

# **APPENDICES**

# **APPENDIX A**

## **Waste Reduction Promotion Flyers (For Clients)**

## **Waste Is a Measure of Business Efficiency**

Does this concept concern you as a small business owner or manager? It probably has affected your business and the management decisions you have made at times. The consideration that components of your business such as labor, space, time, materials, and energy are all cost factors is a straight forward one.

It is easy to recognize the value of reducing labor or energy costs associated with producing a product or service. Ideally, at every step in providing a service or producing a product, value should be added for the resources invested by the business. If there is no value added, the business has limited opportunity to recover costs of the resources that have been invested.

For example, in the 1980s United States automakers discovered they were at a competitive disadvantage with Japanese automakers. Japan was producing high-quality automobiles while consuming half the energy and generating half the waste of comparable vehicles made in the United States. Because there was less waste of energy and materials, more value was added to each product for the dollar invested. Japan's motivation to reduce resource costs was a factor in the high quality achieved in its products.

This highly visible example of competitive advantage is being repeated around us each day, both in global markets and domestic markets. The factors involved and the results are the same, whether you are a dry cleaner, a retail outlet, an insurance business, a furniture maker, or a machine shop. Cost efficiency is a never ending key to success and long term survival.

Don't let waste of material and energy resources get you down. If you would like to explore what your business can do to reduce waste costs, contact your Small Business Development Center office, Business Agent, or your County Extension office for more information.

## Turn Regulations to Your Advantage

The 1960s and 1970s was an era of environmental regulation that added significant costs to businesses, and particularly to manufacturers. The objectives to protect the environment were and continue to be appropriate, but the regulatory methods resulted in expensive pollution control technology.

The pollution control strategies put forth in response to regulation treated wastes after they had been generated. There are two major problems with this strategy. First, the business had already suffered the costs of wasting resources before the waste is treated and disposed. Second, pollution control strategies often transferred the pollutants from one medium to another. For example, scrubbers on smokestacks remove pollutants from the air only to be deposited on the land as a solid or hazardous waste.

But what if waste could be eliminated in the first place? What if the waste wasn't generated, or the amount or toxicity of waste was reduced? Businesses that solve this challenge have a win-win situation. The costs of wasted resources are eliminated **and** the costs of pollution control is eliminated. In fact, it is likely that a number of other hidden costs related to waste generation and management would also be eliminated.

For example, a Tennessee dry cleaner found that by converting to new dry-to-dry technology, the efficiency of using the cleaning solvents was increased by over 400 percent, and the amount of solvent-related waste generated was reduced. This new technology was purchased in response to new Clean Air Act regulations. The resulting savings per month pays most of the loan cost in the short run and in the long run reduces the overall costs of the dry cleaning service. The business will ultimately improve its profitability and its competitive pricing. A side benefit is improved worker safety and health through less exposure to toxic chemicals.

The best way to beat regulations is to accept the challenge to innovate ways to meet them. In so doing you may well reduce or eliminate your regulatory burden. If you would like to explore your options, contact your Small Business Development Center office, Business Agent, or your County Extension office for more information.

## **Waste Reduction and Quality: A Matched Set**

Waste reduction and quality may seem to be independent variables in a business. After all, some product specifications may require certain materials or processes be used to maintain minimum quality standards, and some wastes from those processes seem inevitable. In many cases, it is the result of internal standards and the expectation that any tampering with tried and proven materials or processes risks a sacrifice in quality.

Many companies have demonstrated that quality management programs can result in parallel improvements in product quality and waste reduction. For example, an industrial valve manufacturer used conventional solvent-based coatings in finishing its products with time tested materials and processes. There was reluctance to change specifications on something that gave a superior product finish. However, the coatings often resulted in blemishes that had to be refinished. About 7 percent of the valves had to be redone. At the same time, the processes and materials generated a costly hazardous waste.

At first, proposed changes in materials and process were rejected. However, a team of production and engineering personnel conducted a detailed analysis of water-based coatings to reduce the hazardous waste problem. The evaluation of alternative materials included an assessment of the durability and gloss finish of the coating. The result was a higher quality coating, a less than one percent refinishing rate, and nearly complete elimination of hazardous waste.

In recent years ISO 9000 has made business news as a quality management system. Now ISO 14000 has entered the scene as a parallel environmental management system. Both systems involve the implementation of management systems and protocols that foster improvements in quality and environmental performance, respectively. Both systems have implications that affect competitiveness or even acceptance in global markets.

For more information on waste reduction and quality opportunities, contact your SBDC office, Business Agent, or County Extension Office.

# **APPENDIX B**

## **Small Business Waste Reduction Resources**

## B-1.1 Wisconsin Small Business Environmental Resources Quick Reference List

### Federal Hotlines

**Chemical Information: Chemical Referral Center  
(Chemical Manufacturers Association)**

9 am - 6 pm EST, M-F  
800/262-8200  
800/424-9346

**Chemical Safety: Emergency Planning and Community  
Right-to-Know Act (EPCRA)**

8:30 am - 7:30 pm EST, M-F  
800/535-0202

**Groundwater/Stormwater: U.S. EPA Office of Water  
Resource Center**

202/260-7786

**Ozone Depleting Chemicals: Stratospheric Ozone  
(Clean Air Act -CAA)**

800/296-1996

**Pesticides: National Pesticide Telecommunications  
Network**

8 am - 6 pm CST, M-F  
800/858-7378

**Pollution Prevention: U.S. EPA Information  
Clearinghouse**

8 am - 5:30 pm EST, M-F  
703/821-4800

**Small Business: U.S. EPA Ombudsman**

8 am - 5 pm EST, M-F  
800/368-5888

**Solid & Hazardous Waste: (RCRA)**

8:30 am - 7:30 pm EST, M-F  
800/424-9346

**Spill Response: National Response Center (U.S. Coast  
Guard)**

24 Hours  
800/424-8802

**Superfund (CERCLA)**

8:30 am - 7:30 pm EST, M-F  
800/424-9346

**Toxic Substances: Toxic Substances Control Act  
(TSCA) and Asbestos**

8:30 am - 5:30 pm EST, M-F  
202/554-1404

**Transportation: Hazardous Materials (U.S. DOT)**

9 am - 4 pm EST, M-F  
202/366-4488

**Underground Storage Tanks (USTs)**

8:30 am - 7:30 pm EST, M-F  
800/424-9346

**Water: Safe Drinking Water**

9 am - 5:30 pm EST, M-F  
800/426-4791

### Wisconsin Hotlines

**Pollution Prevention: Wisconsin DNR**

*Bureau of Cooperative and Environmental Assistance*  
608/267-9700

*Hazardous Waste Minimization Program*

608/267-3763

*Clean Air Act (CAA) Small Business Assistance  
Program*

608/267-3136

*\*Information Clearinghouse*

608/267-9523

**Pollution Prevention: UW-Extension**

Solid and Hazardous Waste Education Center

*Pollution Prevention, Hazardous Waste Minimization*

608/262-0385, 414/475-2845

*Recycling & Solid Waste: Markets, Operations,  
Information*

608/262-0398, 715/346-2793, 414/465-2707

**Safety and Health: Workplace**

Dept. Of Commerce  
Safety & Buildings  
608/266-9467

**Underground Storage Tanks (USTs, LUSTs)**

Department of Commerce  
Environmental Regulatory Services  
608/266-9467

**Spills: Hazardous Substances**

Division of Emergency Government  
**24 hours, 800/943-0003**

\*Telephone numbers and points of contact for Wisconsin DNR department bureaus and district offices are listed in *Managing Your Hazardous Waste: A Guide for Wisconsin Small Quantity Generators*, a free publication available from this office.

## **Fact Sheet**

### **B-2.1 Considerations in Selecting a Commercial Analytical Lab**

Regulatory agencies and disposal facilities require that unusable, unknown, or waste materials be properly identified before they are disposed of. This identification is accomplished through analytical testing conducted by commercial labs. A variety of analytical tests are available. Before a commercial lab is selected, be sure to contact the appropriate regulatory agency and the disposal facility to determine what type(s) of analytical test they require.

After determining what type of test is required, other factors besides cost should be considered. For example, the length of time between submitting the sample and receiving analytical results is often of great importance. Also, the location of the laboratory may be an important factor if samples are delivered by your company.

#### **Be Concerned about Lab Analysis and Testing Methods**

Before contacting a lab, the following questions should be addressed:

- ! What analyses are required? If you are unsure what analyses are required, contact the appropriate regulatory agency or the disposal facility that will be receiving the waste, to determine what analytical testing is required.
- ! What testing methods are required? Many testing methods exist, and requesting the “wrong” testing method could result in additional sampling and analytical costs if a different test is required. This problem can be avoided by contracting with a commercial lab that provides testing evaluation services. If you are unsure about what test methods are required, contact the appropriate regulatory agency or the disposal facility that is requiring the analytical testing.
- ! Is the lab certified to perform the requested tests? If the lab does not meet regulatory agency or disposal facility certification requirements, test results may not be accepted.

#### **Research Unknown Materials to Reduce Testing Costs**

For materials or wastes that are unknown, or have no analytical history, some initial background checking may be necessary. Knowing some information about these materials may reduce analytical testing costs:

- ! What is the origin of the unknown material? (What process or drum did it come from?)
- ! How was the material used or produced?
- ! What is the age of the material?
- ! Is the Material Safety Data Sheet (MSDS) available?

## **Ask The Tough Questions When Evaluating Potential Labs**

The analytical testing process begins before samples are collected, and ends when analytical results are received and samples are properly disposed. By considering and asking the following questions before contracting with a lab, a business can help ensure its samples are handled properly throughout the analytical process:

- ! Are the lab personnel trained and equipped to perform the requested analyses?
- ! Does the lab provide sampling containers and guidance for collecting, preserving, storing, and transporting samples properly?
- ! Does the lab have field personnel who are trained in proper collection techniques?
- ! When will the analytical results be available?
- ! What is the procedure for sample disposal by the laboratory after analysis is complete?

**Important Note:** All users of commercial lab services are directly responsible for insuring that any company with whom they contract for products or services complies with the requirements of state and federal law.

## **Fact Sheet**

### **B-2.2 Selecting an Industrial or Environmental Consultant**

Starting a waste reduction project using resources at hand makes good financial sense. However, if your project is complex, hiring an industrial or environmental consultant to supplement your internal capabilities may help you complete the job in a thorough and efficient manner. The skills and areas of expertise that consultants offer vary greatly. For this reason, selecting a consultant requires careful research, starting with an assessment of your own needs.

#### **Assess Your Needs**

Begin assessing your needs by reviewing project objectives, making sure they are specific and well defined. Determine what parts of your current operations meet these project objectives, and what parts do not. Then, develop actions or steps needed to meet your project objectives. Make certain that you document how changes — such as process or product changes, materials substitutions and disposal cost reductions — will affect business operations, profitability, and regulatory requirements.

#### **When determining your project objectives, ask the following questions:**

- ! How much of the project work can be done by your company?
- ! How much of the project work is beyond your company's capabilities and must be done by another company?
- ! What resources are available free of charge through equipment vendors and publication information sources, such as libraries and public technical assistance programs (university extension services, government agencies, trade associations, etc.)?
- ! How much money can your company devote to the project?
- ! What are the project's projected cost savings and payback period?
- ! What is the company commitment to the project? Is it willing to make changes that will affect production processes?
- ! What is the timetable for completing the project?

#### **Understand the Consultant's Role**

Once project objectives are determined, compare your situation and needs to services that consultants offer. A partial list of services generally provided by consultants includes:

- ! Expertise in certain areas.
- ! Objective assessment of your situation.
- ! Help with interpreting regulations.
- ! Temporary supplement to your staff resources and knowledge base.
- ! Technical and economic analysis of alternatives.
- ! Development of recommendations.

- ! Design and engineering support.
- ! Assistance with equipment selection and purchasing.
- ! Assistance with implementing operational changes and startup.
- ! Completion of one-time projects.
- ! Performance of annual tasks, such as facility reviews.

Although environmental consultants can provide many services to improve your company's operations and productivity, remember that you are the experts about your company. Consultants can only enhance your expertise. Do not depend on consultants to provide the following:

- ! Decision Making: You need to evaluate what will work for your business.
- ! Purchasing Specific Products: Find out if the consultant receives compensation when you buy recommended products through them. The product they recommend may not be the most cost effective.
- ! Standard Services: Generally, consultants are hired to provide customized solutions for clients.

### **Find the Right Consultant**

After your company decides that consulting services offer the resources you need to implement your project objectives, begin the process of identifying the consultant that will best meet your needs. For example, if your project involves process changes, find a consultant that has appropriate design engineering experience. To find the right consultant, do the following:

- ! Obtain referrals: Contact local companies with similar operations, trade associations, legal counsel, regulatory and state agencies, or consultant referral services.
- ! Do your homework: Contact consultants directly to identify their expertise and their interest in your project.

### **Prepare for your First Meeting**

Before you meet with prospective consultants, you should do the following:

- ! Prepare a report describing your project objectives and your current operations.
- ! Identify the experience that each consultant has on projects similar to yours.
- ! Obtain references from each consultant to verify the work. Checking past work performance is one of the best ways to evaluate a consultant.

When you meet with each of the consultants, be prepared to do the following:

- ! Explain how much of the project objectives your company can accomplish both with and without consultant assistance.

- ! Define what you want the consultant to do, but explain that their opinions are welcome. An outside perspective on your situation is valuable.
- ! Identify your project timeline.
- ! Find out who would be working on your project.

At the end of the meeting, request a proposal from each consultant based on the information you provided in your report and during your meeting. Be sure to provide more information when requested by the consultants. Clear communication at this stage is important to help ensure your getting the results you want.

### **Review the Proposals**

When reviewing a proposal, make sure that it answers the following questions:

- ! Has the consultant responded to your principle needs based on your outlined objectives?
- ! What services are specific to your project?
- ! Is a project timetable included that covers both consultant time and your company's personnel time? Is the timetable reasonable?
- ! Are all fees and equipment costs clearly explained? Are billing procedures included? Are the fees reasonable?

A consultants's written proposal should also include the following:

- ! Responsibilities of your company's personnel.
- ! Responsibilities of the consultant(s).
- ! Personnel assigned to the project, including their experience levels and billing rates.
- ! References relevant to your project. (Ideally, references should be obtained prior to meeting with the consultants.)

### **Avoid Misunderstandings**

The following are issues most frequently neglected by companies when hiring a consultant. Consider addressing these issues in your contract or letter of agreement:

- ! Use of subcontractors: Does the consultant use subcontractors and assess a commission for their services?
- ! Liabilities and insurance: Who provides the necessary insurance coverage?
- ! Licenses and certifications: Are they needed? Does the consultant have them?
- ! Additional expenses: How will unforeseen expenses be handled? Will you be contacted before these expenses are incurred?
- ! Work site and space: Will the consultant need a substantial amount of time on-site? Is there adequate space for the consultant to work while at your company?

- ! Confidentiality: Will the information that is accessible to the consultant be kept confidential? If so, a nondisclosure clause must be in the contract.
- ! Timeline: What are the project milestones? When should reports be submitted and the project completed?

### **Sources for Referral and More Information**

Additional information about hiring environmental consultants is available from the following resources:

- ! Trade and professional business associations.
- ! Legal counsel.
- ! Other companies in your industry.
- ! County or university extension agencies.
- ! Regulatory and state government agencies.
- ! Better Business Bureau.
- ! Yellow Pages.
- ! Trade magazines and journals, such as *Pollution Engineering*.
- ! Dun's Consultants Directory provides listings of consultants by area of expertise and location. This directory is updated annually and is available in the business reference section of public libraries.

## **Fact Sheet**

### **B-2.3 Understanding Waste Reduction Assessments (Non-regulatory)**

#### **The Goal**

The goal of a nonregulatory waste reduction assessment by extension agency specialists is to identify opportunities for reducing or eliminating hazardous waste and emissions from small business manufacturing processes. It also aims to provide information about waste reduction technologies that will allow small quantity generators to actually reduce waste.

Solid and hazardous waste specialists perform an assessment in response to requests from companies. These requests usually indicate that a company recognizes that it is generating hazardous waste and has some motivation to reduce or totally eliminate wastes. The initial telephone contact by the company is an important opportunity for getting information about waste generation throughout its facility.

Most generators will call with a question about a specific waste generating process, and some effort may be required to get them to describe what other types of activities occur in their facility. Once a complete picture of the facility is formed, and a time arranged for the assessment, background information on the company and its manufacturing processes are compiled. Regulatory databases are searched to obtain current discharge and disposal data and companies may be asked to provide past years waste data, and descriptions of their manufacturing processes.

This information is used to develop a profile of waste generating processes. Using this profile, background research on waste reduction technologies is conducted and a preliminary packet of waste reduction information is compiled. If a company demonstrates an existing commitment to change, specialists do not normally pursue a detailed justification for waste reduction options based on cost savings or manufacturing efficiencies.

These topics are routinely addressed during the assessment, and the specialist may give direction to a company that wishes to develop such a justification. The time required for such a detailed assessment is typically beyond the scope of extension specialist services.

#### **The Process**

The on-site waste reduction assessment normally begins with a short meeting to discuss services the extension specialist can provide. The needs of the company are reviewed and prepared information is presented. The specialist then joins a company representative for a walk-through tour of the plant. This usually follows a logical flow through company operations; reviewed are production processes from either raw material to finished product, or from the waste source to discharge. During this time, other relevant aspects of the facility are examined to identify regulatory compliance problems or other waste reduction opportunities.

Questions relating to the processes are posed to company representatives and line workers with the goal of stimulating thinking about waste reduction as well as clarifying points about waste generation. The ongoing dialogue between the specialist and company representative is the essential educational opportunity during the assessment. It is usually the best time to reach the individuals responsible for implementing waste reduction and to provide them with motivation, information, and resources. Additional information may be gathered by the specialist on other company concerns. A brief exit interview follows to review any details about the assessment or to answer other questions by company staff. A typical assessment will take two to four hours, depending on the business size and the complexity of the manufacturing process.

### **Follow-up and Future Assessment Information**

Specialists research waste reduction options about specific processes and write a report describing in detail the findings of the assessment and opportunities for implementing waste reduction. This report includes: a description of each waste and the process that generates it; opportunities for reducing the waste; sources of additional information, technology and services to support waste reduction; and a discussion of regulatory, worker health and safety issues related to the use of a new material or process. Copies of the report are submitted to the company and also kept on file with the specialist.

The specialist continues to be available to the company to answer any additional questions that arise during the implementation of the waste reduction option. Specialists can also provide long-term support to companies that must deal with complex issues, or that wish to develop in-house waste reduction programs.

These waste reduction assessments through the extension service are non-regulatory and free of charge. Interested companies can contact their county extension agents for more information.

## **Fact Sheet**

### **B-2.4 Off-site Disposal of Hazardous Wastes: Choosing the Right Treatment, Disposal Facility, and Hazardous Waste Hauler**

Once waste is generated, small businesses have several choices for waste management. The term “management” refers to the various handling options such as treatment, storage, recycling, or disposal. Waste may be managed on-site, where it was generated, or managed off-site using a contractor. Not only is shipping waste expensive, it can result in large fines and clean up bills if handled improperly.

#### **Choosing a Treatment and Disposal Facility**

One of the most important decisions for a small business is who to entrust its hazardous waste to. Before signing a contract with a waste treatment and disposal facility, ask the following questions:

- ! Does the facility have all necessary state and U.S. Environmental Protection Agency (EPA) permits to handle your particular waste? Does it have an EPA hazardous waste identification number?
- ! Is the facility in violation of any state or federal law (check with the state regulatory agency)?
- ! Does the facility have any current groundwater or soil contamination, and if so, what is being done to correct the situation?
- ! Does the facility test water before it is processed so incompatible wastes are not mixed together?
- ! Will they test your waste post-treatment to ensure that the treatment standards are met?
- ! How long will it take before your waste is processed? Where and how will the waste be stored in the interim?
- ! Is there good security at the site?
- ! How old is the facility and the equipment? Does it look well-maintained?
- ! Are generators in businesses similar to yours satisfied with the facility?

If the treatment and disposal facility requires a signed contract, review it with an attorney and make sure the facility agrees to notify you in the event of:

- ! Regulatory action taken against it.
- ! Legal action started against it.
- ! Change of ownership.
- ! Termination of operation.
- ! Changes in pollution liability insurance coverage.

If possible, try to visit the facility and periodically check up on the facility. This is in the small businesses best interest, since all waste generators who use treatment and disposal facilities are liable, along with the owner and operator, for any damage to the environment caused by the facility.

## Choosing a Hazardous Waste Hauler

Who hauls waste from a small business to a treatment and disposal facility is equally important. Hazardous waste haulers have been known to mismanage waste. Before contracting with a hauler, do some background checking on the following information:

- ! Does the transporter have a license to transport hazardous waste in every state that must be traveled through to reach the chosen facility?
- ! Does the transporter offer special services to small quantity generators (SQGs)?
- ! Will the transporter take the waste to the chosen treatment and disposal facility?
- ! Is the transporter in compliance with all state and federal regulations? Was it ever in violation?
- ! Does the hauler serve similar businesses?
- ! How long will the delivery take?
- ! What precautions has the transporter taken to minimize spills or leaks?
- ! What spill control training do the drivers have? What spill control equipment will be on the trucks?
- ! How often will the transporter come to pick up your waste? Is there a minimum quantity?

Cooperate with other waste generators to reduce your shipping and handling costs. Many hazardous waste management facilities will not accept small quantities of waste. Organizing with others to combine waste shipments will improve the chances of finding a reputable hauler and treatment and disposal facility.

One way of reducing waste shipping costs is to set up a “milk run” with other local businesses. If several generators have their waste ready at the same time, the hauler only has to make one trip to collect the waste. The cost of pick-up is split among the generators.

**Source:**

*Managing Your Hazardous Wastes: A Guide for Wisconsin Small Quantity Generators*, 3rd ed., Wisconsin Department of Natural Resources, Bureau of Solid & Hazardous Waste Management, PUBL-SW-071 93REV (JG 60 93).

## **Fact Sheet**

### **B-2.5 Materials Waste Exchange: An Effective Waste Reduction Tool for Small Businesses**

A waste exchange can help businesses find a market or an end user for materials they no longer need. This exchange is a materials listing system based on the premise that one business' discards can be another business' feedstock. A low-cost method of solid waste management, waste exchange can be used effectively as a source reduction program. Waste exchanges enable businesses to use existing materials rather than virgin feedstock, conserving valuable resources and reducing landfilled wastes.

The most common type of waste exchange is actually an information exchange. Waste information exchanges do not handle the actual materials. Details about available or wanted waste and surplus materials are compiled into lists in the form of catalogs or on an electronic bulletin board service (BBS). Businesses contact one another directly to set up the actual exchange. If listings are confidential, then the waste exchange service acts as intermediary between the two parties. Some exchanges also provide information about waste management goods and services.

#### **The Advantages**

Waste exchanges are both cost effective and environmentally beneficial. The business generating the waste can avoid paying disposal costs, avoid shipping costs, and free up valuable storage space. The businesses receiving the materials use this less expensive feedstock and packaging by not having to buy new materials. Communities can extend the life of landfills, while also keeping hazardous chemicals out of waste. And, of course, the environment is improved by decreasing the use of raw materials.

Other benefits can result from using waste exchanges. Entrepreneurs can use them as a source of ideas and opportunities to start new businesses or product lines. Publicizing the use of exchanges can also help businesses improve their corporate image.

#### **Using a Waste Exchange Service**

Materials suitable for exchange include surplus equipment, unused supplies, and discontinued products. Typical materials listed in waste exchanges include:

Acids	Plastic & Rubber	Containers & Pallets
Alkalis	Textiles & Leather	Durables & Electronics
Other Inorganic Chemicals	Wood & Paper	Glass, Paint & Coatings
Solvents	Metal & Metal Sludge	Miscellaneous
Other Organic Chemicals	Lab Chemicals	
Oil & Wax	Construction Materials	

## **Listing Materials**

It is easy to list materials with a waste exchange service. A form for listing materials is provided in most catalogs. Most exchanges allow confidential listing of materials. To list a material, the generator provides pertinent information like:

- ! Whether the material is available or needed;
- ! The type of material (acids, plastics, metals, etc.);
- ! Its physical state;
- ! The amount of material;
- ! How often the material is available or needed;
- ! How it is packaged;
- ! List any contaminants that may be present in the material;
- ! If it is a liquid, provide its chemical formula;
- ! Indicate the process that generated the material.

## **Responding To a Listing**

Businesses interested in materials that are listed confidentially first contact the waste exchange service that published the listing. The waste exchange then gives information about the interested business to the generator of the materials. The generator has the option to contact the responding business and negotiate any exchange. If the listing provides the name and address of the generator offering the materials, the business may contact the generator directly. The generator and the business desiring the material negotiate any exchange directly with each other.

## **The Wisconsin Example**

Several waste exchange options can be used by Wisconsin businesses. Wisconsin cooperates with the Industrial Materials Exchange Service (IMES) in Illinois which lists materials from Wisconsin businesses and shares listings with the National Materials Exchange Network (NMEN). There are also waste exchanges in Minnesota and Michigan that can be used. A service limited to businesses in eastern Wisconsin through Wisconsin Electric Power Company (WEPCO) is another option.

## **National Materials Exchange Network**

National Materials Exchange Network (NMEN) is a cooperative effort of 36 materials exchanges across North America. NMEN offers an on-line national database of materials containing more than 5,200 listings of materials available and wanted in 17 categories. The network's BBS is operated by the Pacific Materials Exchange (PME), a nonprofit corporation based in Spokane, Washington, through a grant from the U.S. EPA.

Both PME and NMEN accept listings from any company in any state. When listing with the local exchange, materials will also be listed with NMEN. NMEN lists materials available and needed including: waste by-products; off-spec, overstock, obsolete and damaged materials; and used and virgin solid and hazardous wastes. To list with NMEN, use a computer with a modem. Any business or Industry may list materials by calling 1-800/858-6625. The help line number is 509/325-0551.

### **Advantages of Using the National Materials Exchange Network**

Since NMEN operates as an electronic bulletin board service, it offers several advantages over other materials exchange services:

- ! No charge for the service.
- ! Access is available 24 hours a day.
- ! Listing exposure includes all of North America.
- ! All listings are current — no time lag like the period between when a catalog is printed and when it is distributed.
- ! Instant access to materials listings by modem rather than by periodic catalog.

### **Before you Ship Materials**

Department of Transportation (DOT) and Occupational Health and Safety Administration (OSHA) rules apply when shipping and handling industrial hazardous materials. For general questions about industrial hazardous material exchanges, contact waste reduction specialists at the nearest county extension service or state regulatory agency.

## Resource List

### B-3.1 Wisconsin Environmental Analytical Labs

This is a partial listing of firms that providing environmental analytical services to Wisconsin companies. Small businesses requiring specific environmental analysis to meet regulations should contact several of the listed firms to obtain descriptions of their services and competitive pricing.

#### **Automotive and Industrial Services**

Eau Claire, WI 54701  
715/834-9624

#### **Bech-Hoppe Associates**

Wausau, WI 54401  
715/845-8000

#### **Central Wisconsin Engineers**

Rothschild, WI 54474  
715/359-9400

#### **Employee Health Assurance Group**

Schofield, WI 54476  
715/359-8200  
800/627-8200

#### **Environmental Systems Company**

414/291-0519

#### **Enviroscan Corporation**

Rothschild, WI 54474  
715/355-3221

#### **Foth and Van Dyke**

Green Bay, WI 54307  
414/497-8516

#### **Huntingdon**

Wausau, WI 54402  
715/845-4100

#### **Hydrite Chemical Company**

Wausau, WI 54401  
715/848-1890

#### **Laidlaw Environmental Services**

Pecatonica, IL 61063  
414/422-1802

#### **National Environmental Testing**

Watertown, WI 53094  
414/261-1660

#### **Northern Lake Service**

Crandon, WI 54520  
715/478-2777

#### **Precision Analytical Laboratory**

Milwaukee, WI 53212  
414/272-6949  
800/438-9186

#### **Ramaker and Associates**

Sauk City, WI 53583  
608/643-4100

#### **Safety-Kleen Envirosystems**

Elgin, IL 60121  
800/669-5750

#### **Serco Laboratories**

St. Paul, MN 55113  
612/636-7178

#### **Strand Associates**

Madison, WI 53715  
608/251-4843

#### **Wausau Insurance Companies-Environmental Health Laboratory**

Wausau, WI 54402  
715/842-6810

#### **Waste Research and Reclamation Company**

Eau Claire, WI 54701  
715/834-9624

## Resource List

### B-3.2 Wisconsin Industrial and Environmental Consultants

This is a partial listing of firms providing industrial and environmental consulting services to Wisconsin companies. Small businesses requiring specific environmental analysis to meet regulations should contact several of the listed firms to obtain descriptions of their services and competitive pricing.

**Advent Environmental Services**

Mequon, WI 53902  
414/238-1998 (Mequon)  
715/831-1530 (Eau Claire)

**Ayres Associates**

Eau Claire, WI 54702  
715/834-3161

**Badger Labs & Engineering**

Appleton, WI 54915  
800/776-7196

**Becher-Hoppe Associates**

Wausau, WI 54401  
715/845-8000

**Braun Intertec**

New Berlin, WI 53151  
414/796-8231

**Camp Dresser & McKee, Inc.**

Milwaukee, WI 53217  
414/964-6166

**Capsule Engineering**

St. Paul, MN 55113  
800/328-8246  
612/636-2644

**CH2M Hill**

Milwaukee, WI 53201  
414/272-2426

**Central Wisconsin Engineers**

Rothschild, WI 54474  
715/359-9400

**Delta Environmental Consultants**

New Berlin, WI 53151  
414/789-0254

**Drake Environmental**

Minoqua, WI 54548  
715/358-7612

**Earth Technology Corporation**

Wauwatosa, WI 53222  
414/466-9266

**Eder Associates**

Madison, WI 53717  
608/836-1500

**Flark Associates**

Wisconsin Rapids, WI 54494  
715/325-3827

**Foth and Van Dyke**

Green Bay, WI 54307  
414/497-8516

**Geraghty & Miller Inc.**

Milwaukee, WI 53202  
414/276-7742

**Graef, Anhalt, Schloemer and Associates**

Milwaukee, WI 53226  
414/259-1500

**HNTB Corporation**

Milwaukee, WI 53224  
414/359-2300

**Huntingdon**

Wausau, WI 54402  
715/845-4100

**John Robinson and Associates**

Wausau, WI 54402  
715/842-4655

**Key Environmental Services**

Cedarburg, WI 53012  
414/375-4750  
715/542-3502

**Liesch Environmental Services**

Madison, WI 53704  
608/241-3010

**Michaels Engineering Inc.**

La Crosse, WI 54602-2377  
608/785-1900

**Mid-State Associates**

Baraboo, WI 53913  
608/356-8344

**Northwest Petroleum Services**

Wausau, WI 54401  
715/675-2084

**Omni Associates, Inc.**

Appleton, WI 54914  
414/739-7814

**Radian Corporation**

Milwaukee, WI 53214  
414/643-2668

**Ramaker and Associates**

Sauk City, WI 53583  
608/643-4100

**Remedial Engineering**

Wausau, WI 54401  
715/675-9784

### **B-3.2 Wisconsin Industrial and Environmental Consultants (continued)**

**RMT Inc.**

Madison, WI 53717  
608/831-4444

**Woodward-Clyde Consulting**

Middleton, WI 53562  
608/836-5040

**RUST Environmental and  
Infrastructure**

Plover, WI 54467  
715/341-8100  
Sheboygan, WI 53083  
414/458-8711

**Yanko Environmental  
Services**

Sheboygan, WI 53081  
414/459-2500

**Sigma Environmental Services**

Oak Creek, WI 53154  
414/768-7144

**Simon Hydro-Search**

Brookfield, WI 53045  
414/792-1282

**Strand Associates**

Madison, WI 53715  
608/251-4843

**Triad Engineering**

Milwaukee, WI 53202  
414/291-8840

**Twin Cities Testing  
Corporation**

Wausau, WI 54402  
715/845-4100

**Warzyn**

Madison, WI 53705  
608/231-4747

**Roy F. Weston**

Vernon Hills, IL 60061  
708/918-4000

**WW Engineering & Science**

Milwaukee, WI 53225  
414/466-5554

## Resource List

### B-3.3 Wisconsin Hazardous Waste Transporters

This is a partial listing of the firms that provide hazardous waste transportation services. Companies that require specific waste transportation needs should contact several of the listed firms to obtain descriptions of their services and competitive pricing.

**Alliance Transportation Services**

Milwaukee, WI 53201  
414/344-6400

**Aptus Inc.**

Lakeville, MN 55044  
316/251-6380

**Ashland Chemical Company**

Milwaukee, WI 53208  
414/258-4282

**Cermatics, Inc.**

Mequon, WI 53092  
414/242-1037

**Deluxe Disposal Service**

Mosinee, WI 54455  
715/693-3714

**E&K Hazardous Waste Service**

Sheboygan, WI 53082  
414/458-6030

**Envirite Corporation**

Harvey, IL 60426  
708/596-7040

**Hy-Ho Silver**

DeForest, WI 53532  
608/221-1375

**Hydrite Chemical Company**

Cottage Grove, WI 53527  
608/257-1414

**Laidlaw Environmental Services**

Corunna, Ontario  
519/864-1021

**Milwaukee Solvents & Chemical**

Menomonee Falls, WI 53051  
414/252-3550

**N&M Transfer Company**

Neenah, WI 54956  
414/722-7760

**National Tank Service**

West Allis, WI 53214  
414/257-0030

**Northwest Petroleum**

Brule, WI 54820  
715/372-5000

**Rainbow Freight Systems**

Milwaukee, WI 53228  
414/529-8200

**Rock Oil Refining, Inc.**

Stratford, WI 54484  
715/687-4198

**Safety-Kleen Corporation**

Elgin, IL 60123  
708/697-8460

**Schwerman Trucking**

Milwaukee, WI 53201  
414/671-1600

**Tank Transport, Inc.**

Milwaukee, WI 53224  
414/357-8380

**The Metal Men, Inc.**

Muskego, WI 53150  
414/422-9311

**Waste Research & Reclamation**

Eau Claire, WI 54701  
715/834-9624

**Wausau Chemical Company**

Wausau, WI 54401  
715-842-2285

**Source:**

Resource List: *Hazardous Waste Transporters*, Solid and Hazardous Waste Education Center, University of Wisconsin-Extension.

## Resource List

### B-3.4 Wisconsin Industrial Recycling Services

This is a partial listing of the firms that provide industrial recycling services. Companies that require specific industrial recycling needs should contact several of the listed firms to obtain descriptions of their services and competitive pricing.

**ABC Services, Inc.**

*Empty Barrels and Drums,  
Fuel Oil, Industrial Lubricants,  
Solvents*  
Kenosha, WI 53142  
414/552-9090

**Automotive and Industrial Services**

*Oils and Waxes, Organic  
Chemicals, Solvents*  
Eau Claire, WI 54701  
715/834-9624

**Black Gold Environmental Corp.**

*Inorganic Chemicals, Oils and  
Waxes, Solvents*  
Ogdensburg, WI 54962  
414/244-7488

**Chemical Analytics, Inc.**

*Acids, Alkalis, Inorganic  
Chemicals, Metals/Metal  
Sludges, Oils and Waxes,  
Organic Chemicals, Solvents*  
Menomonee Falls, WI 53051  
414/781-8804

**CleanSoils, Inc.**

*Solid Wastes, Soil*  
Jefferson, WI 53549  
414/674-6210

**EOG Environmental, Inc.**

*Empty Barrels and Drums,  
Fuel Oil, Industrial Lubricants,  
Solvents*  
Milwaukee, WI 53223  
414/353-1156

**France Sales and Service**

*Refrigerants*  
Schofield, WI 54476  
715/359-0091

**Graphic House**

*Fluorescent Lamps*  
Wausau, WI 54401  
715/842-0402

**Hydrite Chemical Company**

*Oils and Waxes, Organic  
Chemicals, Solvents*  
Wausau, WI 54401  
715/848-1890

**JB Industrial Sales**

*Empty Barrels and Drums,  
Fuel Oil, Heavy Metal Sludge,  
Industrial Lubricants, Solvents*  
Muskego, WI 53150  
414/679-4325

**Laidlaw Environmental Services**

*Organic Chemicals, Solvents*  
Pecatonica, IL 61063  
414/422-1802

**Liesch Environmental Services**

*Acids, Alkalis, Inorganic  
Chemicals, Metals/Metal  
Sludges, Solvents*  
Madison, WI 53704  
608/241-3555

**Lochrie & Associates, Inc.**

*Empty Barrels and Drums,  
Fuel Oil, Industrial Lubricants,  
Pallets, Solvents*  
Milwaukee, WI 53213  
414/258-6613

**Marathon Oil Company**

*Oils and Waxes*  
Marathon, WI 54448  
715/443-2400

**Milsolve Environmental Services**

*Oils and Waxes, Solvents*  
Butler, WI 53007  
414/252-3550  
800/558-8501

**Recyclers Transport**

*Dunnage, Empty Barrels and  
Drums*  
Waterford, WI 53185  
414/535-4176

**Recyclights**

*Fluorescent Lamps*  
Minneapolis, MN 54401  
800/831-2852

**Rock Oil Refining**

*Oils, Oil Filters*  
Stratford, WI 54484  
715/687-4198

**Safety-Kleen EnviroSystems**

*Oil Filters, Oils and Waxes,  
Organic Chemicals, Solvents*  
Elgin, IL 60121  
800/669-5750

**Saint Marie Recycling**

*Empty Barrels and Drums, Fuel  
Oil, Pallets*  
Green Lake, WI  
414/294-9915

### **B-3.4 Wisconsin Industrial Recycling Services (continued)**

#### **Superior Environmental Services**

*Metals/Metal Sludges, Plastics  
and Rubber, Solvents*

Port Washington, WI 53704

414/284-9101

800/932-6216

#### **Waste Research and Reclamation**

*Fuel Oil, Industrial Lubricants,  
Solvents*

Eau Claire, WI 54701

715/834-9624

#### **Wausau Chemical Corporation**

*Acids, Alkalis, Inorganic  
Chemicals, Organic Chemicals,  
Solvents*

Wausau, WI 54403

715/842-2285

#### **Wausau Steel Corporation**

*Metals/Metal Sludges*

Wausau, WI 54402

715/845-4286, ext. 234

#### **Source:**

Resource List: *Industrial Recycling*, University of Wisconsin-Extension, Solid and Hazardous Waste Education Center, October 1993.

# **APPENDIX C**

## **Wisconsin Small Business Waste Reduction Technical Assistance Resources**

## **C-1 Wisconsin Business Programs**

### **Wisconsin Manufacturing Extension Partnership (WMEP)**

WMEP promotes the global competitiveness, strength, productivity, and innovative capabilities of the state's 10,000 small- and medium-sized manufacturers. The program uses an extensive state and national network of technical and financial resources to help clients diagnose and better understand problems and needs, and then find the appropriate technical or business solution. WMEP partners federal support from the Department of Commerce's National Institute of Standards (NIST) with state and local organizations. For more information contact: Wisconsin Center for Manufacturing & Productivity, 432 N. Lake St. Rm. B-121, Madison, WI 53703; or call 608/262-2069.

### **Energy Center of Wisconsin**

Formerly the Wisconsin Center for Demand-Side Research, the center is an independent, non-profit organization funded largely by contributions from Wisconsin utilities. It conducts research on energy efficiency and maintains a library and database of energy-related publications and studies. The center also provides access to numerous utility libraries, national research institutions, and other electronic databases. Concerned with the residential, commercial, Industrial, and agricultural sectors, the center evaluates energy use, helps explore energy-saving technologies and programs, conducts energy efficiency workshops, and/or can provide community-based energy-efficient strategies. For more information contact: Energy Center of Wisconsin, 595 Science Drive, Suite A, Madison, WI 53711; or call 608/238-4601.

### **Greater Milwaukee Toxics Minimization Task Force**

The Task Force is a nonprofit organization whose goal is to minimize toxic pollutants entering the environment. The Task Force does this while considering the financial, social, and public health impacts of such efforts. The Task Force unites industry, businesses, labor, state and local agencies, educational institutions, environmental organizations, law firms, elected officials, and others to develop and implement strategies to reduce toxic substances entering the Milwaukee ecosystem. It has created the Pollution Prevention Information Exchange (PPIE) to encourage Wisconsin businesses to share information, services, or expertise on equipment, materials and supplies, and success stories about pollution prevention. For more information, contact: Jack Annis, c/o Solid and Hazardous Waste Education Center, UW-Extension, 161 W. Wisconsin Ave., Ste. 6000; Milwaukee, WI 53203-2602; or call 414/227-3371, or fax 414/227-3165, or e-mail [phillip.annis@ces.uwex.edu](mailto:phillip.annis@ces.uwex.edu).

**Wisconsin Manufacturers & Commerce**

501 E. Washington Avenue  
Madison, WI  
608/258-3400

The Wisconsin Manufacturers & Commerce (WMC) is a member-driven business association with 3,750 members. It is dedicated to representing Wisconsin businesses. WMC lobbyists actively participate in the administrative rule-making process at the Department of Natural Resources (DNR). The Environmental Policy Committee, part of the WMC, encourages the development of environmental policies that benefit all Wisconsin citizens by balancing the goal for a healthy environment with the need for a growing, productive, and competitive economy. For further information on WMC, contact: Patrick Stevens at 608/258-3400; or fax: 608/258-3413.

**Federation of Environmental Technologists (FET)**

The Federation of Environmental Technologists is a non-profit organization assisting Industry with environmental compliance. Membership in FET is open to all industries, municipalities, organizations, and individuals concerned about environmental regulations. There are approximately 1,200 members and 150 patron companies. FET has three main objectives: inform members of the latest environmental regulations and compliance methods, conduct problem-solving sessions concerning environmental issues, and conduct environmental compliance workshops and training programs. For more information contact: FET, P.O. Box 185, Milwaukee, WI 53201; or call 414/251-8163, or fax 414/251-6119.

## C-2 Wisconsin Trade Associations

**Automobile and Truck Dealers Assn., Inc., Wis.**  
105 E. Gilman St.  
P.O. Box 5345  
Madison, WI 53705-5345  
608/251-5577

**Automotive Service Assn. of Wis.**  
3702 Nathan Hale Ct.  
P.O. Box 620-830  
Middleton, WI 53562-0830

**Automotive Trades Assn., Inc., Wis.**  
802 W. Broadway  
P.O. Box 8961  
Madison, WI 53708-8691  
800/856-9282  
608/223-9955

**Brewers Assn., Wis. State**  
4470 Imperial Dr.  
Brookfield, WI 53045

**Builders and Contractors of Wis., Inc., Associated**  
2601 Crossroads Dr.  
Madison, WI 53704  
608/244-5883

**Builders Assn., of Wis., Master**  
P.O. Box 551  
Menomonee Falls, WI 53052-0551

**Builders Assn., Wis.**  
4868 High Crossing Blvd.  
Madison, WI 53704  
608/242-5151

**Cast Metals Assn., Wis.**  
660 E. Mason  
Milwaukee, WI 53202

**Cheesemakers Assn., Wis.**  
3 S. Pickney St.  
Madison, WI 53703  
608/255-2027

**Convenience Stores, Wis. Assn. of**  
121 S. Pickney St.  
Madison, WI 53703  
608/256-7555

**Corn Growers Assn., Wis.**  
2976 Triverton Pike  
Madison, WI 53711

**Cranberry Growers Assn., Wis. State**  
P.O. Box 365  
Wisconsin Rapids, WI 54495

**Dairy Foods Assn., International**  
6441 Enterprise Ln.  
Madison, WI  
608/277-8501

**Dairy Products Assn., Inc., Wis.**  
8383 Greenway Blvd.  
Middleton, WI 53562

**Dental Assn., Inc., Wis.**  
111 E. Wisconsin Ave., St. 1300  
Milwaukee, WI 53202

**Fabricare Institute, Wis.**  
9910 W. Layton Ave.  
Greenfield, WI 53228

**Farm Bureau Federation, Cooperative, Wis.**  
P.O. Box 5550  
7010 Mineral Point Rd.  
Madison, WI 53705  
608/833-8070

**Farm Bureau Service Cooperative, Wis.**  
P.O. Box 5550  
Madison, WI 53705

**Farm Health and Safety Council of Wis., Inc.**  
3518 Memorial Dr., Bldg. 4  
Madison, WI 53704

**Farmers Educational and Cooperative Union of America, Wis. Div.**  
117 W. Spring St.  
Chippewa Falls, WI 54729

**Fertilizer and Chemical Assn., Inc., Wis.**  
2317 International Ln., St. 115  
Madison, WI 53704  
608/249-4070

**Food Processors Assn., Inc., Midwest**  
502 E. Main St.  
P.O. Box 1297  
Madison, WI 53701-1297  
608/255-9946

**General Contractors of Amer., Inc., Wis. Associated**  
4814 E. Broadway  
Madison, WI 53716  
608/221-3821

**Grocers Assn., Inc., Wis.**  
2601 Crossroads Dr.  
Madison, WI 53713  
608/244-7150

**Hazardous Materials Responders, Inc., Wis. Assn.**  
P.O. Box 128  
Janesville, WI 53547-0128

## Wisconsin Trade Associations (continued)

### **Innkeepers Assn., Wis.**

509 W. Wisconsin Ave., St. 622  
Milwaukee, WI 53203

### **Liquid Waste Carriers Assn., Wis.**

44 E. Mifflin St.  
Madison, WI 53703  
608/283-2588

### **Lumbermen's Assn., Inc., Wis. Retail**

6000 W. Executive Dr.  
P.O. Box 97  
Mequon, WI 53092

### **Manufacturers and Commerce, Inc., Wis. Assn. of**

501 E. Washington Ave.  
P.O. Box 352  
Madison, WI 53701-0352  
608/258-3400

### **Meat Processors, Inc., Wis. Assn. of**

8300 Cty. V  
Marshfield, WI 54449

### **Milk Producers Inc., Associated**

1707 Park St.  
P.O. Box 9810  
Madison, WI 53715-0810

### **National Farmers Organization, Wis.**

825 Water St.  
Sauk City, WI 53583

### **Painting and Decorating Contractors of Amer., Wis.**

W6591 Manitowoc Rd.  
Menasha, WI 54952

### **Paper Council, Wis.**

111 E. Wisconsin Ave.  
P.O. Box 718  
Neenah, WI 54957-0718

### **Petroleum Marketers Assn. of Wis., Inc.**

121 S. Pickney  
Madison, WI 53703  
608/256-7555

### **Printing Industries of Wis., Inc.**

P.O. Box 126  
Elm Grove, WI 53122  
414/785-9090

### **Restaurant Assn., Wis.**

31 S. Henry St., St. 300  
Madison, WI 53703  
800/589-3211

### **Retail Assns., Conference of**

25 W. Main St., St. 600  
Madison, WI 53703

### **Tavern League of Wis., Inc.**

103 N. Hamilton St.  
P.O. Box 170  
Madison, WI 53701  
608/251-1133

### **Veterinary Medical Assn., Wis.**

301 N. Broom St.  
Madison, WI 53703  
608/257-3665

### **Wineries, Assn. of Wis.**

7876 Hwy. 188  
P.O. Box 87  
Prairie du Sac, WI 53578

### **Wisconsin Fabricare Institute**

9910 W. Layton Ave.  
Greenfield, WI 53228  
414/529-4707

## **C-3 University of Wisconsin-Extension**

### **Solid and Hazardous Waste Education Center (SHWEC)**

As a non-regulatory agency, SHWEC's pollution prevention specialists provide education and technical assistance to Industry and local governments to reduce the amount of hazardous waste sent to disposal facilities, and toxic emissions released to the air, land, or water. SHWEC specialists work closely with the county-based faculty of the University's Cooperative Extension Service to conduct local-level programming. Specific programs include: recycling markets information, pollution prevention, hazardous waste minimization, solid waste processing, recycling program collection and design, and related issues, such as contracts and regulations. The Center's technical assistance staff is located on four university campuses across the state. For assistance, contact the nearest county Community Natural Resource Development agent or contact the nearest SHWEC office:

**Madison:** University of Wisconsin-Extension, Solid and Hazardous Waste Education Center, 610 Langdon Street, Rm 529, Madison, WI 53703; or call 608/262-0385, or fax 608/262-6250, or e-mail *shwec@epd.engr.wisc.edu*.

**Milwaukee:** University Center For Continuing Education, 161 W. Wisconsin Ave., Ste. 6000, Milwaukee, WI 53203-2602; or call 414/227-3175, or fax 414/227-3165.

**Stevens Point:** College of Natural Resources, University of Stevens Point, Stevens Point, WI 54481; or call 715/346-2793, or fax 715/346-3624.

**Green Bay:** University of Wisconsin-Green Bay, 2420 Nicolet Dr., ES 317, Green Bay, WI 54311; or call 414/465-2327, or fax 414/465-2143.

**Menomonie:** University of Wisconsin-Stout, 103 First Ave. West, Menomonie, WI 54751; or call 715/232/2397, or fax 715/232-1105.

### **Community, Natural Resources & Economic Development (CNRED)**

CNRED agents are located throughout Wisconsin to strengthen the ability of citizens, community leaders, and local officials to identify and resolve critical community needs and issues. Three broad, independent areas are targeted: Communities (community revitalization, local government education, demographic information, community management); Natural Resources (land use, waste management, water quality, resource management); and Economic Development (small business, recreation and tourism, community economic analysis, energy). For additional information or to obtain information about the county extension office nearest to you, contact: Patrick Walsh, State Program Leader, or David Sprehn, Assistant State Program Leader; Community, Natural Resources & Economic Development (CNRED) Program Area, UWEX-Madison, 432 North Lake Street, 625 Extension Building, Madison, WI 53706-1486; or call 608-262-1748, or fax 608-262-9166.



## **Small Business Development Center (SBDC)**

The SBDC is a focal point for linking the resources of the federal, state, and local governments with those of colleges, universities, and the private sector to meet the specialized needs of small businesses. The Wisconsin SBDC, part of the University of Wisconsin-Extension, is a network of ten centers located at UW four-year institutions. The combined goal of the University of Wisconsin system and the SBDC is to help small businesses acquire the knowledge and ability to solve problems, plan for the future, and remain competitive in an ever-changing business environment. SBDC helps coordinate an array of business programs, counseling, special initiatives, research, and publications. The Wisconsin SBDC program is a major management assistance delivery program of the U.S. Small Business Administration, and is managed by the Office of Small Business Development Centers.

For additional general program information or to locate the SBDC office nearest you, contact:

**UW-Madison SBDC:** Serving Columbia, Dane, Iowa, Lafayette, and Sauk counties, and is the Wisconsin SBDC Main Office. Write to: Small Business Development Center, University of Wisconsin-Extension, State Office, 432 North Lake Street, Madison, WI 53706-1498; or call 608/263-7794, fax 608/262-3878, or e-mail the SBDC Counseling Network at *sbdc-coun@mac.wisc.edu*.

**UW-Milwaukee SBDC:** Serving Milwaukee, Ozaukee, and Washington counties. Call 414/227-3240.

**UW-Whitewater SBDC:** Serving Dodge, Green, Jefferson, Rock, Walworth, and Waukesha counties. Call 414/472-3217.

**UW-Parkside SBDC:** Serving Kenosha and Racine counties. Call 414/595-2189.

**UW-Oshkosh SBDC:** Serving Fond du Lac, Green Lake, Marquette, Outagamie, Sheybogan, Waushara, and Winnebago counties. Call 414/424-1453.

**UW-Green Bay SBDC:** Serving Brown, Calumet, Door, Florence, Forest, Kewaunee, Manitowoc, Marinette, Oconto, Oneida, Shawano, and Vilas counties. Call 414/465-2089.

**UW-Stevens Point SBDC:** Serving Langlade, Lincoln, Marathon, Menominee, Portage, Waupaca, and Wood counties. Call 715/346-2004.

**UW-Eau Claire SBDC:** Serving Barron, Chippewa, Clark, Dunn, Eau Claire, Pepin, Pierce, Polk, Rusk, St. Croix, and Taylor counties. Call 715/836-5811.

**UW-La Crosse SBDC:** Serving Adams, Buffalo, Crawford, Grant, Jackson, Juneau, La Crosse, Monroe, Richland, Trempealeau, and Vernon counties. Call 608/785-8782.

**UW-Superior SBDC:** Serving Ashland, Bayfield, Burnett, Douglas, Iron, Price, Sawyer, and Washburn counties. Call 715/394-8351.

## **Wisconsin Technology Access (WisTAP)**

WisTAP provides technical counseling and business connections to small manufacturing or technology-based businesses in Wisconsin. The program is provided through the state's Small Business Development Centers (SBDCs) located at ten University of Wisconsin-System

campuses. The services include: Industry-specific information on the latest technical and scientific advances, product and process innovation assistance, preliminary patent searches, government funding opportunities for new technologies, federal lab and university expertise, and Small Business Innovation Research Program assistance. For additional information, contact: WisTAP Manager, University of Wisconsin-Extension, 414/472-2792; or locate the nearest regional Small Business Development Center by calling 608/263-7794.

**Wisconsin Farmstead Assistance System/Home Assistance System Program  
(Farm\*A\*Syst/Home\*A\*Syst)**

These non-regulatory programs concentrate on surface water, groundwater, and indoor air quality risks in rural America. They address the problems created by harmful nitrates, microorganisms, and toxic chemicals. Both programs are based on coordinated, practical efforts that help identify groundwater pollution risks and motivate voluntary actions to prevent pollution.

A series of worksheets are used to identify pollution risks from a wide range of rural business and home site management practices. Fact sheets and technical referrals help direct voluntary prevention efforts in the common high risk areas of petroleum handling and storage, pesticide handling and storage, household wastewater disposal, and well design and management.

Program agents are located throughout the U.S. and Canada. The national home office is located at the University of Wisconsin. Assessment packet materials are also available in Spanish. The Farm\*A\*Syst/Home\*A\*Syst World Wide Web home page provides program information, newsletter articles, and text and graphic presentations on training materials. The home page address is:[<http://www.wisc.edu/farmasyst>]. For more information, contact: Farm\*A\*Syst/Home\*A\*Syst Program, B142 Steenbock Library, 550 Babcock Drive, University of Wisconsin, Madison, WI 53706; or call 608/262-0024, or e-mail [farmasyst@macc.wisc.edu](mailto:farmasyst@macc.wisc.edu).

## **C-4 Wisconsin Department of Commerce (WI DOC)**

### **Wisconsin Small Business Assistance Program (WI SBAP)**

#### **Small Business Clean Air Assistance Program**

Wisconsin's Small Business Clean Air Assistance Program is a joint effort between the Wisconsin Department of Natural Resources (DNR) and the Department of Commerce. The goal of our program is to help small businesses understand and comply with the regulations of the Clean Air Act Amendments, while remaining economically competitive. Section 507 of the Clean Air Act Amendments requires each state to operate a small business assistance program.

The Small Business Clean Air Assistance staff provides technical assistance through factsheets, informational brochures and other publications, answers compliance questions, conducts on-site consultations, responds to permitting inquiries, coordinates environmental compliance workshops, and directs businesses to other pertinent assistance providers. For more information, contact: Small Business CAA Program, Wisconsin Department of Commerce, 9th Floor, 123 W. Washington Ave., Madison, WI 53703; or call 608/267-9124, or fax 608/267-0436, or e-mail Pam Christenson at *pchrste@mail.state.wi.us*.

#### **Small Business Ombudsman**

The Small Business Ombudsman Program was established by state statute to assist Wisconsin's small businesses, especially in the regulatory arena. The ombudsman responds to problems that small business owners have or anticipate with state regulators in three primary ways: streamlining the regulatory process, resolving regulatory disputes, and works as a clearinghouse and advocacy for new rules. The Ombudsman works closely with the Small Business Clean Air Assistance Program to help firms meet the requirements of the federal Clean Air Act. In addition, the Ombudsman can assess a firm's financial position and capital requirements; identify financial packaging options for particular projects; and make referrals to the most appropriate sources of financing. For information contact: Cheryl Gail, Small Business Ombudsman, Wisconsin Department of Commerce, 123 W. Washington Ave., Madison, WI 53703; or call 608/267-9384, or fax 608/267-0436.

## **C-5 Wisconsin Department of Natural Resources (WI DNR)**

The Wisconsin Department of Natural Resources (WI DNR) is a regulatory arm of state government which enforces state and federal environmental protection mandates. Specific DNR Department information is available on the Internet via the Wisconsin state government agencies, departments, and legislature home page: <http://badger.state.wi.us/departments.html>.

### **Wisconsin DNR Bureau of Cooperative Environmental Assistance**

The Cooperative Environmental Assistance Bureau (CEA) was created as part of Wisconsin Department of Natural Resource's recent reorganization. It is housed in the Customer Assistance and External Relations division. This Bureau investigates and supports non-regulatory incentives to promote environmental protection and assist Department staff in incorporating waste reduction philosophy into the environmental programs.

CEA has become an umbrella group for waste reduction, business outreach, pollution prevention, small business assistance, and business recycling initiatives. A new direction for CEA is to support business sector specialists. Contact the CEA at: phone, 608/267-9700, or fax, 608/267-0496.

### **Wisconsin DNR Bureau of Waste Management**

The Bureau of Waste Management replaces the Bureau of Solid and Hazardous Waste. This bureau tracks and implements regulatory programs relating to solid and hazardous waste. For information, contact: phone, 608/266-2111, or fax, 608/267-2768.

## **C-6 Wisconsin Financial Assistance Programs**

### **Wisconsin Department of Commerce (Wisconsin DOC)**

Formerly the Department of Development, the Wisconsin DOC administers several programs aimed at financing pollution detection and prevention in state business and industry. Many of these programs are listed below. For more information, contact: Wisconsin DOC, Office of Development Finance, P.O. Box 7970, Madison, WI 53707, 608/266-2766.

#### **Hazardous Pollution Prevention Audit Grant Program**

This Wisconsin DOC program provides matching grants to industry for conducting hazardous pollution prevention audits. For more information call the Wisconsin DOC's Office of Finance at 608/266-7099.

#### **General Rebate Program (GNR)**

The General Rebate Program was established to encourage the use of post-consumer waste as a raw material in making products and to reduce the amount of post-consumer waste disposed of in landfills. The program provides financial assistance to companies making products using post-consumer waste as a raw material and that are at a competitive disadvantage with companies that make the same products using virgin materials.

#### **Recycling Loan Program (REC)**

The Recycling Loan Program was established to encourage the use of post-consumer waste as a raw material in making products. The program provides financial assistance to companies that need funds for land, buildings, equipment, and working capital expenses associated with a cloth diaper service or the manufacture of products from recyclable materials. New or expanding businesses are eligible to receive loans up to \$750,000.

#### **Minority Business Recycling Program**

The Minority Business Recycling Program was established to increase minority business participation in the manufacture of products made from post-consumer waste and the operation of cloth diaper services. The funds may be used for capital expenses or for working capital.

#### **Qualified Property Rebate Program (QPR)**

The Qualified Property Rebate Program encourages using a raw material to make products and to reduce the amount of waste disposed of in landfills. "Qualified property" means machinery or equipment that is used exclusively in making a product from waste. Applicants are eligible for rebates of up to 5 to 10 percent of the equipment purchase cost.

**Wisconsin Housing and Economic Development Authority (WHEDA)**  
P.O. Box 1728  
Madison, WI 53701-1728

### **Recycling Fund Program**

The Recycling Fund Program is intended to stimulate the development of markets for recyclable materials. It provides loan guarantees to state businesses emphasizing alternative use of products recovered through a recycling process. It also encourages the expansion or start-up of businesses that supply and launder cloth diapers. Loan proceeds can be used for working capital or for the purchase of building or equipment. For further details, contact WHEDA at 800/642-6474.

### **Business Development Bonds**

Business Development Bonds are industrial revenue bonds issued by WHEDA on behalf of small businesses. The program provides low-cost, fixed-rate financing for eligible projects, and is restricted to manufacturers (including manufacturers using recycled materials) with gross annual sales of less than \$35 million. Funds must be used to purchase or improve land, buildings, or equipment. For further details, contact WHEDA at 800/362-2767 or 608/266-2297.

### **Wisconsin DNR Bureau of Community Assistance**

#### **Solid Waste Reduction and Recycling Demonstration Grants**

This grant program provides \$1 million each year to fund projects implementing innovative waste reduction and recycling activities. It is intended to stimulate innovative ideas and exchange among the state's recyclers. Each year the grant application deadline is August 1. The DNR expects to make grant announcements by November 1. The maximum award is \$150,000, or 50 percent of the total eligible costs of the project, whichever is less. The grants require a 50 percent, in-kind contribution of labor, equipment, or facilities. For more information contact Sheila Henneger, Department of Natural Resources, Bureau of Community Assistance, P.O. Box 7921, Madison, WI 53707-7921; or call 608/266-9426.

## **C-7 Wisconsin Industry Partnership Programs**

### **Wisconsin DNR Bureau Cooperative Environmental Assistance**

Pollution Prevention Partnerships are joint agreements where one or more industry-wide partners work with the Wisconsin DNR to voluntarily reduce environmental emissions below compliance levels. The partnership goal is broad and far-reaching, and not limited to compliance options. In exchange for their efforts, private sector partners receive DNR assistance in tracking and evaluating pollution prevention activities, promoting Industry forums, assisting business and Industry make sound business and environmental decisions. The DNR also supports coordination efforts by the Public Service Commission, the Department of Administration's Energy Bureau, and individuals, to link energy conservation with pollution.

One current partnership, called Pulp and Paper, partners the DNR with the Wisconsin Paper Council, (representing 28 state paper companies at 45 separate production facilities) to reduce emissions and investigate technology transfer options. The Great Printers Project is another current partnership, and is the first of its kind in the nation. This partnership is a regional cooperative effort with the Council of Great Lakes Governors, the Environmental Defense Fund, and the Printing Industries of America. The Wisconsin DNR and the Printing Industries of Wisconsin represent a partnership in one of four pilot states chosen to implement the project recommendations. Another partnership in progress joins DNR resources with the Wisconsin Fabricare Institute to form a Drycleaner program. This program establishes priorities for this Industry's pollution prevention efforts and identifies the steps necessary to reduce and prevent the generation of targeted substances. For additional information about these partnerships, contact Wisconsin DNR Bureau of Cooperative Environmental Assistance at 608/267-9700.

### **Climate Wise (Governor Thompson's Industry Partnership Program)**

Climate Wise is a national, voluntary pledge program designed to save business and industry money and to recognize efforts to enhance energy efficiency, encourage pollution prevention, and reduce greenhouse gases. Launched by the U.S. EPA and the U.S. Department of Energy, the program includes Wisconsin as one of its seven pilot states. Wisconsin's program, called Governor Thompson's Industry Partnership Program, is designed to help state business and Industry turn energy efficiency and environmental performance into corporate assets. Program resources can assist companies with energy and/or environmental assessments, project design and implementation, and the calculation of emissions reductions and energy use. For more information contact: Angela Prestil, Energy Center of Wisconsin, 595 Science Drive, Suite A, Madison, WI 53711-1060, 608/2384601; Victoria Stone, Wisconsin DNR Office of Pollution Prevention, 101 South Webster Street, Madison, WI 53702, 608/266-1962; Jolene Anderson, Wisconsin Department of Administration, Wisconsin Energy Bureau, P.O. Box 7868, Madison, WI 53707-7868, 608/266-7375.

## **C-8 Wisconsin Pollution Prevention Award Programs**

### **Wisconsin DNR Prevention/Environment/Prosperity (P/E/P) Award**

The Wisconsin Department of Natural Resource's P/E/P Award rewards successful businesses for innovative waste reduction efforts. Waste reduction is a proactive, multi-faceted approach to eliminating, or significantly reducing, the use of hazardous substances and the generation of wastes. This can be accomplished through changes in design, production processes, plant operations, and material choices. For more information contact the Pollution Prevention Recognition Coordinator of the Bureau of Cooperative Environmental Assistance at 608/267-9700.

### **Governor's Award for Excellence in Hazardous Waste Reduction**

The annual Governor's Award recognizes achievements by Wisconsin industries and institutions in reducing and managing hazardous waste. The award is sponsored by the Wisconsin Department of Commerce and the Federation of Environmental Technologists. For more information contact: FET, P.O. Box 185, Milwaukee, WI 53201; or call 414/251-8163.

### **Wisconsin Business Friend of the Environment Award**

Sponsored by the Wisconsin Environmental Working Group, this annual award is presented to state companies that demonstrate leadership in environmental protection. The award is given for achievements in pollution prevention, innovative technology, and environmental stewardship. Awards are given in each category to a company in each of the following categories: less than 100 employees; 100-500 employees; and more than 500 employees. For more information about the annual awards or on how your company can benefit from environmental protection programs, contact: Pat Stevens, Director of Environmental Policy, Wisconsin Manufacturers & Commerce, P.O. Box 352, Madison, WI 53701-0352, or call 608/258-3400.

## **C-9 Wisconsin Environmental/Pollution Prevention Community Groups**

### **Associated Recyclers of Wisconsin (AROW)**

Associated Recyclers of Wisconsin (AROW) is an advocacy group working in Wisconsin at the community, business, school, or industry level. The agency publishes six newsletters a year, organizes an annual statewide general conference, and presents several regional workshops. Outreach services are available for businesses interested in recycling. AROW is affiliated with the National Recycling Coalition. For details, contact: Associated Recyclers of Wisconsin (AROW), 16940 W. Shadow Drive, New Berlin, WI 53151; or call 414/679-2132.

### **Citizens For A Better Environment**

CBE is a regional environmental advocacy organization with offices in Wisconsin, Minnesota, and Illinois. Its mission is to prevent and fight against environmental and public health threats in midwest communities. For details, contact: Elizabeth Wessel, Staff Scientist, Citizens for a Better Environment, 222 South Hamilton Street, Madison, WI, 53703; or call 608/251-2804; or fax 608/256-4562.

### **Great Lakes**

This joint program partners business and citizen volunteer groups with government environmental agencies to identify and prevent pollution risks in the Great Lakes states. Major areas of concern are: conserving energy; reducing contaminated runoff; and controlling the use, disposal, and recycling of hazardous commercial and household products. States involved in this effort are: Wisconsin, Minnesota, Michigan, Illinois, and Indiana. For additional general program information, contact the coordinating office: Great Lakes National Program Office, 312/353-2117; or U.S. EPA Office of Solid Waste, 77 W. Jackson Blvd., Chicago, IL 60604, 312/886-3584.

For specific information on Wisconsin's program efforts, contact the nearest office:

Wisconsin-Northwest  
Wisconsin Department of Natural Resources  
Superior Subarea Office Hazardous Waste Specialist  
1705 Tower Ave.  
Superior, WI 54880  
715/392-7988

Wisconsin-Lake Michigan  
Wisconsin Department of Natural Resources  
Lake Michigan District  
1125 N. Military Ave., P.O. Box 10448  
Green Bay, WI 54307  
414/492-5800

Wisconsin-Lake Michigan  
Wisconsin Department of Natural Resources  
Southeast District  
2300 N. Martin Luther King Dr.  
P.O. Box 12436  
Milwaukee, WI 53212  
414/263-8570

### **Lake Michigan Federation (LMF)**

LMF is a four-state non-profit organization dedicated to improving and maintaining the integrity of the Lake Michigan ecosystem in addition to the other Great Lakes. Since 1970, LMF has worked with businesses, government agencies and citizen groups to find solutions to complex environmental problems. LMF's four main goals include:

- ! protecting water quality and reducing toxics;
- ! protecting shoreline wildlife habitat and preserving public access;
- ! promoting energy conservation and safe nuclear waste disposal;
- ! building active citizen and corporate support for efforts to protect the lakes.

It has helped establish a pollution prevention forum in the greater Milwaukee area for businesses to exchange information and resources. For more information, contact:

LMF-Wisconsin  
1412 S. Lake Michigan Dr.  
Sturgeon Bay, WI 54235  
414/746-9819

LMF-Wisconsin  
647 W. Virginia St., Ste. 307  
Milwaukee, WI 53204  
414/271-5059

LMF-Illinois  
59 E. Van Buren St., Ste. 2215  
Chicago, IL 60605  
312/939-0838

LMF-Michigan  
425 W. Western Ave., Ste. 410  
Muskegon, MI 49440  
616/722-5116

### **Wisconsin Industry Saving Our Environment (WISE)**

Wisconsin Industry Saving Our Environment (WISE) is a non-profit coalition representing Wisconsin business, industry, labor, education, and trade associations created to focus public attention on ways to protect and preserve the state's environment. WISE educates Wisconsin businesses about the benefits and advantages of voluntary resource recovery, helps promote research for the creation of markets for reusable materials, and assists in finding voluntary solutions to other potential environmental concerns. The long-term goal of the organization is to provide positive answers to environmental concerns that can protect and improve Wisconsin's overall environment while continuing to foster and sustain a healthy economic climate. For more information contact: Wisconsin Industry Saving Our Environment (WISE), 606 East Wisconsin Avenue, Milwaukee, WI 53202; or call 414/223-7520.

### **Center for Neighborhood Technology (CNT)**

The Center for Neighborhood Technology is a non-profit research and technical assistance agency concerned with supporting the environment and community development. The organization focuses on four main areas: transportation and air quality, sustainable manufacturing, community energy, and materials reuse and recycling. One current program involves demonstrating a non-toxic wet cleaning process to drycleaning businesses in Chicago which use the highly toxic chemical, perchloroethylene. For more information, contact: Center for Neighborhood Technology, Sustainable Manufacturing and Recycling, 2125 W. North Avenue, Chicago, IL 60647-9886; or call 312/278-4800, ext. 299; or fax 312/278-3840; or e-mail [sylvia@cnt.org](mailto:sylvia@cnt.org) or [cindy@cnt.org](mailto:cindy@cnt.org).

### **Buy Recycled Business Alliance —Wisconsin**

The Alliance is a group of Wisconsin companies committed to increasing their purchases of recycled products. The group works with the Washington, D.C.-based National Recycling Coalition to encourage businesses of all sizes to buy recycled products. The Alliance conducts seminars and distributes how-to materials. The Wisconsin headquarters are located in the AROW office. For more information, contact: Buy Recycled Business Alliance; P.O. Box 671, Madison, WI 53701-0671; or call 608/255-2769, or fax 608/255-8887.

## **C-10 Regional Non-profit Information Programs**

### **Great Lakes Technical Resources Library (GLTRL)**

### **Great Lakes Pollution Prevention Information Clearinghouse (GLPPIC)**

The GLTRL is a low-cost alternative to a centralized pollution prevention clearinghouse. It both serves and uses the decentralized network of pollution prevention information providers in the Great Lakes region. The library consists of extensive databases of technical resources and vendor information (TECHINFO and VENDINFO), useful in implementing pollution prevention programs. The technical database contains references to more than 7,000 listings for books, technical papers, manuals, and government documents. The vendor database contains more than 1,400 classified listings of equipment, supplies, and services applicable to specific pollution prevention programs. For additional information contact: David Liebl, University of Wisconsin-Extension, Solid and Hazardous Waste Education Center, 432 N. Lake St., Rm. 311, Madison, WI 53706, or call 608/265-2360, or fax 608/262-6250.

### **Great Lakes Information Network (GLIN)**

GLIN is an extensive network of business, industry, government, academia, and citizen groups concerned with resource management, environmental protection, and economic development in the Great Lakes region. This collaborative project links data, information, and people via the Internet and e-mail groups. To learn more about GLIN, its participating organizations, or its Industry-specific information, contact: GLIN Director, Great Lakes Commission, Argus II Bldg., 400 Fourth St., Ann Arbor, MI 48103-4816; or call 313/665-9135, or fax 313/665-4370. The GLIN home page address is <http://www.great-lakes.net:2200/ecosystem/pollution/polprev/>.

### **P2TECH**

P2TECH is an e-mail listserv information sharing forum for pollution prevention technical assistance providers. It fosters information exchange using e-mail to search for solutions to pollution problems encountered while providing technical assistance to industry. Questions are automatically forwarded to other subscribers, with questions and responses archived for future use. P2TECH technical support is provided by the Great Lakes Information Network (GLIN). General questions, comments on performance, or questions on subscribing to P2TECH, contact: David Liebl, University of Wisconsin-Extension, Solid and Hazardous Waste Education Center, 432 N. Lake St., Rm. 311, Madison, WI 53706; or call 608/265-2360, or e-mail [liebl@epd.egr.wisc.edu](mailto:liebl@epd.egr.wisc.edu).

# **APPENDIX D**

## **References**

## Appendix D: References

Please note that additional references are provided throughout the guidebook.

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*Business Guide for Reducing Solid Waste*, U.S. EPA, Solid Waste and Emergency Response, September 1993, EPA/530-K-92-004.

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*Generating Profits Instead of Waste: A Pollution Prevention Resource Brochure*, Lake Michigan Federation, Milwaukee.

*Hazardous Waste Management Guide for Metal Finishers*, Orange County (CA) Health Care Agency, Environmental Health Division, October 1993.

*Hazardous Waste Minimization Manual: For Small Quantity Generators*, Center For Hazardous Materials Research, University of Pittsburgh Applied Research Center, October 1989.

*Managing Your Hazardous Wastes: A Guide for Wisconsin Small Quantity Generators*, 3rd ed., Wisconsin Department of Natural Resources, Bureau of Solid and Hazardous Waste Management, Revised 1993, PUBL-SW-071 93REV.

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*Profiting from Waste Reduction in Your Small Business*, David Wigglesworth, Alaska Health Project, 1988.

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*Small Business Environmental Assistance Site Visit Manual*, Iowa Waste Reduction Center, University of Northern Iowa, 1995.

*Small Business Guide to Hazardous Materials Management*, Great Lakes Rural Network, WSOS Community Action Commission, 1988.

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*Understanding the Small Quantity Generator Hazardous Waste Rules: A Handbook for Small Business*, U.S. EPA, Office of Solid Waste and Emergency Response, Washington, DC, September 1986, EPA/530-SW-86-019.

*Waste Minimization: Environmental Quality with Economic Benefits*, 2nd ed., U.S. EPA, Office of Solid Waste and Emergency Response, April 1990, EPA/530-SW-90-044.

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*Information for Small Business*, U.S. EPA, Small Business Ombudsman, Winter 1996.

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*Surfing the Net*, Iowa Ombudsman Office, February 1996, Des Moines.

*The Pollution Prevention Yellow Pages*, National Pollution Prevention Roundtable, Washington, DC, September 1994.

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*Cutting Fluid Management in Small Machine Shop Operations*, Iowa Waste Reduction Center, University of Northern Iowa, 1990.

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*Wood Furniture Industry Waste Reduction Opportunities*; U.S. EPA, Center For Environmental Research Information, and Tennessee Valley Authority.

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*Case Histories of Cost Saving through Waste Reduction by Small Industries in Tennessee*; University of Tennessee Center For Industrial Services, State of Tennessee Dept. of Environment and Conservation, Tennessee Valley Authority Industrial Waste Management Services; Knoxville, January 1994.

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- Electronics and Computer Industry, EPA/310-R-95-002;
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