric utilities, lighting management companies, banks, and financing companies. The database is updated and distributed on a regular basis.

The U.S. EPA has also developed Green Lights Ally programs for lighting manufacturers, service providers, and utilities to promote the environmental, economic, and quality benefits of energy-efficient lighting. Allies commit to undertake the same level of retrofits as Green Lights Partners, but also will assist in developing the technical support programs.

for more information contact:

**Green Lights**  
**U.S. Environmental Protection Agency**  
**401 M. Street, SW (6202 J)**  
**Washington, D.C. 20460**  
**202-775-6650 FAX 202-775-6680**

# U.S. EPA Headquarters/ Laboratory Pollution Prevention Contacts

*The U.S. EPA offices identified below are involved in various pollution prevention issues. A brief description of each office's pollution prevention program is provided. For further information regarding particular programs or functions, contact the appropriate office.*

## EPA OFFICES

**Pollution Prevention Division  
Office of Pollution Prevention and Toxics  
U.S. EPA  
401 M Street, S.W. (7409)  
Washington, D.C. 20460  
202-260-3557**

This office was established in 1988 to help integrate a multimedia pollution prevention ethic both inside and outside EPA. Its primary role is to support pollution prevention efforts by EPA's program offices, EPA Regions, state and local governments, industry, and the public.

**33/50 Program Management Staff  
Office of Pollution Prevention and Toxics  
U.S. EPA  
401 M Street, S.W. (TS-799)  
Washington, D.C. 20460  
202-260-6907**

This program is EPA's voluntary pollution prevention initiative to reduce national pollution releases and offsite transfers of 17 toxic chemicals by 33 percent by the end of 1992 and by 50 percent by the end of 1995. Since the program's beginning in February 1991, more than 1,000 companies have participated in the program. EPA is using the Toxic Release Inventory (TRI) data for 1988 as a baseline.

**Office of Environmental Engineering and  
Technology Demonstration  
U.S. EPA  
401 M Street, S.W. (PM-681)  
Washington, D.C. 20460  
202-260-5747**

This office has prime responsibility for EPA's pollution prevention research. In 1987, ORD initiated the Waste Minimization Research program that primarily addressed ways to minimize hazardous wastes. In 1989, ORD began to build a multi-media research program. The plan for expanding this program, described in the *Pollution Prevention Research Plan: Report to Congress*, focused on six functional areas of pollution prevention research: 1) product research; 2) process research; 3) recycling/reuse research; 4) social science research; 5) anticipatory research; and 6) technology transfer.

Over the past four years (FY 88-92) pollution prevention research has grown in all six functional areas and has expanded to air, water, pesticides, and toxic substances. Applied research to reduce hazardous/industrial wastes has continued to be a priority, and has focused primarily on "process" research related to different industry sectors.

**Risk Reduction Engineering Laboratory  
Office of Research and Development  
U.S. EPA  
26 West Martin Luther King Drive  
Cincinnati, Ohio 45268  
513-569-7418**

EPA's Pollution Prevention Research Branch encourages the development and adoption of processing technologies and products in the U.S. that will reduce the generation of pollutants. The lab is involved in studies, research, and demonstration projects, including the Innovative Clean Technologies Project, the Clean Products Program, the Assessments Program, Waste Reduction Evaluation at Federal Sites (WREAFS), and support for the 33/50 Program.

**Waste Minimization Branch  
Office of Solid Waste  
U.S. EPA  
401 M Street, S.W. (OS-320W)  
Washington, D.C. 20460  
703-308-8402**

This Branch has recently completed a multiyear action plan for waste minimization; the purpose of this plan is to incorporate waste minimization throughout the RCRA program. The RCRA program will then be integrated into EPA's pollution prevention program under the Office of Toxic Substances.

**Air and Energy Engineering Research  
Laboratory  
Office of Research and Development  
Research Triangle Park, North Carolina 27711  
919-541-2821**

The mission of the Air and Energy Engineering Research Laboratory (AEERL) is to research, develop and demonstrate methods and technologies for controlling air pollution from stationary sources.

AEERL creates and improves air pollution control equipment, seeks means of preventing or reducing pollution through changes in industrial processes, develops predictive models and emissions estimation methodologies, identifies and assesses the importance of air pollution sources, and conducts fundamental research to define the mechanisms by which processes, equipment, and fuel combustion produce air pollution. AEERL has eight main research areas: acid rain; air toxics; hazardous waste; indoor air/radon; municipal waste combustion; ozone non-attainment; stratospheric ozone; and global climate change. Under stratospheric ozone, AEERL is evaluating alternatives to ozone depleting substances in the refrigeration and fire extinguishing industries.

# U.S. EPA OFFICE OF AIR/SMALL BUSINESS ASSISTANCE PROGRAM

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*The Clean Air Act Amendments of 1990 place new Federal controls on small sources of air pollution that ultimately may affect hundreds of thousands of small American businesses. Section 507 of the Act is especially important to small businesses. This section requires all state governments and the Environmental Protection Agency to establish a Small Business Technical and Environmental Compliance Assistance Program to help small businesses contend with several new air pollution responsibilities.*

## State Programs

While each state has been granted the flexibility to tailor its program to meet the needs of industries within their state, there are three mandatory components;

- a state ombudsman
- a small business assistance program
- a state compliance advisory panel

As programs may vary state to state, individuals should contact their local program for specific details. (see state contact list at the end of this section)

## EPA Programs

The EPA must establish a Federal Small Business Assistance Program which will provide state programs with several forms of guidance and assistance. EPA

will also operate several technical service centers and telephone hotlines (listed below) providing support to state and local air pollution control agencies as they develop and carry out the small business

assistance programs. *Small businesses may also* contact any of these centers for specific information and technical assistance.

## **EPA Technical Support Centers and Hotlines for Air/Small Business Information**

### **SERVICE CENTER - HOTLINE**

The Office of Asbestos and Small Business  
Ombudsman Hotline  
800-368-5888

EPA Control Technology Center  
919-541-0800

Emission Measurement Technical Information  
Center  
919-541-1060

Emergency Planning and Community Right-to-  
Know Information Hotline  
800-535-0202

Indoor Air Quality Information Clearinghouse  
800-438-4318

Stratospheric Ozone Information Hotline  
800-296-1996

Technology Transfer Network (Clean Air Act  
Bulletin Board)  
919-541-5742

### **SUBJECTS AND SERVICES**

Small business pollution prevention grants  
General assistance to small business

General assistance and information on the Clean Air  
Act and its requirements  
Federal air pollution standards  
Air pollution control technologies

Air emissions testing methods  
Emission monitoring guidance  
Federal testing and monitoring requirements

Accidental chemical release prevention  
Hazardous chemical emergency planning  
Toxic Release Inventory assistance

Information on indoor air pollutants, sources, health  
affects, testing, measuring and control  
Constructing buildings to minimize indoor air pollution

General information on stratospheric ozone depletion  
and its protection  
Consultation on ozone protection regulations and  
requirements under the 1990 amendments

Recent EPA rules, EPA guidance documents and  
updates of EPA activities

## STATE AND TERRITORIAL AIR POLLUTION CONTROL AGENCIES

Alabama Department of Environmental Management  
Air Division  
1751 Congressman Dickenson Drive  
Montgomery, Alabama 36130  
205-271-7861

American Samoa  
Environmental Quality Commission  
Governor's Office  
Pago Pago, American Samoa 96799  
011-684-633-4116

Arkansas Department of Pollution Control and Ecology  
Air Division  
8001 National Drive, P.O. Box 9583  
Little Rock, Arkansas 72209  
501-562-7444

Colorado Department of Health  
Air Pollution Control Division  
4210 E. 11th Avenue  
Denver, Colorado 80220  
303-331-8500

Department of Natural Resources and Environmental  
Control  
Division of Air and Waste Management  
89 Kings Highway, P.O. Box 1401  
Dover, Delaware 19903  
302-739-4791

Florida Department of Environmental Regulation  
Air Resources Management  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400  
904-488-1344

Guam Environmental Protection Agency  
Complex Unit D-107  
130 Rojas Street  
Harmon, Guam 96911  
011-671-646-8863

Alaska Department of Environmental Conservation  
Air Quality Management Section  
P.O. Box 0  
Juneau, Alaska 99811-1800  
907-465-5100

Arizona Department of Environmental Quality  
Office of Air Quality  
P.O. Box 600  
Phoenix, Arizona 85001-0600  
602-257-2308

Secretary of Environmental Affairs  
California Air Resources Board  
P.O. Box 2815  
Sacramento, California 95812  
916-445-4383

Connecticut Department of Environmental Protection  
Bureau of Air Management  
165 Capitol Avenue  
Hartford, Connecticut 06106  
203-566-2506

District of Columbia Department of Consumer and  
Regional Affairs  
Air Quality Control and Monitoring Branch  
2100 Martin Luther King Avenue, SE  
Washington, D.C. 20020  
202-404-1120

Georgia Department of Natural Resources  
Air Resources Branch  
205 Butler Street, SE  
Atlanta, Georgia 30344  
404-656-6900

Hawaii State Department of Health  
Laboratories Division Air Surveillance-Analysis Branch  
1270 Queen Emma Street, Suite 900  
Honolulu, Hawaii 96813  
808-586-4019



Idaho Division of Environmental Quality  
Air Quality Bureau  
1410 North Hilton  
Boise, Idaho 83706  
208-334-5898

Indiana Department of Environmental Management  
Office of Air Management  
105 S. Meridan Street, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
317-232-8384

Kansas Department of Health and Environment  
Bureau of Air and Waste Management  
Forbes Field, Building 740  
Topeka, Kansas 66620  
913-296-1593

Louisiana Department of Environmental Quality  
Office of Air Quality and Radiation Protection  
Air Quality Division, P.O. Box 82135  
Baton Rouge, Louisiana 70884-2135  
504-765-0110

Maryland Department of the Environment  
Air Management Administration  
2500 Broening Highway  
Baltimore, Maryland 21224  
301-631-3255

Michigan Department of Natural Resources  
Air Quality Division  
P.O. Box 30028  
Lansing, Michigan 48909  
517-373-7023

Mississippi Department of Environmental Quality  
Air Division, Office of Pollution Control  
P.O. Box 10385  
Jackson, Mississippi 39289  
601-961-5171

Montana Department of Health and Environmental  
Science  
Air Quality Bureau  
Cogswell Building, Room A116  
Helena, Montana 59620  
406-444-3454

Nevada Division of Environmental Protection  
Bureau of Air Quality  
123 West Nye Lane  
Carson City, Nevada 89710  
702-687-5065

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
2200 Churchill Road, P.O. Box 19276  
Springfield, Illinois 62794-9276  
217-782-7326

Iowa Department of Natural Resources  
Air Quality Section  
Henry A. Wallace Building, 900 E. Grand Street  
Des Moines, Iowa 50319  
515-281-8852

Kentucky Department for Environmental Protection  
Division for Air Quality  
316 Saint Clair Mall  
Frankfort, Kentucky 40601  
502-564-3382

Maine Department of Environmental Protection  
Bureau of Air Quality Control  
State House, Station 17  
Augusta, Maine 04333  
207-289-2437

Massachusetts Department of Environmental Protection  
Division of Air Quality Control  
One Winter Street, 8th Floor  
Boston, Massachusetts 02108  
617-292-5593

Minnesota Pollution Control Agency  
Air Quality Division  
520 Lafayette Road  
Saint Paul, Minnesota 55155  
612-296-7331

Missouri Department of Natural Resources  
Division of Environmental Quality, Air Pollution Control  
P.O. Box 176  
Jefferson City, Missouri 65102  
314-751-4817

Nebraska Department of Environmental Control  
Air Quality Division  
P.O. Box 98922  
Lincoln, Nebraska 68509-8922  
402-471-2189

New Hampshire Air Resources Division  
Air Resources Division  
64 N. Main Street, Box 2033  
Concord, New Hampshire 03301  
603-271-1370

New Jersey Department of Environmental Protection  
Division of Environmental Quality, Air Program  
401 East State Street  
Trenton, New Jersey 08625  
609-292-6710

New York Department of Environmental Conservation  
Division of Air Resources  
50 Wolf Road  
Albany, New York 12223-3250  
518-457-7230

North Dakota State Department of Health  
Division of Environmental Engineering  
1200 Missouri Avenue  
Bismark, North Dakota 58502-5520  
701-221-5188

Oklahoma State Department of Health  
Air Quality Service  
1000 Northeast 10th Street, P.O. Box 53551  
Oklahoma City, Oklahoma 73152  
405-271-5220

Pennsylvania Department of Environmental Resources  
Bureau of Air Quality Control  
101 South Second Street, P.O. Box 2357  
Harrisburg, Pennsylvania 17105-2357  
717-787-9702

Rhode Island Department of Environmental  
Management  
Division of Air and Hazardous Materials  
291 Promenade Street  
Providence, Rhode Island 02908-5767  
401-277-2808

South Dakota Department of Environment and Natural  
Resources, Point Source Program  
523 East Capitol Avenue  
Pierre, South Dakota 57501  
605-773-3153

State of Texas  
Texas Air Control Board  
12124 Park 35 Circle  
Austin, Texas 78753  
512-908-1000

Vermont Agency of Natural Resources  
Air Pollution Control Division  
103 S. Main Street, Building 3 South  
Waterbury, Vermont 05676  
802-244-8731

New Mexico Environmental Department  
Air Quality Division, Environmental Protection Division  
P.O. Box 26110  
Santa Fe, New Mexico 87502  
505-827-0070

North Carolina Department of Environment, Health  
and Natural Resources, Air Quality Section  
P.O. Box 27687  
Raleigh, North Carolina 27611-7687  
919-733-3340

Ohio Environmental Protection Agency  
Division of Air Pollution Control  
1800 WaterMark Drive  
Columbus, Ohio 43266-0149  
614-644-2270

Oregon Department of Environmental Quality  
Air Quality Control Division  
811 SW 6th Avenue, 11th Floor  
Portland, Oregon 97204  
503-229-5287

Puerto Rico Environmental Quality Board  
Edificio Banco National Plaza  
431 Avenue Ponce DeLeon  
Hato Rey, Puerto Rico 00917  
809-767-8071

South Carolina Department of Health and  
Environmental Control  
Bureau of Air Quality Control  
2600 Bull Street  
Columbia, South Carolina 29201  
803-734-4750

Tennessee Department of Environmental Conservation  
Division of Air Pollution Control  
701 Broadway  
Nashville, Tennessee 37243-1531  
615-741-3931

Utah Department of Environmental Quality  
Division of Air Quality  
1950 West North Temple  
Salt Lake City, Utah 84114-4820  
801-536-4000

Virgin Islands Department Planning/Natural Resources  
Division of Environmental Protection  
Watergut Homes 1118 Christiansted  
St. Croix, Virgin Islands 00820-5065  
809-773-0565

State of Virginia  
Department of Air Pollution Control  
P.O. Box 10089  
Richmond, Virginia 23240  
804-786-2378

State of West Virginia  
Air Pollution Control Commission  
1558 Washington Street East  
Charleston, West Virginia 25311  
304-348-2275

Wyoming Department of Environmental Quality  
Air Quality Division  
122 West 25th Street  
Cheyenne, Wyoming 82002  
307-777-7391

Washington State  
Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504-7600  
206-459-6632

Wisconsin Department of Natural Resources  
Bureau of Air Management  
Box 7921  
Madison, Wisconsin 53707  
608-266-7718

# U.S. EPA Libraries

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*EPA libraries are excellent sources of pollution prevention information. In particular, the EPA Headquarters and Region IX Libraries have extensive collections dedicated to this topic.*

## EPA Headquarters Library

Lois Ramponi, Librarian\*  
Pollution Prevention Information Clearinghouse  
Craig Lelansky, Pollution Prevention Librarian\*  
Anne Freckmann, Information Specialist\*  
Headquarters Library  
U.S. EPA  
401 M Street, S.W. (PM 211A)  
Washington, D.C. 20460  
202-260-5921  
202-260-1963 (PPIC)

## EPA Laboratory Library

Stephena Harmony, Librarian\*  
Andrew W. Briedenbach Environmental Research  
Center Library  
Risk Reduction Environmental Laboratory  
U.S. EPA  
26 W. Martin Luther King Drive  
Cincinnati, Ohio 45268  
513-569-7707

## EPA Regional Libraries

Peg Nelson, Librarian\*  
U.S. EPA Region I - Library  
John F. Kennedy Federal Building  
1 Congress Street  
Boston, Massachusetts 02203  
617-565-3300

Eveline Goodman, Librarian\*  
U.S. EPA Region II  
26 Federal Plaza  
New York, New York 10278  
212-264-2881

Diane M. McCreary, Librarian  
U.S. EPA Region III  
841 Chestnut Building (3PM52)  
Philadelphia, Pennsylvania 19107  
215-597-7904

Priscilla Pride, Librarian\*  
U.S. EPA Region IV  
345 Courtland Street, NE  
Atlanta, Georgia 30365-2401  
404-347-4216

Penny Boyle, Librarian\*  
U.S. EPA Region V  
12th Floor, 77 West Jackson Blvd.  
Chicago, Illinois 60604  
312-353-2022

Phyl Barris, Librarian\*  
U.S. EPA Region VI  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202-2733  
214-655-6444

Barbara MacKinnon, Librarian\*  
U.S. EPA Region VII  
726 Minnesota Avenue  
Kansas City, Kansas 66101  
913-551-7358

Doug Rippey, Librarian\*  
U.S. EPA Region VIII  
999 18th Street, Suite 500  
Denver, Colorado 80202-2405  
303-293-1444

Pollution Prevention Resource Center  
Karen Sundheim, Pollution Prevention Librarian\*  
U.S. EPA Region IX  
75 Hawthorne Street, 13th Floor  
San Francisco, California 94105  
415-744-1508

Julienne Sears, Librarian  
U.S. EPA Region X  
1200 Sixth Avenue  
Seattle, Washington 98101  
206-553-1289/1259

\* Contractor Staff

# U.S. EPA Regional Office Pollution Prevention Contacts

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*The individuals identified below are the official contacts for pollution prevention matters concerning the EPA Regional Office initiatives and the 33/50 Program. Summaries of each Region's pollution prevention activities can be found in the Pollution Prevention Information Exchange System (described in section 7).*

## REGION I

Mark Mahoney, Manager  
Abby Swaine, Manager  
Pollution Prevention Program  
U.S. EPA Region I (PAS)  
John F. Kennedy Federal Building  
Boston, Massachusetts 02203  
Mahoney: Phone: 617-565-1155  
FAX: 617-565-3346  
Swaine: Phone: 617-565-4523  
FAX: 617-565-3346

Dwight Peavey  
33/50 and ENERGI Programs  
U.S. EPA Region I (ATR)  
John F. Kennedy Federal Building  
Boston, Massachusetts 02203  
Phone: 617-565-3230  
Fax: 617-565-4939

Norman Willard  
Green Lights and ENERGI Programs  
U.S. EPA Region I (ADA)  
John F. Kennedy Federal Building  
Boston, Massachusetts 02203  
Phone: 617-565-3243

## REGION II

Janet Sapadin, Pollution Prevention Coordinator  
U.S. EPA Region II  
26 Federal Plaza, Rm. 900  
New York, New York 10278  
Phone: 212-264-1925  
FAX: 212-264-9695

Nora Lopez  
33/50 Program  
U.S. EPA Region II (MS: 105)  
2890 Woodbridge Avenue, Building 10  
Edison, New Jersey 08837-3679  
Phone: 908-906-6890  
Fax: 908-321-6788

## REGION III

Lorraine Urbiet  
Pollution Prevention Coordinator  
Environmental Assessment Branch  
Environmental Services Division  
U.S. EPA Region III  
841 Chestnut Building (3ES43)  
Philadelphia, Pennsylvania 19107  
Phone: 215-597-6289  
FAX: 215-597-7906

Bill Reilly  
33/50 Program  
Special Assistant, Air, Radiation & Toxics Division  
U.S. EPA Region III (3AT01)  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107  
Phone: 215-597-9302  
Fax: 215-349-2011

## REGION IV

Carol Monell  
Chief, Pollution Prevention Unit  
Policy, Planning, and Evaluation Branch  
Office of Policy and Management  
U.S. EPA Region IV  
345 Courtland Street, NE  
Atlanta, Georgia 30365  
Phone: 404-347-7109  
FAX: 404-347-1043

Beverly Mosely  
33/50 Program  
U.S. EPA Region IV  
345 Courtland Street, NE  
Atlanta, Georgia 30365  
Phone: 404-347-1033  
Fax: 404-347-1681

## REGION V

Kathy Allon  
Pollution Prevention Coordinator  
Planning and Budgeting Branch  
Policy and Management Division  
U.S. EPA Region V  
77 West Jackson Blvd.  
Chicago, Illinois 60604-3590  
Phone: 312-886-2910  
FAX: 312-886-5374

Dennis Wesolowski  
33/50 Program  
Acting Chief, Asbestos Control Section  
Environmental Science Division  
U.S. EPA Region V (MS: SP-14J)  
77 W. Jackson Blvd.  
Chicago, Illinois 60604  
Phone: 312-353-5907  
Fax: 312-353-4342

## REGION VI

Dick Watkins, Pollution Prevention Coordinator  
Donna Tisdall, Grants Coordinator  
Office of Planning and Evaluation  
U.S. EPA Region VI  
1445 Ross Avenue (6M-P)  
Dallas, Texas 75270  
Watkins: Phone: 214-655-6580  
FAX: 214-655-2146  
Tisdall: Phone: 214-655-6528  
FAX: 214-655-2146

Lewis Robertson  
33/50 Program  
U.S. EPA Region VI (MS: 6T-P)  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202  
Phone: 214-655-7582  
Fax: 214-655-2164

## REGION VII

Steve Wurtz, Pollution Prevention Manager  
Waste Management Division  
U.S. EPA Region VII  
726 Minnesota Avenue  
Kansas City, Kansas 66101  
Phone: 913-551-7050  
FAX: 913-551-7063

Carl Walter  
33/50 Program  
Deputy Director, Air and Toxics Division  
U.S. EPA Region VII (MS: ARTX)  
726 Minnesota Avenue  
Kansas City, Kansas 66101  
Phone: 913-551-7600  
Fax: 913-551-7065

## REGION VIII

Don Patton, Chief  
Sharon Childs, Program Analyst  
Policy Office  
U.S. EPA Region VIII

999 18th Street, Suite 500

Denver, Colorado 80202-2405

Patton: Phone: 303-293-1627

FAX: 303-293-1198

Childs: Phone: 303-293-1454

FAX: 303-293-1198

Kerry Whitford

33/50 Program

Toxic Release Inventory Program

U.S. EPA Region VIII (MS: 8ART-AP)

999 18th Street, Suite 600

Denver, Colorado 80202-2405

Phone: 303-294-7684

Fax: 303-293-1229

## REGION IX

Jesse Baskir, Program Coordinator

Hilary Lauer, Program Coordinator

Pollution Prevention Program

U.S. EPA Region IX

75 Hawthorne Street (H-1-B)

San Francisco, California 94105

Baskir: Phone: 415-744-2190

FAX: 415-744-1796

Lauer: Phone: 415-744-2189

FAX: 415-744-1796

Helen Burke

33/50 Program

TRI Coordinator

U.S. EPA Region IX (MS: A-4-3)

75 Hawthorne Street

San Francisco, California 94105

Phone: 415-744-1069

Fax: 415-744-2153

Bill Wilson Waste Minimization Coordinator

Hazardous Waste Management Division

75 Hawthorne Street (H-1-W)

San Francisco, California 94105

Phone: 415-744-2153

Mike Stenburg

Green Lights Coordinator

Air and Toxics Division

78 Hawthorne Street A-1

San Francisco, California 94105

Phone: 415-744-1102

## REGION X

Carolyn Gangmark

Pollution Prevention Coordinator

Policy, Planning and Evaluation Branch

U.S. EPA Region X

1200 Sixth Avenue (MD-142)

Seattle, Washington 98101

Phone: 206-399-4072

FAX: 206-553-4957

Claire Rowlett, Environmental Protection Specialist

Community Relations Policy Section

Hazardous Waste Policy Division

U.S. EPA Region X

1200 Sixth Avenue (HW-113)

Seattle, Washington 98101

Phone: 206-553-1099

Jayne Carlin

33/50 Program

U.S. EPA Region X (MS: AT-083)

1200 6th Avenue

Seattle, Washington 98101

Phone: 206-553-0890

Fax: 206-553-8338





# 6

## Section 6 Additional Technical Assistance Programs for Businesses

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*This section describes resources for pollution prevention assistance to small manufacturing establishments.*

- Manufacturing Technology Center (MTC) Program
- The Department of Energy's
  - \*Small Business Technology Integration Program (SB-TIP)
  - \*Innovative Concepts Program (InnCon)



*The Omnibus Trade and Competitiveness Act established the Manufacturing Technology Center (MTC) program as a new initiative at the National Institute of Standards and Technology (NIST). The Centers are designed to bridge a technological gap between sources of manufacturing technology and the small and mid-sized companies that need it. The program establishes regional centers around the country to help manufacturers improve their productivity and competitiveness in the marketplace through the transfer of appropriate, modern technology. Sources of technology consist of a number of Government research and development laboratories, universities and other research oriented organizations. The Centers provide a wide range of services including individual project engineering, training courses, demonstrations, and assistance in selecting and using software and equipment. What follows is a brief description of each Center's activities.*

**California  
Manufacturing  
Technology Center  
(CMTC)**

The California Manufacturing Technology Center's (CMTC) focus is to assist smaller aerospace suppliers and rural manufacturers to transfer aerospace technologies to other commercial applications. The aerospace industry is the region's leading manufacturing sector accounting for 20% of employment in the region. These firms are predominately small and mid-size firms. The Los Angeles basin is the primary service area of the CMTC, containing more than 6,000 aerospace suppliers.

CMTC  
California MTC  
13430 Hawthorne Boulevard  
Hawthorne, California 90250  
310-355-3060 Fax 310-676-8630

**Great Lakes  
Manufacturing  
Technology Center  
(GLMTC)**

The Great Lakes Manufacturing Technology Center's (GLMTC) client base is nearly 9000 manufacturing establishments in and around the Cleveland, Ohio area. Nearly 40% of the firms served by the GLMTC are standard industrial classification (SIC) 3500 (industrial machinery and equipment) with the remaining firms being a diverse cross section of manufacturing technologies. During 1990 GLMTC initiated 334 technology transfer projects with regional firms.

GLMTC  
Great Lakes MTC  
2415 Woodland Avenue  
Cleveland, Ohio 44115  
216-987-3200 Fax 216-987-3210

***Mid-American  
Manufacturing  
Technology Center  
(MAMTC)***

The Mid-American Manufacturing Technology Center's (MAMTC) service area is the entire state of Kansas and several adjoining counties of Missouri. This area contains a diverse mix of urban and rural manufacturing establishments numbering more than 2600 small to medium-size firms. The three largest industry groups manufacture agricultural equipment, fabricated metal products and aircraft parts.

MAMTC  
Mid-America MTC  
10561 Barkley, Suite 602  
Overland Park, Kansas  
66212  
913-649-4333 Fax 913-649-4498

***Midwest  
Manufacturing  
Technology Center  
(MMTC)***

The Midwest Manufacturing Technology Center's (MMTC) initial service area is the southern Michigan area which has approximately 4000 manufacturing firms and 800,000 employees. The MMTC plans to concentrate on small firms involved in SIC 3711 and 3714 (automotive manufacturers) and SIC 2522 (metal office furniture companies), two core industries in Michigan.

MMTC  
Midwest MTC  
PO Box 1485  
2901 Hubbard Road  
Ann Arbor, Michigan 48106  
313-769-4377 Fax 313-769-4064

***Northeast  
Manufacturing  
Technology Center  
(NEMTC)***

The Northeast Manufacturing Technology Center's (NEMTC) principal target region is New York State and the typical client firms are small and medium-size establishments which fall into SIC 3400 (fabricated metals products) and SIC 3500 (industrial machinery and equipment). During 1990 NEMTC initiated 68 field projects with small manufacturing firms.

NEMTC  
Northeast MTC  
RPI CII Room 9009  
Troy, New York 12180  
518-276-6314 Fax 518-276-2990

***Southeast  
Manufacturing  
Technology Center  
(SMTC)***

The Southeast Manufacturing Technology Center's (SMTC) client base is over 4000 small and medium-size manufacturing firms in South Carolina. Typical client firms have 50-100 employees. Most of the target firms are concentrated in small rural manufacturers of discrete parts and metal working firms with smaller numbers specializing in electrical/electronic, plastics and lumber/wood products.

SMTC  
Southeast MTC  
PO Box 1149  
Columbia, South Carolina 29202  
803-252-6976 Fax 803-252-0056

***Upper Midwest  
Manufacturing  
Technology Center  
(UMMTC)***

The Upper Midwest Manufacturing Technology Center's (UMMTC) target industries include: computers, industrial machinery, electrical machinery, metal fabrication, plastics and composites. UMMTC's initial service area will include the metropolitan area of Minneapolis and St. Paul with a client base of over 5,000 manufacturers. This center plans to ultimately expand its client base to include assistance through Minnesota and neighboring regions.

UMMTC  
Upper Midwest MTC  
111 Third Avenue S., Suite 4000  
Minneapolis, Minnesota 55401  
612-338-7722 Fax 612-339-5214

# DOE Programs

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## ***Small Business Technology Integration Program (SB-TIP)***

The Department of Energy (DOE), under the Office of Technology Development, has established the Small Business Technology Integration Program (SB-TIP) to facilitate the development and use of small business technologies with the DOE Environmental Restoration and Waste Management (EM) program. Specific goals are:

- conduct outreach activities
- assist in structuring procurements so that small businesses are given fair representation
- reduce barriers to small business participation in EM program
- help firms advance their technologies into government and commercial environmental markets.

contact: Joseph Paladino  
SB-TIP Manager  
301-903-7449

## ***Innovative Concepts Program (InnCon)***

DOE's Innovative Concepts Program (InnCon) provides seed-money grants to encourage energy innovation and help new technologies move more quickly from the conceptual stage into the marketplace. The InnCon program seeks to be "first funder" for concept stage technology in specific problem areas, which for the past two years has been waste minimization/utilization. The seed funding is intended to fund concept definition to a stage at which other prospective sponsors can more clearly assess the potential of the concept. After grant completion, the funded projects showcase their technologies at a technology fair which is the primary mechanism for exposing potential sponsors to the concepts. The next technology fair will be held April 22-23, 1993, in Austin, Texas.

contact: Elliott Levine  
U.S. DOE  
Conservation and Renewable Energy Division  
Inventions and Innovation Division  
202-586-1478

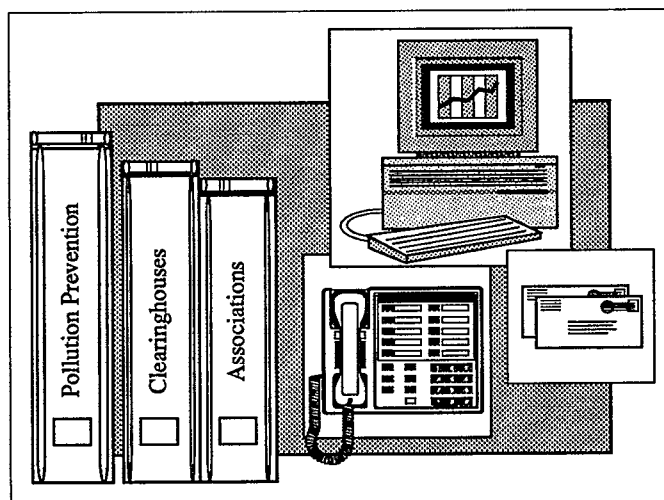


# 7

## Section 7 Pollution Prevention Clearinghouses, Associations and Hotlines

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*This section contains descriptions and contact information of clearinghouses, associations and hotlines. These resources facilitate the networking and exchange of critical information and are also useful as central access points for hard to locate information.*



# Clearinghouses and Associations

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## **Pollution Prevention Information Clearinghouse**

The Pollution Prevention Information Clearinghouse (PPIC) is dedicated to reducing or eliminating industrial pollutants through technology transfer, education, and public awareness. It is a free, nonregulatory service of the U.S. EPA, and consists of: a repository, a telephone reference and referral service and a computerized information exchange system.

### **PPIC Repository**

The repository of the PPIC is a hard copy reference library, housed at the U.S. EPA Headquarters Library, containing the most current pollution prevention information. The repository includes training materials, conference proceedings, journals, and Federal and State government publications. The repository can be visited at the Headquarters Library, Room M2904 (401 M. Street, SW, Washington, D.C.). For use outside the Washington, DC area, the Library maintains cooperative agreements with many academic, public, and special libraries to borrow or lend books, journals, and other research materials through interlibrary loan. Abstracts and titles of holdings can be viewed by accessing PIES (see below).

### ***Documents for Distribution***

The Clearinghouse distributes selected EPA documents and fact sheets on pollution prevention free of charge. For a current distribution list call, fax, or mail a request to the PPIC (see below).

### ***Reference and Referral Service***

Telephone service is available to answer or refer questions on pollution prevention or the PPIC and take orders for documents distributed by the PPIC.

Phone: 202-260-1023  
Fax: 202-260-0178  
Mail: Pollution Prevention Information Clearinghouse  
Environmental Protection Agency, PM 211-A  
401 M Street, SW  
Washington, D.C. 20460



**Pollution  
Prevention  
Information  
Exchange System  
(PIES)**

A 24-hour electronic network consisting of technical databases and mini-exchanges that focus on specific pollution prevention issues, a calendar of events, hundreds of case study abstracts on pollution prevention, and message centers for interaction and exchange with users. The International Cleaner Production Information Clearinghouse (ICPIC) and OzonAction are also available by accessing PIES.

***Accessing PIES***

Anyone can access PIES using either an IBM PC (or compatible), Apple, or a dumb terminal equipped with a modem (1200 or 2400 baud), and appropriate communications software. PIES is accessible through a regular telephone call, the SprintNet network and the EPA x.25 wide area network (for EPA employees only). The following communications software settings are required if you are calling PIES on a regular telephone line:

PHONE NUMBER:	703-506-1025
SPEED:	1200 or 2400
DATA BITS:	8
PARITY:	None
STOP BITS:	1

Upon first calling PIES, you must answer some brief questions, and then select and enter a password (you must remember your password for subsequent calls to the system).

***PIES User Guide***

A short, 2 page, "PIES Quick Reference Guide" was written to help new users log-on to and use the system. This guide can be requested by calling the PIES technical support office. A PIES User Guide (version 2.1, Nov. 1992) is available and may be obtained free of charge by leaving a message on the system addressed to "Sysop", or by writing or calling the Clearinghouse.

***PIES Technical  
Support Office***

Phone:	703-821-4800
Fax:	703-821-4775

Contact the PIES Technical Support Office for information on how government employees can access PIES toll-free.

***SprintNet<sup>SM</sup>***

SprintNet<sup>SM</sup> is a data network subscription service that enables you to access PIES in most major metropolitan areas using a local telephone call. Users are billed for connect time through U.S. Sprint, thus saving long distance telephone charges. To access PIES through SprintNet<sup>SM</sup> you must first obtain a SprintNet<sup>SM</sup> account. If you already subscribe to this service, dial your local SprintNet<sup>SM</sup> access number. At the @ prompt, type: c 202561311 (your SprintNet<sup>SM</sup> account number)(your personal SprintNet<sup>SM</sup> password to access the PIES). If you would like to receive information about how to subscribe to SprintNet<sup>SM</sup>, contact the PIES Technical Support Office. Note: SprintNet<sup>SM</sup> is not affiliated with the U.S. EPA or the PPIC.

## **The International Cleaner Production Information Clearinghouse**

The International Cleaner Production Information Clearinghouse (ICPIC) is the PPIC's sister clearinghouse operated by the United Nations Environment Program (UNEP). The ICPIC provides information to the international community on all aspects of low- and non-waste technologies and methods. Patterned after the PPIC, the ICPIC has similar functions and components, including an electronic information exchange system that is indirectly accessible to PIES users through nightly exchanges of messages on the PIES Main Menu message center. For more information about the ICPIC, contact the PPIC (see above) or the ICPIC at the address below.

### **Accessing the ICPIC**

#### *Mail*

The Director  
Industry and Environment Program Activity Center  
United Nations Environment Programme  
39-43 quai André Citroën  
75739 Paris CEDEX 15  
France

#### *Phone/Fax*

33-1-40-58-88-50  
33-1-40-58-88-74 Fax  
33-1-40-58-88-78

#### *ICPIC Computer Network*

## **OzonAction**

OzonAction was newly established by UNEP in 1992 under the Interim Multilateral Ozone Fund (IMOF) of the Montreal Protocol Agreements. OzonAction relays technical and programmatic information on alternatives to all ozone depleting substances identified by the IMOF. OzonAction contains information on five industry sectors: solvents, coatings and adhesives; halons; aerosols and sterilants; refrigeration; and foams. Later this year OzonAction will contain the OZONET data bases on solvent substitutes, compiled by the Industry Cooperative for Ozone Layer Protection (ICOLP). For more information on OzonAction, contact the director, UNEP Industry and Environment Office listed above.

## **American Institute for Pollution Prevention (AIPP)**

The AIPP was founded jointly by U.S. EPA and the University of Cincinnati in 1989 to assist EPA in promoting the widespread and expeditious adoption of pollution prevention concepts. The institute accomplishes this mission through developing informational and educational materials; participating in waste reduction demonstration projects; conducting economic, programmatic, and technological analyses; and assisting government, universities, and industry in identifying and resolving various pollution prevention issues. The institute consists of a group of 25 volunteer experts selected by their professional societies, agencies, and trade associa-

tions. These experts participate in four councils that undertake various tasks: Economics Council, Education Council, Implementation Council, and Technology Council.

Thomas R. Hauser, Ph.D., Executive Director  
American Institute for Pollution Prevention  
Department of Civil and Environmental Engineering  
University of Cincinnati  
Cincinnati, Ohio 45221-0071  
Phone: 513-556-3693

### **Center for Environmental Research Information (CERI)**

CERI is the focal point for the exchange of scientific and technical environmental information produced by EPA. It supports the activities of the Office of Research and Development (ORD), its laboratories, and associated programs nationwide. CERI publishes brochures, capsule and summary reports, handbooks, newsletters, project reports, and manuals. Services are provided to EPA employees; federal, state and local agencies; businesses; and the public.

Dorothy Williams  
US Environmental Protection Agency  
Center for Environmental Research Information (CERI)  
26 West Martin Luther King Drive  
Cincinnati, Ohio 45268  
Phone: 513-569-7562  
Fax: 513-569-7566

### **Center for Waste Reduction Technologies (CWRT)**

The CWRT was established in 1989 by the American Institute of Chemical Engineers, to support industry efforts in meeting the challenges of waste reduction through a partnership between industry, academia, and government. CWRT serves as a focal point for research, education and information exchange on the innovative waste reduction technologies needed for the next generation of clean, economically competitive manufacturing facilities.

#### **Targeting Research**

CWRT is building an integrated research program based on the identification of target waste streams and the development of a hierarchy of technological solutions to effect their solution or elimination. CWRT's Research Advisory Committee solicits university proposals covering both experimental research and process design methodology. Requests-for-proposals, currently under development, center around two major areas: total water reuse, and dilute VOC emissions recovery.

### **Transferring Technology and Enhancing Education**

CWRT is committed to transferring technology and related information to the user community through practical "how-to" publications, international conferences, continuing education courses, and links with organizations having related interests. CWRT's Technology Transfer Committee works to identify and prioritize candidate projects, including best management practices in several technology areas, standardized economic evaluation of technology, and current practices in specific areas of waste reduction. CWRT is also developing course materials for undergraduate and graduate engineering curricula and student internship programs, as well as continuing education courses for practicing engineers.

Center for Waste Reduction Technologies  
American Institute of Chemical Engineers  
345 East 47th Street  
New York, New York 10017  
Phone: 212-705-7407  
Fax: 212-752-3297

### **Florida Recycling Marketing System (FRMS)**

The FRMS, developed through an Innovative Recycling Grant from the Florida Department of Environmental Regulation, is a computerized marketing system for recycled/recyclable materials. This no-cost system includes the following options:

- Directories of recyclers, processors, end users, recycling equipment, and manufacturers of products with recycled content
- Forums divided into specific recyclable categories where any question, comment, or information about that material may be answered, discussed, or made available
- Downloadable files related to recycling
- Announcements concerning conferences, meetings, workshops, etc.
- Advertisements for materials wanted or available.

The bulletin board is accessible 24-hours a day by any PC equipped with a modem. To connect, set your communications software to 8 data bits, no parity, 1 stop bit, and dial 1-800-348-1239. The system operates up to 2400 baud.

Dr. Paul Still  
Florida Recycling Marketing System  
Florida Center for Solid and Hazardous Waste Management  
3900 S.W. 63rd Boulevard  
Gainesville, Florida 32608  
Phone: 904-392-6264 X811  
Fax: 904-392-6910 FAX

## **Hazardous Waste Research and Information Center (HWRIC)**

The HWRIC is a Division of the Illinois Department of Energy and Natural Resources (ENR). HWRIC combines research, education, and technical assistance in a multidisciplinary approach to manage and reduce hazardous waste in Illinois. HWRIC collects and shares this information through its library/clearinghouse and several computerized waste management tools.

### **Library/Clearinghouse**

The HWRIC has collected a broad collection of pollution prevention information, including books, journal articles, reports, and pamphlets on various topics. Books and reports are compiled into a quarterly waste reduction bibliography, copies of which are available upon request. The library/clearinghouse includes all of the studies cited in the North Carolina Pollution Prevention bibliography, as well as others. Print and online indexes to all of the collections are available on site. HWRIC can distribute single copies of HWRIC-sponsored reports, in addition to pamphlets, at no charge. Lists of both types of materials are available upon request. Books and articles are not lent directly outside of the Center, but HWRIC does participate in interlibrary loans.

### **Waste Reduction Advisory System (WRAS)**

The WRAS is a user-friendly computerized waste management tool developed by the HWRIC, the U.S. EPA, and other State waste management programs. It provides waste generators with a wide range of options for reducing and recycling industrial waste. The WRAS has two parts: the Waste Reduction Audit Checklist (WRAC) and the WRIB. The WRAC gives individualized waste reduction assistance via a series of questions presented in the audit checklist. It is designed to assess a facility's current waste reduction activities and then identify potential waste reduction techniques for each waste generating process and job operation. The WRIB provides users with more than 300 literature abstracts and case studies on current waste reduction technologies. Currently, the WRAS case study data base is being merged with the PIES data base (see the description of the PPIC in this section).

A fully executable WRAS program, complete with a User's Guide, costs \$95. To access this program, a user needs a fully IBM compatible PC with at least 640 K of memory, a hard disk, and DOS version 2.1 or greater.

Alisa Wickliff  
Hazardous Waste Research and Information Center  
One East Hazlewood Drive  
Champaign, Illinois 61820  
Phone: 217-244-8905  
Fax: 217-333-8944

**The National  
Roundtable of  
State Pollution  
Prevention  
Programs  
(Roundtable)**

The Roundtable is a group of pollution prevention programs at the State and local level in both the public and academic sectors. Typically, member programs are engaged in a broad range of activities, including multi-audience training and primary to post-secondary pollution prevention education, supported by a variety of State and Federal funding sources. The Roundtable is coordinated through biannual conferences as well as ongoing activities. Conferences serve in part as opportunities for updates on member programs' progress, including their training efforts. The first conference in 1993 is scheduled for April 28-30. (October conference TBA) The Roundtable is funded through a U.S. EPA grant.

David Thomas  
National Roundtable of Pollution Prevention Programs  
One East Hazelwood Drive  
Champaign, Illinois 61820  
Phone: 217-333-8940  
Fax: 217-333-8944

**Northeast  
States  
Pollution  
Prevention  
Roundtable  
(NE Roundtable)**

The NE Roundtable was initiated in 1989 by the Northeast Waste Management Officials' Association (NEWMOA) to assist state programs, industry, and the public implement effective source reduction programs. The effort involves four components: establishing a clearinghouse of information on pollution prevention, including technical data, reports, case studies, and a list of pollution prevention experts; conducting training sessions for State officials and industry representatives on source reduction policies, strategies, and technologies; coordinating an interstate roundtable; and researching source reduction strategies for the major toxic metals in incinerator emissions and ash. The clearinghouse provides pollution prevention information to the public, industry representatives, and State officials and identifies upcoming pollution prevention meetings and conferences.

The NE Roundtable publishes a free quarterly newsletter the "NE States Pollution Prevention News" available upon request.

Terri Goldberg, Program Manager  
Northeast States Pollution Prevention Roundtable/Northeast Waste Management Officials' Association  
85 Merrimac Street  
Boston, Massachusetts 02114  
Phone: 617-367-8558  
Fax: 617-367-2127

## **Pacific Northwest Pollution Prevention Research Center**

The Pacific Northwest Pollution Prevention Research Center is a non-profit public-private partnership dedicated to the goal of furthering pollution prevention in the Pacific Northwest. The Center is being built on the support of industry, environmental and civic organizations, Federal and state governments, and academia.

The Center will:

- Identify where pollution prevention research gaps exist;
- Set priorities for research;
- Support, sponsor, and conduct research;
- Communicate research results;
- Foster ways to evaluate the effectiveness of the research;
- Disseminate and educate the public on the progress the Pacific Northwest is making in pollution prevention.

Madeline Grulich, Director  
Pacific Northwest Pollution Prevention Research Center  
411 University Street, Suite 1252  
Seattle, Washington 98101  
Phone: 206-223-1151  
Fax: 206-467-0212

## **Solid Waste Information Clearinghouse (SWICH)**

SWICH is an information clearinghouse operated by the Solid Waste Association of North America (SWANA) and funded by SWANA, U.S. EPA's Office of Solid Waste, and the Association of Solid Waste Management Professionals. SWICH covers a wide range of solid waste issues, including:

- Source Reduction
- Recycling
- Composting
- Planning
- Education and Planning
- Public Participation
- Legislation and Regulation
- Waste Combustion
- Collection
- Transfer
- Disposal
- Landfill Gas
- Special Wastes.

SWICH components include an electronic bulletin board, a library, and a hotline. Services include document ordering and onsite library access.

The bulletin board is accessible 24 hours a day by any PC equipped with a modem. To connect, set your communications software to 8 data bits, no parity, 1 stop bit, and dial 301-585-0204. The system operates at either 1200 or 2400 baud.

Lori Swain, Manager  
Solid Waste Information Clearinghouse  
Solid Waste Association of North America  
P.O. Box 7219  
Silver Spring, Maryland 20910  
Phone: 800-677-9424  
Fax: 301-585-0297

**Waste  
Reduction  
Institute for  
Training and  
Applications  
Research, Inc.  
(WRITAR)**

WRITAR is a private, independent, nonprofit organization designed to identify waste reduction problems, help find their solutions, and facilitate the dissemination of this information to a variety of public and private organizations. The institute is also the current administrator of the U.S. EPA grant to the National Roundtable of State Pollution Prevention Programs (see above). WRITAR has an extensive background in designing and delivering persuasive pollution prevention training to Federal, State, and local regulators, inspectors, and administrative staffers, as well as to corporate and public audiences. This existing activity is supplemented by a 1991 grant from the U.S. EPA Office of Pollution Prevention to support pollution prevention training for the States through U.S. EPA Regional staff. WRITAR also conducts industry-specific training (primarily in metal finishing) for more narrowly defined audiences.

Terry Foecke or Al Innes  
Waste Reduction Institute for Training and Applications Research  
1313 5th Street, S.E.  
Minneapolis, Minnesota 55414-4502  
Phone: 612-379-5995  
Fax: 619-379-5996



**Waste  
Reduction  
Resource  
Center for the  
Southeast  
(WRRRC)**

The WRRRC was established in 1988 to provide multimedia waste reduction support for the eight States of U.S. EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee). The center has a collection of technical waste reduction information from the national level, from Federal government agencies, from all 50 States, and from numerous private sources. WRRRC serves as a clearinghouse that will give answers and information to people from Region IV who request it, identify upcoming conferences and meetings, identify new publications, and provide technical staff support to prepare reports on industry-specific waste reduction questions. A key element of the center is the capacity to assign trained engineers to respond to questions regarding specific waste reduction problems. The center also provides support for onsite waste reduction assessments and training for regulatory agency and industrial personnel.

Gary Hunt  
Waste Reduction Center for the Southeast  
3825 Barrett Drive  
P.O. Box 27687  
Raleigh, North Carolina 27611-6787  
Phone: 800-476-8686

# POLLUTION PREVENTION HOTLINES

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## Hotline

Asbestos Ombudsman Clearinghouse/Hotline  
Small Business Ombudsman Clearinghouse/Hotline  
800-368-5888  
703-305-5938

Center for Hazardous Materials (CHMR)  
800-334-2467  
412-826-5320

Emergency Planning and Community Right-to-Know (EPCRA) (Title III of SARA)  
800-535-0202  
703-920-9877

Green Lights Customer Service Center  
202-775-6650  
202-775-6680 Fax  
202-775-6671 - online service/modem

Hazardous Waste Ombudsman  
800-262-7937  
202-260-9361

RCRA/Superfund (OUST Hotline)  
800-424-9346  
703-920-9810

Solid Waste Assistance Program (SWAP)  
800-677-9424  
301-585-0297 - online service/modem

Toxic Release Inventory User Support (TRI-US)  
202-260-1531  
202-260-4655 Fax

Toxic Substances Control Act (TSCA) Assistance  
Information Service  
202-554-1404  
202-554-5603 - online service/modem

## Subjects and Services

Small business pollution prevention grants  
General assistance to small business - compliance with EPA regulations

Information on hazardous waste regulations, minimization, pollution prevention  
Distributes related publications/referrals

Regulatory, policy and technical assistance related to the Emergency Planning and Community Right-to-Know Act (Title III of SARA)

Current program information, news, participant lists, and technical information about energy-efficient lighting.

Handles complaints from citizens and the regulated community, obtains facts, sorts information, and substantiates policy as it relates to the Hazardous Waste Management Program.

Information on RCRA regulations and policies  
Referrals for obtaining related documents  
RCRA, Underground Storage Tanks (UST), Superfund/CERCLA, Pollution Prevention

Source reduction; recycling; composting; planning; education/training; public participation; legislation/regulation; waste combustion, collection, transfer and disposal; landfill gas; and special wastes

Offers specialized assistance to individuals seeking data collected under EPCRA.

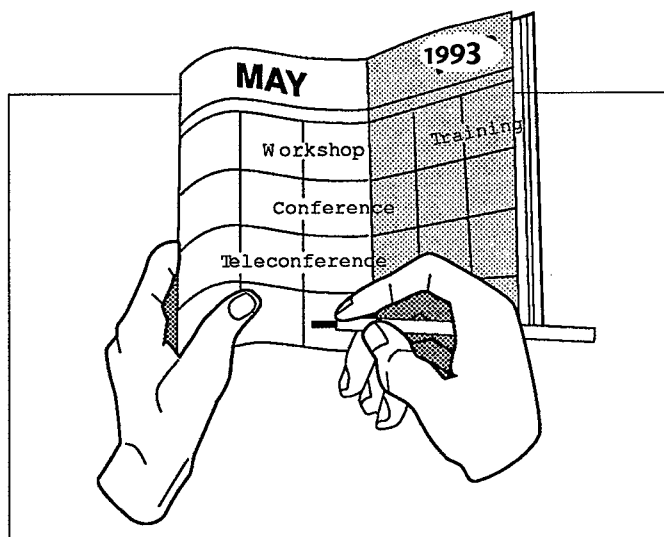
Information on TSCA regulations  
Technical and general information

# 8

## Section 8 Calendar of Pollution Prevention Events

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*The information in this calendar was obtained from the conference sponsors, PIES (see Section 7), as well as journals and newsletters. For up-to-date information, consult the most recent of EPA's Office of Pollution Prevention and Toxics (OPPT) newsletter, **Pollution Prevention News** and other newsletters or journal publications.*



## Calendar of Events

Title	Sponsor	Date/Location	Phone
First International Trade Exhibition and Congress on Recycling	Ryder Associates	1/20/93 to 1/25/93 Geneva, Switzerland	022-789-1111
Plant Level Environmental Compliance Course (Canada)	Executive Enterprises, Inc.	3/1/93 to 3/2/93 Calgary, Canada	800-831-8333 212-645-8689 Fax
Plant Level Environmental Compliance Course (US)	Executive Enterprises, Inc.	3/1/93 to 3/2/93 Chicago, Illinois	800-831-8333 212-645-8689 Fax
Oil and Gas Environmental Conference	American Petroleum Institute, Gas Research Inst., EPA, DOE	3/7/93 to 3/10/93 San Antonio, Texas	703-308-8431
The Environmental Total Quality Management (TQM) Conference	Executive Enterprises, Inc.	3/8/93 to 3/9/93 San Francisco, California	800-831-8333 212-645-8689 Fax
Design for the Environment Printing Project - Industry Workgroup meeting	U.S. EPA/Pollution Prevention Division	3/10/93 to 3/11/93 Washington, D.C.	800-726-4853 202-466-8554 Fax
Integrated Energy and Environmental Management	EPRI, AWMA, American Society of Mechanical Engineers	3/10/93 to 3/12/93 New Orleans, Louisiana	412-232-3444
The Greening of Durable Products: What's the Best Route	Center for Technology, Policy and Industrial Development, MIT	3/24/93 to 3/25/93 Cambridge, Massachusetts	617-253-3586 617-253-7140 Fax
Watershed '93	U.S. EPA plus 11 federal agencies	3/21/93 to 3/24/93 Alexandria, Virginia	202-833-8317
Corporate Quality/Environmental Management III	Global Environmental Management Initiative	3/24/93 to 3/25/93 Arlington, Virginia	202-429-0776
The Role of the Clean Air Act in Promoting Pollution Prevention	U.S. EPA and Engineering Foundation Conferences	3/28/93 to 4/2/93 Palm Coast, Florida	919-541-7308 919-541-5945 Fax
RCRA Reform: Pollution Prevention and Enforcement - New Policies and Procedures for 1993	Inside EPA	4/20/93 to 4/21/93 Alexandria, Virginia	800-424-9068 703-685-2606 Fax
Pollution Prevention, Reuse, Recycling and Environmental Efficiency	Air and Waste Management Association	4/20/93 to 4/22/93 Baltimore, Maryland	512-454-4797
HAZMACON	Association of Bay Area Governments	4/6/93 to 4/8/93 San Jose, California	415-464-7951
Waste Stream Minimization/Utilization Technology Fair	DOE Innovative Concepts Program (InnCon)	4/22/93 to 4/23/93 Austin, Texas	509-376-8054
1st International Symposium on Electronics and the Environment	IEEE	5/10/93 to 5/12/93 Arlington, Virginia	908-562-3878 908-562-1571 Fax
Waste Prevention Seminar Pollution Prevention Workshop	Waste Advantage	5/12/93 Anaheim, California	714-939-5501
International Conference of B.I.R. — The International Federation of the Reclamation and Recycling Industries		5/24/93 to 5/27/93 Washington, D.C.	202-217-8251

## Calendar of Events

Title	Sponsor	Date/Location	Phone
Pollution Prevention on Low and No-Voc Coating Technologies	U.S. EPA, others	5/25/93 to 5/27/93 San Diego, California	919-541-5816
Comparative Risks Analysis of Air Pollution Issues	U.S. EPA, AWMA	6/6/93 to 6/11/93 Denver, Colorado	919-541-4477
Annual Meeting and Exhibition	Air and Waste Management Association	6/13/93 to 6/18/93 Denver, Colorado	412-232-3444
Wasteexpo '93	National Solid Waste Management Association	6/14/93 to 6/18/93 Chicago, Illinois	202-659-4613
86th Annual Meeting of the Air and Waste Management Association	Air and Waste Management Association	6/20/93 to 6/25/93 Denver, Colorado	412-232-3444
31st International Solid Waste Exposition	GRCA	8/2/93 to 8/5/93 San Jose, California	800-456-4723
14th SO <sub>2</sub> Control Symposium	EPRI, U.S. EPA, DOE	8/24/93 to 8/27/93 Boston, Massachusetts	415-855-2153
Global Forum on Environmental and Development Education (to discuss Agenda 21)	Indian Environmental Society	9/24/93 to 9/28/93 New Delhi, India	(33 1) 40-58-88-50
The Southern States Annual Environmental Conference	MISSTAP/MSSWRAP, MSDEQ, DOD, EPA Region IV, EPA Region VI and the states involved	10/26/93 to 10/28/93 Biloxi, Mississippi	601-325-8067 601-325-2482 Fax
Plant Level Environmental Compliance Course	Executive Enterprises, Inc.	11/11/93 to 11/12/93 Atlanta, Georgia	800-831-8333 212-645-8689 Fax
Designing the Sustainable Enterprise; Second Int. Research Conference of The Greening of Industry Network	Greening of Industry Network, the Center for Environmental Management, and the Center for Studies of Science, Technology and Society	11/14/93 to 11/16/93 Boston, Massachusetts	617-627-3486 617-627-3084 Fax
Plant Level Environmental Compliance Course	Executive Enterprises, Inc.	12/2/93 to 12/3/93 San Francisco, California	800-831-8333 212-645-8689 Fax
Wasteexpo '94	National Solid Waste Management Association	5/3/94 to 5/6/94 Dallas, Texas	202-659-4613
87th Meeting and Exhibition of the Air and Waste Management Association	Air and Waste Management Association	6/19/94 to 6/24/94 Cincinnati, Ohio	412-232-3444
32nd International Solid Waste Exposition	GRCA	7/31/94 to 8/3/94 San Antonio, Texas	800-456-4723
National Solid Waste Management Association		4/24/95 to 4/28/95 Chicago, Illinois	202-659-4613

