

# Hotel/Motel Waste Reduction

## THE MANY RETURNS OF RECYCLING

*This waste reduction fact sheet is one in a series produced by the N.C. Division of Pollution Prevention and Environmental Assistance (DPPEA) to assist the lodging industry and concerned professionals in efforts to reduce waste and enjoy the benefits of cost savings and a public image as environmentally responsible organizations.*

Nationally, about 50 percent of a typical property's waste stream is recyclable, not including food wastes. That means most lodging facilities generate sufficient amounts of recyclable materials to justify recycling. Add conventions and meetings to the mix, and the recycling potential skyrockets. Even for facilities that are smaller or do not serve food, talking with the city or county recycling coordinator can help find new ways to reduce wastes.

The benefits of recycling make it a winning proposition. Recycling not only keeps waste out of the landfill, but it also saves energy and water. Recycling one ton of office paper creates 95 percent less air pollution and uses about 60 percent of the energy needed to produce the same amount of paper from trees. Recycling one aluminum can saves enough energy to run a television set for three hours. Additionally, some facilities have cut operational costs by thousands of dollars through recycling.

This fact sheet explains step-by-step how to start recycling in your facility. It provides a list of questions for potential contractors, identifies materials that can be collected, and suggests ways to design the collection process.

### COMMIT TO RECYCLING

One motivated person from any department can inspire an entire facility to recycle. This person must be committed to recycling as a concept, because one of the recycling coordinator's first challenges will be obtaining a similar level of commitment from the owner(s) or manager(s) of the facility. Management commitment ensures that all employees become educated about recycling and are aware that it is part of their responsibilities.

### KNOW YOUR TRASH

Conducting a waste assessment is one way to identify the types and approximate quantities of materials available for recycling in a facility. However, many facilities have successfully estimated these quantities by reviewing purchasing and waste hauling

### Waste Composition Analysis for New York City Hotels

Paper	39.9%
(includes mixed paper, newspaper, corrugated cardboard, and high grade paper)	
Organics/Food	27.8%
Glass	7.6%
Plastic	7.1%
Yard Waste	6.7%
Metals	6.1%
Other and Special Waste	4.5%



records or using data from other facilities as a guide. The city of New York examined the composition of waste in its hotels as part of its 20-year solid waste management plan. Results of that study are presented below. For more information on conducting a waste assessment, contact DPPEA at (919) 715-6500.

## IDENTIFY MARKETS

Before launching a recycling program, investigate which materials can be recycled in your area, the revenues and costs to recycle each material, and the specific requirements to recycle (e.g., acceptable materials and contamination levels). To identify local

recyclers, contact your local government recycling coordinator, or view the *Directory of Markets for Recyclable Materials*, a listing of all known material handlers in the state, available at [www.p2pays.org/DMRM/dmrm.asp](http://www.p2pays.org/DMRM/dmrm.asp). Please contact DPPEA if you need a printed version of the directory.

Compare recycling companies using multiple criteria, such as price quotes, equipment needs, material quality requirements, transportation costs, track record and ability to take unusual items or provide additional pick-ups. Below are questions to ask about prospective contractors. Once you have identified several contractors, solicit competitive bids.



## Questions for potential haulers, processors, and material handlers

### Q Which recyclable materials do you accept?

Some processors accept all the materials you generate while others may collect only a few. Choosing one processor that accepts all materials reduces truck traffic on your property.

### Q What are the materials preparation requirements?

Some processors accept materials that are clean and sorted, others accept materials that are mixed together, or commingled.

### Q Do you provide collection containers? If yes, at what cost? How are damaged containers replaced?

Some processors provide free recycling containers with an exclusive agreement for materials, while others reduce payments for recyclable materials to cover the cost of the containers.

### Q Do you pay for recyclable materials? Do we get a percentage of the revenue?

If the processor pays for materials, establish how the price is determined and how often payments are made. By retaining recycling revenues you can offset program costs and provide a long-term funding source. However, when contractors keep all revenues, they charge lower fees, have incentives to collect more recyclables, and assume the risk of fluctuating market prices.

### Q Do you pick up materials? If yes, what is the charge? How often will you pick-up?

(see answer above)

Some processors provide free transportation. Ask the hauler to ensure efficient collection by monitoring volumes and adjusting the collection schedule as needed.

### Q How much notice do you require for an unexpected pick-up?

Investigate “on-call” pick-up procedures, as facility occupancy and functions can affect the volume of materials collected.

### Q Do you provide education and training? Does that include signs and educational materials?

Good signs and training help employees understand what is expected of them and keep the program running well.

### Q What contract terms are available?

Short-term contracts (three to six months) enable the evaluation of services and equipment. A good contract clearly defines responsibilities so there is no ambiguity about expectations. Include a cancellation clause, and indicate who is responsible for equipment or container repair and cleaning. Review the contract periodically to ensure it is meeting expectations.

### Q Do you provide the weight of the recyclable materials?

Material weights help you calculate the savings from recycling and report or publicize your accomplishments. Some processors estimate weights, while others weigh materials.

When requesting bids, specify how bids are to be prepared (e.g., on a per ton basis) to ensure fair comparisons. Evaluate the technical skill of each candidate, as well as their demonstrated experience with the lodging industry, financial stability and capability to implement service.

**Caution:** Before initiating a new contract, identify any agreements established previously. Some properties have discovered their solid waste contracts require them to work with the same contractor to manage recyclables.

## DECIDE WHAT TO COLLECT

Two categories, paper and organics/food, typically dominate hotel waste streams, comprising nearly 70 percent. Materials commonly collected by lodging facilities include cardboard, office paper, newspaper, aluminum and steel cans, glass and plastic. Try starting a program with a few of these materials and adding more over time. Significant amounts of cardboard tend to be generated, especially in facilities with food services. Cardboard is one of the most marketable commodities generated on-site, so consider including it in early collections. The table below identifies materials to collect as well as common contaminants to avoid.

A variety of other materials can be collected and recycled. For example, landscape waste such as

branches and other woody waste can be chipped and used as mulch. Edible food waste can be donated to needy organizations, and cooking oil/grease can be recycled.

## DESIGN THE COLLECTION CENTER

**Step 1: Identify a central collection center.** Choose a convenient location for your central site, ideally near an employee service exit. Ensure easy access to the containers for vehicles and employees. Management may be concerned about the appearance of the site, so consider concealing it with fences, walls or landscaping if necessary. Alternatively, consider encouraging them to view it as a positive environmental image when guests are increasingly interested in the environment.

**Step 2: Locate work-station collection points and establish transfer routes to move recyclables to the collection center.** Locate containers near areas where recyclables are generated, such as offices, kitchens, vending areas and guest room floors. Use the facility floor plan to locate storage spaces, hallways, equipment and employee and guest traffic patterns in all departments. Next, identify collection points at work stations and storage areas. Then map routes and choose container sizes. Remember to involve employees in deciding where the recycling containers will be located. For efficiency, consider using the same routes used for solid waste.

## Common Recyclable Materials Collection Guidelines

Recyclables	Materials to Collect	Keep These Materials Out
Office Papers	Writing and typing paper, computer and photocopy paper, junk mail	Paper clips, staples, waxed paper, thermal fax paper, carbon paper, paper towels/napkins/tissues/plates/cups
Cardboard	Cardboard boxes, brown bags, brown paper and folders	Waxed boxes/liners, polystyrene packing materials, packing tape, plastic bags, food contaminated boxes
Newspaper	Newspaper and inserts	Plastic bags, rubber bands, magazines, telephone books, other types of paper
Glass	Containers used for food, juice, water, soft drinks, beer, wine and liquor	Metal collars or lids, dishes, drinking glasses, crystal, baking dishes, mirrors, window glass, ceramics, TV tubes, broken glass, fluorescent bulbs
Metal	Aluminum beverage cans, steel/bimetal food cans	Pesticide containers, sterno fuel cans, cans with liquid or food in them, cooking utensils, aluminum foil, pie tins
Plastic	Know which resins your processor accepts. #1 PET, soft drink and liquor bottles, and #2 HDPE, milk/water jugs and laundry detergent containers commonly are separated.	Any resins not accepted by processor, milk and soft drink bags, lids, flower pots, food trays

**Reminder:** In public areas, trash cans always should be placed near recycling bins to avoid having trash thrown in with recyclables.

**Step 3: Choose appropriate equipment.** Typical equipment used by facilities that recycle includes large roll-off containers, dumpsters or portable 90-gallon carts. Choosing equipment will depend on available space, volume of materials collected, and requirements of the recycler/hauler.

- Large roll-off containers may be covered and compartmentalized for sorted recyclables or have one large compartment for commingled materials. Select a roll-off as large as space permits to reduce the number of times the container is hauled or emptied.
- Dumpsters work well for storing single materials, but generally are not large enough for commingled recyclables from the entire facility. Dumpsters require more frequent emptying, which can increase costs if fees are based on the number of hauls in a specified period.

- Portable 90-gallon carts are convenient for small facilities. They may be used at larger facilities for collecting and storing single commodities, like newspaper or office paper, and transporting them to the central collection area.
- Properties with food and beverage operations may opt to bale cardboard boxes to reduce volume. Cardboard will quickly fill dumpsters and roll-offs, increasing the number of times they need to be emptied and increasing costs.

## INVOLVE & MOTIVATE EMPLOYEES

Starting and maintaining a recycling program requires involved and motivated employees. Soliciting suggestions from employees is one way to involve them. To keep employees motivated, some properties offer individuals and departments weekly or monthly incentives for recycling. These can include special memos to personnel files, dinners for two at the hotel restaurant, or “recycler of the month” awards.

## RECYCLING AT THE GROVE PARK INN, ASHEVILLE, N.C.

Grove Park Inn is an 850,000-square-foot complex on 140 acres with 510 guest rooms. It has 40 meeting rooms, two ballrooms, four full-service dining rooms, banquet facilities, a sports center, a spa and an 18-hole golf course.

From the time the facility launched its recycling program in August 1992 through 1998, the inn has collected more than 1.5 million pounds of aluminum, glass, steel, #1 and #2 plastics, cardboard, office paper, newspapers and magazines. The hotel also collected and recycled batteries, toner cartridges, and, on a seasonal basis, Christmas trees and telephone books. During that collection period, the inn saved \$23,000 in tipping fees and received more than \$10,000 in recycling revenues.

The  
Grove Park Inn

When the inn re-bid its recycling contract several years ago, it required one hauler to handle both solid waste and recycling. Asheville Waste Paper was selected from the qualified bidders because of its ability to do just that. Other conditions of the contract included revenue-sharing and containers provided to the inn at no cost. According to Laura Bennett, the inn's former recycling manager, it is extremely important to be specific and note any special requirements in your request for proposal. She emphasized that in specifying waste hauling and recycling contracts, hotel purchasers should “get it right the first time and you won't need to get out of it later.”

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The N.C. Division of Pollution Prevention and Environmental Assistance (DPPEA) provides free, non-regulatory technical assistance and training on methods to eliminate, reduce or recycle wastes before they become pollutants or require disposal. Telephone DPPEA at (919) 715-6500 or (800) 763-0136 or e-mail at [nawaste@p2pays.org](mailto:nawaste@p2pays.org) for further information about the issues discussed in this fact sheet or to discuss any of your waste reduction concerns.

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