



WasteWise Tip Sheet

Recycling Collection

**WASTE
WISE**



WasteWise Program Elements

- *Waste Prevention*
- ***Recycling Collection***
- *Buying or Manufacturing Recycled Products*

What Is Recycling?

Recycling is a three-step process. Collecting used materials is the important first step. The second step involves using recovered materials as feedstock in the manufacture of new products. The final step is purchasing and using the recycled products.

What Are the Benefits of Collecting Recyclables?

Recyclables are materials that still have useful physical or chemical properties after serving their original purpose and that can, therefore, be reused or remanufactured into new products. Collecting recyclables reduces a company's waste disposal costs by diverting materials from waste. Recycling can also provide revenues through the sale of collected materials. In addition, collecting recyclables helps to ensure an adequate supply of raw materials for manufacturing recycled products.

Recycling also has important environmental benefits, including the conservation of energy, natural resources, and valuable landfill capacity. Company support of recycling also can improve customer and employee relations by demonstrating a company's commitment to environmental protection.

How Does Recycling Fit into the WasteWise Program?

Each company in the WasteWise program commits to establish, expand, or improve programs to collect recyclables. If your company is not currently collecting recyclables, the first step would be to set up a collection program for one or more materials. Companies that already have a collection program in place can choose to increase the amount of recyclables collected, collect additional types of recyclables, or improve employee education programs to improve the quality of collected materials.

WasteWise companies are asked to monitor their progress and report annually on the total amount of material collected for recycling.



Recycled/Recyclable

Printed on paper that contains at least 50% recycled fiber.

What Materials Can Be Recycled?

Generally, materials that have recycling potential are those that can be collected in quantity, free of contamination, and which can be economically transported to a processor or end user. A decision to collect materials also will depend on such factors as the costs and revenues involved, employee interest, local solid waste laws, and corporate environmental policy. The following materials are most commonly recycled:

Paper

Most types of paper are recyclable. Office paper is usually collected in two grades: “high grade” and “mixed.” High grade paper typically consists of **white** copier paper, **white** computer paper, **white** office stationery, and **white** note paper. Mixed office paper includes nearly all waste paper generated in an office, such as white and colored paper, file folders, and manila envelopes. Because it is minimally sorted, mixed paper is considered to be low quality and generally yields very low market prices. In some markets, some recyclers even charge a fee for collecting mixed paper. Buyers of either type of recyclable paper usually prohibit certain contaminants, including glossy paper, tape, and envelopes with plastic windows. The highest prices are paid for sorted paper with little contamination.

Corrugated Containers (Cardboard)

The commercial sector in the United States generates more corrugated cardboard than any other single waste material. Cardboard is a very good candidate for recycling because it is easily separated from other materials. In addition, because of its bulk, collecting cardboard for recycling can significantly reduce the volume of waste requiring disposal. This can reduce the number of trash pickups or the size of solid waste containers needed, thereby lowering disposal costs. Cardboard is more desirable to buyers if contaminants are removed and boxes are flattened and baled.

Glass

Many buyers require that collected glass be separated by color (clear, green, and brown) before pickup, although some will accept mixed glass. Typically, broken glass and paper labels are acceptable. Most buyers require, however, that glass be clean and free of such contaminants as bottle caps, ceramics, and light bulbs.

Metal

Aluminum and tin/steel cans, aluminum foil, and other scrap metals are readily recyclable. Some metals, such as copper and aluminum, yield a high market price. Collection requirements depend on the metal and the local market situation.

Plastic

While plastics recycling is a relatively young industry, it is expected to expand as processing technologies develop. In order to recycle recovered plastic, it must be separated by resin type. The plastic resins most commonly recycled are PET (polyethylene terephthalate), used in soda bottles, and HDPE (high-density polyethylene), used in milk jugs. In some areas, there may be buyers for mixed or commingled plastics. Mixed plastic are

used to manufacture items such as recycled plastic park benches, garbage containers, and highway barriers. Manufacturers and other commercial enterprises with large volumes of plastic waste often can find markets for these large quantities.

Other Recyclables

Other materials, such as wood waste and textiles, are also recyclable. To find a buyer, identify the composition of the waste material and the amount generated. Then check with your community's Chamber of Commerce, local business networks, and your local or state government environmental or public works agency to help you find a market.

How Do I Get Started?

Management should endorse the collection program and appoint an enthusiastic recycling coordinator to oversee it. The recycling coordinator will need to work with many groups, including facilities management, transportation, purchasing, suppliers, employees, and the public. The recycling coordinator also should work with those designated to implement the waste prevention and recycled-products purchasing efforts.

The next step is to get to know your waste stream. This can be done through a waste assessment that identifies the types and amounts of waste a facility generates. (See the tip sheet on *Waste Assessments* or EPA's *Business Guide for Reducing Solid Waste*). By conducting a waste assessment, you will gather baseline information that can be used to set goals and monitor progress.

Finally, set your recycling goals. Your goals will reflect the amounts and types of waste generated at your facility and the recycling options that are feasible and cost-effective. Remember to first consider activities that actually prevent waste from being generated. Then examine the remaining waste to determine which materials could be collected for recycling.

How Do I Find a Buyer for the Collected Materials?

Before your recycling program begins, it is important to locate markets for the materials that will be collected. If markets cannot be found, materials should not be collected for recycling.

Companies that buy recyclables are generally referred to as "vendors." Often, vendors can be found in your local telephone book. Sometimes, however, more research is necessary. In some cases, a new market may need to be developed for the material.

Your local or state government recycling offices, the local Chamber of Commerce, or a local or regional recycling organization may be able to help you find or develop markets for the materials you intend to collect. National trade associations, such as the National Soft Drink Association and the Steel Recycling Institute, also can help identify markets for your collected materials. Local or regional "waste exchanges" are another resource you should explore. Waste exchanges provide a communications link between those who have material that could be recycled and those who are looking for materials to use in their production processes.

How Do I Set Up a Good Collection Program?

Convenience is the key to a successful recycling program. A convenient collection system will encourage employees to carefully sort recyclables by material type and to eliminate contaminants. By collecting the highest quality recyclables, you will get the most value for your collected materials and the highest return on your investment in the recycling program.

Know where recyclable materials are generated and by whom, and place collection containers as close to these sources as possible. For instance, desk-top containers work well for an office paper collection program. Convenience is especially important in a manufacturing setting, where employees might have little time to properly separate materials. After the material has been collected in small containers, transfer it to a larger central collection point. Fire codes must be considered when choosing a storage area.

When designing a collection program, be creative. Each program should be designed to meet the specific characteristics of the company and the types of recyclables collected.

How Do I Educate Employees?

As with any waste reduction effort, employee education and involvement is critical to the success of the recycling collection program. Involve individuals from many parts of the company in planning and implementing the collection program. This will give them a sense of ownership and participation, making it more likely that they will become advocates of recycling in your company. Target key employees who will be integrally involved, such as the custodial staff. Encourage employees to offer feedback and suggestions. Educate employees about the benefits of recycling, both for the company and for the environment. Teach employees how to participate by conveying information in a simple and concise way.

Suggested educational tools include a memo from upper management supporting the program, a kickoff fair to educate employees, and a 20-minute training session for all employees. Also, be sure to provide ongoing publicity about program successes.

How Do I Monitor and Evaluate the Collection Program?

Maintain accurate, up-to-date statistics, such as the types and amounts of materials collected, prices paid by vendors, and contaminant levels. Use this information, as well as feedback from employees, to evaluate the program and make changes as needed.

What Additional Information Is Available from EPA?

Order the following EPA document from the EPA RCRA/Superfund Hotline at 800 424-9346 or TDD 800 553-7672 for the hearing impaired. For Washington, DC, and outside the United States, call 703 412-9810 or TDD 703 412-3323.

Business Guide for Reducing Solid Waste (EPA530-K-92-004), 1993. Free.

This is a comprehensive how-to guide on assessing your facility's solid waste and choosing cost-effective waste reduction actions.

Order the following document from the National Technical Information Service (NTIS) at 703 487-4650.

Office Paper Recycling: An Implementation Manual (PB90-199-431), 1990.

\$22.50. This detailed manual explains how to set up an office paper collection program and provides examples of successful programs.

Sources of Additional Information

The following list of resources is not intended to be comprehensive and does not constitute EPA endorsement of products. The documents referenced are those WasteWise found to be most useful.

For further information, WasteWise members are encouraged to contact their state and local governments, many of which have manuals on setting up collection programs and information about markets for collected recyclable materials. Please let us know of other resources you have found to be helpful.

National Office Paper Recycling Project, information/enrollment package. Free.

U.S. Conference of Mayors
National Office Paper Recycling Program
1620 Eye Street, NW.
Washington, DC 20006
202 233-3089

Business Recycling Manual, 1991. \$90.00. This comprehensive manual provides a systematic approach to establishing a recycling program in businesses. Topics range from negotiating with haulers to sustaining your program over the long run.

INFORM, Inc. and Recourse Systems, Inc.
381 Park Avenue South
New York, NY 10016
212 689-4040

Guide to Commercial and Institutional Recycling, 1992. \$10.00. This comprehensive guide explains how to establish a waste reduction and recycling program, including conducting a waste assessment, employing an eight-step approach to office recycling, and buying recycled products.

Northeast Maryland Waste Disposal Authority
25 South Charles Street, Suite 2105
Baltimore, MD 21201-3330
410 333-2730

RecycleLine *RecycleLine* is an online recycling network and resource center. It offers continually updated information on recycled products, markets, equipment, and services.

P.O. Box 32428
Louisville, KY 40232
800 824-2144

WasteCap Interactive Computer Model (WICM). \$10.00 outside New Hampshire. This menu-driven program for personal computers can help identify and evaluate recycling opportunities in your organization.

Emily Hess, Director
Business and Industry Association of New Hampshire
122 North Main Street
Concord, NH 03301
603 224-5388
603 224-2872 (FAX)



WasteWise is a partnership between EPA and America's leading businesses. Participants set their own waste prevention, recycling, and recycled-product purchasing goals. WasteWise supports company efforts through technical assistance and recognition of participants' successes.

For more information about any aspect of WasteWise, call
800 EPAWISE (800 372-9473).