

## Recycling at Work in Pennsylvania

Recycling at commercial, institutional, and municipal establishments throughout Pennsylvania can make a positive impact on our environment and our local communities. These establishments contribute about 50% of the municipal waste stream, so it is important that they be a part of our waste management program and work together with their community and local municipality to establish and maintain a successful recycling program. It is important to understand that recycling in Pennsylvania is a local effort, so therefore, coordination between business and local municipalities is key to successful recycling programs.

**Recycling is local in Pennsylvania** - The Municipal Waste Planning, Recycling, and Waste Reduction Act of 1988 (Act 101) requires commercial, institutional, and municipal establishments located in Pennsylvania's mandated municipalities to recycle high-grade office paper, corrugated paper, aluminum, and leaf waste. In addition, establishments must recycle any other materials included in the municipality's recycling ordinance or regulations, which may include glass, newsprint, plastics, and/or steel and bimetallic cans. Businesses and institutions with facilities located within mandated municipalities must implement recycling programs according to local requirements, those not, are encouraged to recycle.

### **General municipal recycling requirements are as follows:**

- All commercial, institutional, and municipal establishments must source separate the following materials:
  - High grade office paper;
  - Corrugated cardboard;
  - Aluminum cans;
  - Leaf waste; and
  - Any other recyclables that may be designated by the municipality.
- These establishments must arrange for the collection and recycling of all designated materials.
- All commercial, institutional, and municipal entities must provide written documentation as to the type and weight of materials recycled annually. Reports are due to the municipality by January 31 of each year on a form provided by the municipality.

### **So Why Should You Have a Recycling Program?**

The most obvious reason for implementing a recycling program in your workplace is that if your municipality is mandated by law, it is required, but even if not mandated you should recycle at work for several sound reasons. Waste reduction and recycling are environmentally responsible and usually cost-effective methods for reducing the waste generated in your workplace. They are environmentally responsible because they divert materials from disposal. Recycled materials are remanufactured into new products, thus saving natural resources. Most processes for manufacturing new products from recyclables require less energy, which means reduced emissions to the air and water. Waste reduction and recycling may also result in what is referred to as "avoided cost," which means a savings in costs for waste disposal. And depending on market performance, some revenue may be generated for the materials you recycle.

### **Designing Your Recycling Program**

A well-designed recycling program requires careful planning and attention to detail. When you implement a program that has been well thought-out, it not only complies with the law, but it reduces waste, saves natural resources, and potentially, saves money for your business or institution. Source reduction and reuse—using less resources in addition to recycling—can further reduce waste.

### **Elements of a successful recycling program are as follows:**

- 1) **Obtaining Top-Level Management Support** - Senior management support is essential to the success of your recycling program. Management's positive support promotes a similar attitude among employees and customers. Also, recycling programs often require initial outlays of capital. Management approval of a recycling budget ensures that resources are available when needed.
- 2) **Designating a Recycling Coordinator** - Every business or institution should have a coordinator to manage its recycling program. The person selected should be genuinely interested in recycling and able to interface with personnel at all organizational levels. To ensure that attention is given to the program, it is advisable to incorporate recycling responsibilities into the employee's overall job description.

- 3) **Establishing a Recycling Task Force** - If the facility is large enough and has a significant number of employees, a task force should be formed to help the coordinator plan and initiate the program. This group may remain in force as a permanent advisory body to ensure continued program development. To ensure that all parts of your operation are addressed fairly and adequately, task force representatives should be assigned from all departments that will be affected by your recycling program. It is also a good idea to include a spokesperson for employees.
- 4) **Assessing the Waste Stream** - The waste assessment is one of the first steps in developing a recycling program. Elements of a good waste assessment are as follows:
- **Composition of the Waste Stream** - Determine what materials are currently being disposed and the quantities along with the type and volume of recyclables in your organization's waste stream, and where they originate. Your focus should be on materials that must be recycled by law, high volume materials (e.g. in retail it would be cardboard and in offices it would be office paper), and high value materials such as toner cartridges and aluminum cans. If the audit reveals that yard debris composes a large percentage of the waste stream, the task force should consider the feasibility of including on-site composting as part of the recycling program.
  - **Determine Weight/Volume** - Determine the weight and volume of the potentially recyclable materials that are currently being disposed. Restaurants and bars generate large quantities of glass and are often charged a surcharge for collection due to the weight. Retailers generate large volumes of cardboard that can quickly fill dumpsters. If the establishment generates a high volume of cardboard it may pay to consider baling the material, which may help to increase the marketability of the cardboard. Reducing the weight and/or volume of waste may result in lower waste management costs due to "avoided cost" because of fewer pulls/collections and less waste delivered for disposal.
  - **Sources of Waste** - The waste assessment should focus on offices, cafeterias, lounges, restrooms, vending machine areas, boiler rooms, maintenance areas, storage areas, and other locations where trash originates. Consider your entire operation and determine where waste is being generated and the extent to which this material can be:
    - reduced (e.g. two-sided copying, purchase of durable vs. disposable items)
    - reused (e.g. reuse packing material, boxes, paper for scratch pads or drafts)
    - recycled (e.g. collect and recycle required materials, high volume materials and high value materials for which there are markets)
  - **Reassessments** - After implementing your recycling program, you should assess your waste periodically -- probably annually -- to determine if your program has significantly reduced the amount of waste generated. If it has, you may want to reduce your waste collection schedule or size of your container(s), which will save you money. If it has not, you will need to determine why and adjust the program.
- 5) **Markets for Recyclables** - Your recycling program will generate materials that can be used to manufacture new products. The companies that do this are known as end users or end markets. One of the more significant tasks of the recycling coordinator is to determine how to get recyclables to these markets. Recyclables may be marketed directly to an end user if agreement can be reached on the amount, quality and regularity of the shipments. Otherwise, it will be necessary to negotiate with intermediaries -- such as waste haulers, processors, or brokers -- to collect, process, and/or market recyclables. The coordinator should discuss recycling strategies with waste haulers, processors/brokers, and end users to determine the preferred management option before adopting a final plan for the recycling program.
- 6) **Internal Collection** - Whether your organization is housed in one room, one building, or multiple locations, it will be necessary to design a system for collecting recyclables. The main issue to consider in developing an internal collection system should be **convenience** for both system users and collection staff. Key considerations are as follows:
- **Containers**. Collection containers should be located where the recyclables are being generated. Clearly mark all collection containers and make it difficult to contaminate the recyclables. For example, use lids with only a hole in the top for the collection of aluminum cans or glass and plastic bottles. Locating the recycling containers near trash cans can cut down on contamination. Recycling container options range from reused corrugated boxes to a wide variety of commercially available trays and bins. Consider space availability, container placement, the quantity needed, size, shape, color, labels that identify the containers as recycling containers, and educational materials that inform the employees and customers about acceptable materials and how to use the system. Consideration should be given to individual

- workstations and areas of high generation, such as copiers and lunchrooms. Check with your local fire marshal regarding fire code compliance.
- **Storage.** The central storage area should be clean, dry and free of fire hazards. Containers should be clearly labeled. If storage containers must be located outside, consider using covered storage bins to preserve material quality and prevent litter and contamination.
- **Collection Personnel.** Collecting recyclables from workstations and high generation areas and taking them to a central storage area is usually the responsibility of custodial staff. If recyclables must be delivered to a market, delivery personnel must be designated. A printed operations schedule is helpful to collection and delivery personnel.
- **Materials Preparation.** Many end users require special preparation of materials for efficient transportation and/or incorporation into their manufacturing processes. Preparation techniques include crushing, bundling, and baling. Unless your facility generates very large volumes of material (e.g. a grocery store that generates large volumes of corrugated cardboard), you should probably work with a hauler, processor, or broker to determine how they wish to receive materials to facilitate further processing for end users.

**7) Education and Promotion** - A comprehensive and sustained program is imperative to:

- tell employees and customers about your recycling policies, procedures, and goals;
- encourage participation;
- stress that recyclables must be kept clean, dry, and free of contaminants that can diminish their market value or cause them to be rejected; and
- publicize program successes to maintain ongoing participation. Channels to consider for conveying this information include staff meetings, orientation meetings for new employees, newsletters, email, web postings, flyers, and posters.

**8) Evaluation** - The coordinator should monitor the program to ensure its effectiveness and efficiency. Sources of information include:

- maintenance staff, for input regarding improper handling and contamination of materials;
- accounting staff, regarding waste management costs;
- employees and customers, for suggestions concerning convenience;
- safety staff regarding possible storage violations; and
- waste haulers, processors, brokers, or end users, as appropriate, for information on the amount of waste generated and materials recycled, and the percentage of waste reduced through recycling.

**9) Procurement Policies – Buying Recycled** - Purchasing products that are made from or packaged in recycled materials create a demand for the materials generated by your recycling program. Greater demand for these materials usually means greater market price, which helps to reduce the cost to operate a recycling program. One way to achieve this is through revising bid specifications to give a preference for items containing post-consumer materials.

**10) Multiple Municipality Locations** - Businesses that have establishments in multiple locations need to coordinate their recycling efforts with each local municipality where they operate. Each municipality may have different recycling processes – remember, recycling is local in Pennsylvania.

Many wastes generated at places of work can be recycled. Workplaces such as offices, restaurants, schools, retail operations, manufacturers, hospitals, hotels, and other establishments each generate various types and amounts of wastes and have their own unique recycling opportunities. To learn more on how different types of establishments can implement a recycling program, please refer to our other Recycling Fact Sheets available at: <http://www.depgreenport.state.pa.us/elibrary/> (select Publications and then Waste Management). Though each workplace may have differences in the waste they produce and what they can recycle, all have the capability of significantly reducing what and how much waste is disposed in our landfills. By recycling they can also save energy and reduce carbon emissions, save natural resources, and limit operational costs. It is important that we all work together with our employers and local municipalities to implement and maintain a recycling program at our places of work.

For more detailed information about recycling in Pennsylvania, visit the Pennsylvania Department of Environmental Protection, Bureau of Waste Management, Recycling in Pennsylvania website at: <https://www.dep.pa.gov/Business/Land/Waste/Recycling>