

## **Lose Your Waste and Grow Your Profits: Waste Reduction, Reuse and Recycling for Hotels**

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Waste management programs can be more challenging for hotels than other green initiatives, because there are many kinds of waste to address, and it takes ongoing attention to achieve good results. Yet, successful programs are financially rewarding, and they are noticed by hotel customers more than other green initiatives.

This article is intended to help hotels reduce waste and reap the associated benefits.

Hotels reduce their operating costs when they manage their waste stream well. Waste management programs cut costs by making some purchases unnecessary, saving staffing time and cutting trash disposal bills. However, disposal costs vary markedly by region, so some hotels reap greater savings than others. Also, recycling saves the most money when the economy is strong and commodity prices are high.

Waste management programs can increase hotel revenue, too. A growing number of conference planners and corporate purchasers now favor facilities that recycle. Some hotels consider their in-room recycling bins to be part of their internal marketing program that helps attract guests back to the hotel by demonstrating the organization's environmental commitment.

Waste ban regulations provide an impetus to recycle in various states, too.

Waste reduction programs also bolster the national economy. A [2001 study](#) showed that over one million U.S. workers are employed by the recycling and reuse sector.

Waste prevention, reuse and recycling are important for the environment, too. They save trees, reduce pollution from incinerators, save room in landfills and preserve non-renewable natural resources like petroleum and metal. Also, it takes [less energy](#) to produce products from recycled materials than virgin materials, thereby reducing greenhouse gases, air pollution and water pollution.

### **HOW TO ORGANIZE A WASTE MANAGEMENT PROGRAM**

Successful waste management programs attend to the "3 R's" in priority order—reduce, reuse and recycle. The greatest monetary and environmental benefit comes from waste reduction, followed by reuse, and then recycling.

The first step in organizing a waste management program is to audit the facility's waste stream. Audits reveal the type and amount of waste per department and opportunities for improvement. The [Earth 911 website](#) has a good business waste audit form.

Once hoteliers know the composition of their waste stream, they should ask management and staff how to reduce it. Based on their findings and their research, they should establish policies with goals, lines of accountability and a training plan. There are other strategies that waste managers should consider, too. They could provide incentives for achieving programmatic goals, and they could ask staff to sign a [letter of commitment](#) to this initiative.

Once the program is enacted, hoteliers should keep monthly statistics on trash and recycling, such as bills, number of pickups and weight. The results should be assessed against the program goals and communicated to staff. In-depth departmental audits should be performed periodically to keep the program on track. During these studies, auditors should check departmental wastebaskets, recycling bins and dumpsters at the end of each shift. Clear plastic trash bags make these audits much easier to do.

## **WASTE REDUCTION**

Refillable amenity dispensers can replace soap, lotion, shampoo and conditioner bottles in hotel guest rooms. They reduce waste, slash operating costs and save time. Until recently, it was hard to find attractive dispensers, but now they are readily available.

Housekeeping managers save staff time when they buy highly concentrated cleaning supplies. These products are easier to transport within the facility and they require less storage space.

Engineering managers cut waste and increase productivity when they switch from incandescent lights to fluorescent or LED bulbs. Fluorescent bulbs last five times as long as incandescents and LED's operate twenty-five times longer.

[Modular mattresses](#) allow hotels to replace just the mattress tops, not the rest of the units. They extend the seven-year average life of hotel mattresses by five to ten years.

Hotel restaurants reduce waste by using washable table cloths and dinnerware, reusable coffee filters and by providing condiments in bulk dispensers. Hotels can eliminate bottled water waste by using filtered water instead.

There are many more waste prevention strategies that hotels could deploy, such as: eliminating unrequested newspapers; requiring documents to be printed on both sides of the page and with a smaller font and margins; asking hotel suppliers to reduce excess packaging; and having staff use permanent mugs and cups, rather than disposables.

## **REUSE**

When hotels donate items for reuse, they can often claim a tax deduction. Unused food can be made available for pickup by hunger relief agencies, when it meets their safety standards, or by pig farmers. Shelters and other charities appreciate used linens, blankets, towels and toiletries. Some agencies accept old uniforms.

[Furniture could be refinished](#) and reused by hotels, or donated to worthy organizations. The cost of donating furniture is often less than the cost of disposing it. Some haulers specialize in transferring furniture to charities during renovations and move-outs. Domestic and international relief agencies use surplus property to furnish schools, hospitals, clinics, and homes.

Construction and demolition materials could be reused, too. Hotels achieve a significant cost reduction when they do so. There are now markets for more than twenty C& D commodities, enabling contractors to achieve an 80% or better reuse/recycling rate on renovation projects. To achieve such rates, project managers must plan carefully and specify reuse and recycling in the project contract.

Some products can be removed before renovation projects begin, including furniture, casework, carpeting, ceiling tiles, lighting (bulbs, ballasts and fixtures), wiring and cable, HVAC equipment and bathroom fixtures. Other materials can be dismantled before demolition, such as wood,

windows, doors, porcelain fixtures, and partitions. After demolition, haulers will take away asphalt, brick, concrete, wood, metals, glass, roofing and mixed debris.

Hotels can reuse toner cartridges by shipping them to companies that remanufacture them. They can close this product lifecycle loop by purchasing remanufactured toner cartridges, at a fraction of the original price. Companies like [www.re-inks.com](http://www.re-inks.com) and [www.ink-refills-ink.com](http://www.ink-refills-ink.com) buy and sell recycled printer ink cartridges. Retailers like Lexmark, Office Depot and Staples take them back.

Certain items can be reused within hotels. For example, staff can reuse garbage can liners that are still clean. Torn towels could be used as cleaning rags.

## **RECYCLING**

Hotels can improve their recycling program by collaborating with their haulers, because haulers can identify the most suitable equipment, staff education materials and collection schedules for their clients. They can also help hoteliers decide whether it makes sense to purchase compactors for cardboard or other material.

The [Earth911.com Business website](http://Earth911.com) helps hotels find haulers in their vicinity who will take their recyclable commodities.

Recently, haulers in some regions have begun to offer single stream recycling. This alternative enables staff and guests to place paper and cardboard with other common recyclables, like metals, plastic and glass. The materials get sorted mechanically at the recycling facility. Single stream recycling reduces the number of recycling bins needed inside the hotel and on the loading dock. It also makes training easier to do. The only disadvantage is that it might reduce the hotel's return for certain comingled materials.

Hotels that cut their waste and improve their recycling rate should review their trash and recycling contracts to assure that they maximize their financial savings. For example, in order to cut their trash hauling bill, they might have to reduce the size of their trash containers or the frequency of collection.

Sometimes, hotels will not save money until their hauling contracts end and they negotiate new ones. When they do, they should eliminate volume requirements that discourage recycling. Also they should consider paying by the pickup, rather than the ton; and bid trash and recycling contracts separately. The EPA guide, "[Pick Up Savings: Adjusting Hauling Services While Reducing Waste](#)," is a good resource for negotiating trash and recycling contracts.

When hotels audit their recycling program, they should assess how well they collect commonly recycled items that are part of the daily waste stream: cardboard, paper, plastic containers, metal and glass. Ideally, recycling bins should be located next to every trash container, look different than the trash containers and be clearly marked. If the facility recycles paper separately from bottles and cans, the bins should have different opening. For example, the opening for paper could be a slot, and the openings for cans could be round.

Until recently, it was difficult to find attractive recycling bins for guest rooms and public areas. Now, several companies offer them, including [T2 Site Amenities](#) and [JRS Amenities](#).

After improving the collection of the most commonly recycled materials, hoteliers should evaluate other commodities.

In some areas, hoteliers can find haulers that collect food waste, yard waste, and waxed cardboard, and take them to composting facilities. Food waste is one of the heaviest components of the hotel waste stream. In landfills, it creates methane, a potent greenhouse gas. Some hotels without refrigerated storage find that they can participate for most of the year, but not during the hottest weeks when food waste becomes smellier.

Hotels that have their waste composted should consider using [compostable cups, plates and utensils](#). These products are from made from biodegradable materials like sugar cane or corn starch rather than petroleum. Of course, the greenest option is to use washable dinnerware.

[Decomposition machines](#) provide hotels with another alternative to trashing food. They benefit the environment by reducing the amount of material that must be trucked away and by keeping food waste out of landfills. However, decomposition machines increase the demand on sewage treatment facilities. I could not find a life cycle analysis that compares the environmental impact of decomposition machines with composting. However, I did survey a dozen environmental analysts, and they indicated that composting is usually preferable for hotels that have this option.

In many areas, hotels have new options for disposing of used fryer oil, too. Not long ago, the only acceptable solution was to have it recycled into fertilizer, livestock feed, and cosmetics. Now, there are companies that convert fryer oil it into bio-diesel. At least [one company](#) sells a machine that burns used vegetable oil on-site to make electricity.

The **electronics** recycling industry has also grown in recent years. Electronics recyclers take computers, televisions, cell phones, pagers, copiers, printers, faxes, stereos and other devices. This equipment often contains lead, mercury, cadmium and brominated flame retardants, so it is important to donate or recycle them.

Fortunately, hotels have many reuse and recycling options for electronic goods. Two excellent resources for identifying them are the Massachusetts Department of Environmental Protection webpage on [electronics recycling and donation](#) and the [Earth911.com Business website](#). The EPA's web page, "[e-Cycling: Frequently Asked Questions](#)," provides useful information about electronics reuse and recycling.

There are fewer options for recycling mattresses than electronics, but some hotels do so. Recycling companies typically [separate and re-sell](#) the wood, metal, cotton and foam, which comprise as much as 90% of the mattress. Unfortunately, there are not many mattress recyclers in the U.S., so shipping costs will be high for many hotels. Reuse is not a good alternative, because old mattresses may not meet new fire code standards and could harbor dust mites or bed bugs..

Other hotel goods can be recycled more easily. Fluorescent bulbs must be recycled by law in many states, because they contain a small amount of mercury. The EPA has a [website](#) that facilitates fluorescent bulb recycling.

There are five kinds of **batteries** on the market, four of which can be recycled. Battery recycling is important, because these products often contain mercury and cadmium. The Earth 911 website has [advice](#) about how to recycle batteries and where to send them.

Pallets can be taken back by the vendors who drop them off, re-used by the hotel or recycled.

Finally, hotels can have their leftover soap and shampoo reprocessed and donated to needy people in developing countries by sending them to [Clean The World](#) or the [Global Soap Project](#). When

they do, they earn a tax deduction that can offset shipping costs and membership fees in these organizations.

### **PURCHASING RECYCLED-CONTENT PRODUCTS**

When hoteliers purchase recycled-content products, they improve the market for the very materials that they recycle.

Hoteliers should consider buying the following recycled paper products: office paper (30% recycled paper performs about as well as virgin paper), toilet and facial tissue, napkins, menu paper and cardboard. Other common recycled-content products include glass bottles and jars, glass floor tiles, carpet, trash can liners, trash cans and plastic lumber. Recently, it has become possible to purchase [recycled-content fabrics](#).

Hoteliers can now buy computers that contain recycled material and have other environmental attributes. Information about greener computers can be found on the [EPEAT website](#).

### **OTHER RESOURCES**

**Recycling Guidebook for the Hospitality and Restaurant Industry**, Metropolitan Washington Council of Governments, Department of Environmental Programs, [www.p2pays.org/ref/05/04032.pdf](http://www.p2pays.org/ref/05/04032.pdf). This 30-page document is a succinct but informative guide for hotels and their food services.

**EPA WasteWise Program:** “[WasteWise](#) is a free, voluntary EPA program through which organizations eliminate costly municipal solid waste and select industrial wastes, benefiting their bottom line and the environment...WasteWise, launched in 1994, has more than 2000 partners.”

### **CONCLUSION**

Clearly, it takes time and effort to develop an effective waste management program. However, it pays off with a better bottom line, a greener image and a healthier environment.