

Recycling Guidebook for the Hospitality and Restaurant Industry

April 2000

Prepared By
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Grant Funds Provided By
**EPA Region III
Mid-Atlantic Solid Waste Management Assistance Grant
X1-993782-01-0**

Title: Recycling Guidebook for the Hospitality and Restaurant Industry

Date: April 2000

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Acknowledgments: COG gratefully acknowledges the United States Environmental Protection Agency Region III for providing a Mid-Atlantic Solid Waste Management Assistance Grant (# X1-993782-01-0) for this project.

Agency: The Metropolitan Council of Government (COG) is the regional organization of the Washington area's major local governments and their governing officials. COG works toward solutions to such regional problems as growth, transportation, inadequate housing, air pollution, water supply, water quality, economic development and noise, and serves as the metropolitan planning organization for the Washington region.

Report

Abstract: This guidebook provides the steps that restaurants and hotels can follow to implement a waste reduction and recycling program. It profiles ten business programs in the Washington metropolitan area that have successfully established these programs.

Publication

Number: 20702

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Why Should Hotels and Restaurants Recycle?

Recycling can reduce hotel and restaurant operating costs by diverting materials from disposal.

Xerox Document University and the Washington Convention Center have saved thousands of dollars per year by recycling their waste.

Waste reduction can reduce purchasing costs in addition to disposal costs.

Morrison House uses waste reduction techniques to reduce disposal costs. Cloth towels are used in restrooms, old linens are reused as rags, a water filter system was installed instead of buying bottled water, and individual newspapers are no longer provided to every guest.

Recycling demonstrates a hotel or restaurant's commitment to environmental protection to customers, businesses and employees.

Ben & Jerry's of Georgetown has a corporate mission statement which includes environmental protection. The store has an unusual plastic spoon recycling program, which is so popular with customers, that they bring their plastic ware from other restaurants to Ben & Jerry's to be recycled.

Recycling saves raw materials, energy and reduces environmental pollution.

- ! Recycling glass saves 25-32% of the energy used to make virgin glass.
- ! Recycling paper uses 60% less energy than manufacturing paper from virgin timber and reduces pollutants by 50%.
- ! Recycling steel and tin cans saves 74% of the energy used to produce them from raw materials.
- ! Recycling steel reduces energy consumption by 70%.
- ! Recycling aluminum uses 95% less energy than producing aluminum products from raw materials

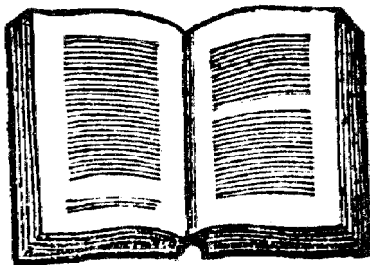
Step 1: Develop an Environmental Policy

To assure that your program will be successful, develop an environmental statement incorporating recycling into your company policies.

Benefits of a Policy

Support from the top of an organization is key to the success of your recycling program. Managers need to understand why it's important to have a recycling program; they also need to know how a program will positively impact the business operations overall. Management endorsement of an environmental policy ensures that resources will be available when needed.

A policy also sends a message to all employees that the company is serious about the recycling program. This commitment will help to promote a similar attitude among the establishment's employees and customers. An effective program will need the full support of every employee as well as a determination to make it work.



First Steps

1. *Write a company policy* statement that reflects the commitment of top management.
2. *Set reduction goals that are specific and measurable*, such as a 25% reduction in garbage hauled away within the next 6 months.
3. *Communicate* this policy so that it is clear to all staff.

Implementing the Policy

For smaller businesses: Appoint a recycling coordinator to manage the entire recycling program. The person selected should be genuinely interested in recycling and able to interface with personnel at all organization levels. It is advisable to incorporate recycling responsibilities into the employee's job description.

For larger businesses: Establish a "Green Team" that will develop and implement the program. Choose representatives from the departments that will be most affected by your recycling program. It is also a good idea to have a spokesperson for the employees. The team should have frequent meetings to discuss how their department is doing and ways of improving the program.

Step 2: Perform a Waste Audit

Find out what to recycle and how your business may save money by reducing waste.

What is a Waste Audit?

An audit is a simple assessment of the type and quantities of waste that the business generates. It can help you decide which materials can be recycled and how many collection containers will be necessary.

Why Do a Waste Audit?

Not all hotels or restaurants are the same. The amount of waste and recyclables produced is affected by variables that differ from one business to the next. You need to examine your own waste stream before adopting new programs to assure a good fit with your business.

How to Conduct a Waste Audit

One approach is to sort and weigh several samples of your trash over time. This effort will provide a good accounting of your waste stream composition.

Another method involves a review of purchasing and waste removal records. These records can help you to develop a decent estimate of your waste materials.

Look for high-volume materials such as corrugated cardboard, and for high-value materials such as toner cartridges and aluminum cans. These types of materials make good candidates for waste reduction and recycling. Walk through the facility noting what type of waste is discarded in

each area. A walk-through will help you determine the size and placement of collection bins.

What You Will Find

The type and mix of wastes that your facility generates will be unique. The box below shows some typical materials found in restaurants and hotels.

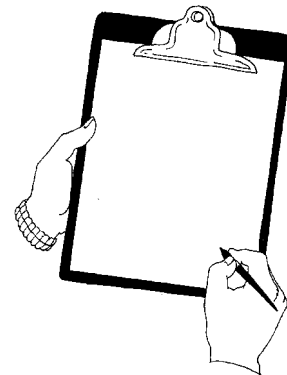
Typical Wastes

Office Area: office paper, corrugated paper or cardboard, other paper, beverage cans and bottles

Dining Area: beverage cans and bottles, newspaper, uneaten food

Kitchen: food waste, grease/oil, packaging waste like corrugated cardboard, pallets, steel cans, aluminum cans, glass and plastic bottles

Guest Rooms: newspaper, magazines, bottles, cans



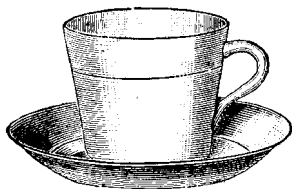
Step 3: Reduce and Reuse

Prevent waste creation by reusing items and reducing your consumption of resources.

Save money on disposal by not creating waste in the first place. The hierarchy of solid waste management calls for reduction and reuse before recycling. Now that you have finished the initial waste audit, you can identify materials for reuse and reduction. Below are some techniques for restaurants and hotels.

Purchasing

- ! Ask suppliers to take packaging back.
- ! Ask your suppliers to inform you of products that contain recycled content, have reduced packaging, and are packaged in recyclable materials.
- ! Establish purchasing guidelines to encourage the use of durable, repairable equipment, and reusable products such as linen and tableware.
- ! Buy a dispensing system to replace disposable room amenities such as shampoo and lotion bottles.



Donation

- ! Guest hangers no longer suitable for use to local dry cleaners.
- ! Linens, towels, blankets, soap, shampoo, uniforms, and used furniture to a local shelter.
- ! Egg cartons, strawberry baskets, tennis ball canisters, poster board, and other materials to schools or daycare centers for use in arts and crafts activities.
- ! Flowers that were used for a banquet to a local hospice or hospital.
- ! Unserved food to local food banks. Produce scraps can be composted on site or donated to local farmers for composting.

Waste Minimization

- ! Use pourers for sugar, pitchers for cream and small serving dishes for butter and jellies.
- ! Use cloth towels or hot air dryers in the restrooms.
- ! Buy beverages in concentrate or bulk form.
- ! Use health department-approved,

refillable condiment dispensers instead of individual packets

- ! Minimize excessive use of disposable and non-recyclable packaging.
- ! Use minimal packaging to wrap take-out items and offer pre-packaged food in recyclable packaging.
- ! Buy shelf-stable food supplies in bulk.
- ! Have employees use permanent-ware mugs or cups for their drinks.
- ! Use straw-style stir sticks for bar beverages instead of the solid style.
- ! Serve straws from health department-approved dispenser rather than pre-wrapped, and offer only one straw per drink.
- ! Offer customers a discount if they bring their own mugs, containers, or bags.
- ! Print daily specials on a chalkboard or dry-erase board, rather than printing daily specials on new sheets of paper every day.

Reuse

- ! Store food in reusable containers
- ! Use old paper bags when draining fat off oily foods, instead of paper towels.
- ! Turn stained tablecloths into napkins and chef's aprons. Use cloth linens and old linens for rags.
- ! Use reusable coffee filters. Quality

cotton, silk or metal filters can replace the cartons of paper filters restaurants go through in a given year.

- ! Collect and resell used cooking fat (oils) back to a manufacturer.

Food Preparation and Storage

- ! Adjust inventory levels on perishables to reduce waste due to spoilage or dehydration.
- ! Use daily production charts to minimize over prepping and unnecessary waste.
- ! Whenever possible, prepare foods to order.
- ! Adjust the size of meal portions if you find they are consistently being returned unfinished.
- ! Wrap freezer products tightly, label, and date them. Make sure they are used in a timely fashion, to minimize waste due to freezer burn.
- ! Check your produce deliveries carefully for rotten or damaged product, and return any substandard product.
- ! Rotate perishable stock at every delivery to minimize waste due to spoilage.
- ! Clean coolers and freezers regularly to ensure that food has not fallen behind the shelving and spoiled.
- ! Arrange your refrigerated and dry storage areas to facilitate easy product access and rotation.

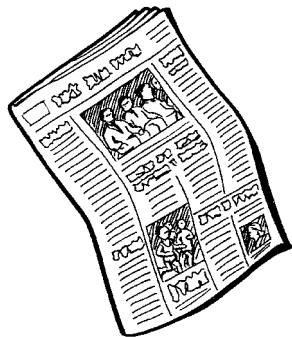
Step 4: What and Where to Recycle

Identify eligible materials for recycling.

Selecting Recyclables

Based on your waste audit findings, you can now select potential materials for recycling. If an item was not a candidate for waste reduction or reuse, you may be able to keep it out of your trash dumpster with a recycling program.

You will have to work with a hauler offering recycling services to determine which materials will be economical to recycle (see *Step 5: Working with Your Hauler*). The following materials are common recyclables collected by hotels and restaurants.



Common Recyclables

- Paper:** computer paper
bond paper
corrugated cardboard boxes
newspaper
telephone books
magazines
- Metal:** aluminum cans
tin/steel cans
- Glass:** clear, brown, green bottles and jars
- Plastics:** narrow neck bottles made of PET #1 and HDPE #2
- Office:** copier and printer cartridges
- Maintenance:**
motor oil
antifreeze
paint
- Other:** wood pallets
polystyrene containers

Collection Tips

A good collection system will help you capture a high percentage of your recyclables. Read the following tips for ideas.

- ! Be sure that recycling and trash bins look different from each other and are clearly marked. Both types of bins should be conveniently located in the kitchen and bar areas so that employees will use them.
- ! If your establishment is self-serve, post signs letting customers know that you are recycling and what they should do with their bottles and cans. Either put out a bin for these items, or have customers leave them on a designated counter for collection by your staff.
- ! If space is a problem, specially designed equipment such as can, glass and plastic crushers are available to reduce the volume of your recyclable materials.
- ! Some fast food chains are operating recycling programs for polystyrene containers.
- ! Make sure that bins in public areas are well-marked. It is best to choose bins with specialized openings, such as a hole for cans or a slot for newspapers, for these areas.
- ! Hotels and motels should recycle the "wet" and "dry" materials received through their offices, guest rooms, restaurants, and cafeterias. Dry recyclables, from offices and guest rooms, include different grades of paper. Wet recyclables, from the restaurants and

cafeterias, include cans and bottles as well as food waste, which can be used for pig chow or for composting in some areas of the country.

- ! Set up appropriate recycling programs in administrative offices, food service areas, guest rooms and public areas. It is best to concentrate on areas that produce significant amounts of particular materials.
- ! Set up a log book or a receipt system to record the volume of recyclables leaving the premises. This will enable you to receive proper compensation for your materials and to take appropriate action if volumes decrease.
- ! The wood pallet and container industry is the largest user of hardwood lumber in the United States. Recycled pallets are used for poultry litter, livestock bedding, fuel, mulch, soil amendment, particle board, and furniture.

Contamination

Contamination turns your carefully separated recyclables back into garbage. Keep your recyclables clean. Locating the recycling containers near trash cans can cut down on contamination. Clearly mark all collection containers and make it as difficult as possible to contaminate the recyclables. For example, use lids with only a small hole in the top for the collection of aluminum cans.

Step 5: Talk to Your Hauler

Most waste haulers also offer recycling services.

Now that you have identified potential recyclables in your waste stream, you should find out what recycling services are available to your business. A good place to start is your existing waste disposal contractor. Most waste haulers can develop a recycling program tailored to your business.

Recycling Issues

It is important to explore what types of recycling opportunities the contractor can provide. Depending on market conditions, the disposal contractor may pay you for your recycled product, haul it away at no extra charge, or provide reduced rates for containers and periodic pick-ups. If your business generates a lot of recyclables, it is important to explore this issue carefully since some firms may offer much better prices for recyclables.

Your waste hauler can help you set up your recycling program by suggesting appropriate containers to use and by providing educational materials for your employees. Ask your waste hauler for advice about keeping recyclables and wet waste separate. Depending on the company's trucks and equipment, your hauler may want to give you separate containers for trash and recyclables. It's important to properly sort and prepare your recyclables. If you don't, recyclables become garbage.

If your business generates a small amount of recyclables, you may find that private haulers will not be interested in collecting your

materials. In this situation it is often beneficial to join together with neighboring businesses to consolidate your recyclables and get better prices. Another option for small businesses is to check with local governments to see if they will accept commercial recyclables at their public recycling drop-off centers. These centers are typically intended for residential use. (Check *Appendix A* for a list of government contacts.)

Disposal Issues

Even with a good recycling program, your business will still generate trash for disposal. Since recycling will reduce the amount of trash, you should be able to save on disposal expenses. Ask prospective haulers to estimate these savings and to help you to choose the appropriate refuse container.

Containers are usually offered in sizes of two, four, six, eight and 10 cubic yards. Generally, you can expect to pack seven or eight filled trash bags per cubic yard. Depending on how quickly the container gets filled, the disposal contractor should be able to time pick-ups accordingly. While scheduled weekly pick-up is quite common, larger businesses may want service several times a week. In contrast, smaller businesses may simply want to schedule pick-up on an on-call basis. If your company falls in this small category, you should learn how quickly the contractor will respond to a call for pick-up.

How Much to Pay

Pricing for disposal and recycling services will help you decide which materials to recycle. Most disposal contractors offer monthly pricing, which incorporates a rental fee for the container, a set charge per pick-up, additional charges or credits for recycling, and optional services like weekend pick-up or rush service.

Contractors typically encourage customers to enter at least a three-year agreement, but many will consider working with you for a term as short as one year. Competition for disposal and recycling services can be quite fierce, so shopping around for the best deal usually pays off.



Tips for Saving Money

- ! Receive multiple bids — the disposal industry is highly competitive.
- ! Share the costs — if there are other businesses nearby, you may want to consider sharing a container.
- ! Be sure that your container can be easily secured against unauthorized usage — you do not want to pay for someone else's trash.
- ! Break down your trash — the disposal charge is based on the container size rather than the amount of waste generated. You can often save money by using a smaller container and packing the container more efficiently.

Step 6: Buying Recycled

Buying recycled products creates demand for the recyclables that your business collects.

Why Buy Recycled?

Collection of recyclables is only part of the economic process that makes recycling successful. The other key activities are reprocessing the materials into new products and selling these products in the marketplace. If no one buys recycled-content products, there will be no demand for the cans, bottles and paper that your business generates and the prices paid for these materials will fall accordingly. This relationship explains why it is important for your business to buy recycled-content products.

What Products are Available?

Interesting new products are being manufactured from your recyclables and turning up in the marketplace. Products range from ordinary writing paper to decorative glass tiles. The list on the following page provides some examples.

Look for products with high “post-consumer content.” Post-consumer means that the item’s recycled content comes from products that have been previously used and sent for recycling. Pre-consumer content refers to material that has never been sold to consumers, but collected from factory processes and reused to make products. For most printing and writing paper, look for at least 20% post-consumer content.

How to Buy Recycled Products

Talk with whoever purchases your supplies and also sit down with your vendors. Recycled-content products can have equal or superior quality to virgin material products. As with any purchase, it is important to assess the quality of each product on an individual basis.

Sometimes, purchasing policies are so strict that they needlessly exclude the consideration of some recycled products. Review your existing purchasing policies to assure they do not prevent the purchase of these goods. Specify the use of recycled-content products in all printing and janitorial contracts. State that your organization expects vendors to supply products with recycled content.



Recycled-Content Products

Paper Products

paper towels	facial tissue
toilet tissue	toilet seat covers
office paper	menu paper
napkins	place mats
cardboard	

Glass Products

bottles and jars	floor tiles
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Metal Products

steel cans	aluminum cans
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Plastic Products

carpets	desk sorters
desk trays	pencil holders
binders	plastic envelopes
trash can liners	flower pots
bottles and containers	scouring pads
auto parts	paint brushes
industrial paints	trash cans
recycling bins	kitchen drain boards
drums and pails	matting
milk bottle carriers	industrial pallets
bathroom stalls	plastic lumber

Other

toner cartridges and printer ribbons

Step 7: Education and Promotion

Educate your employees and customers about your recycling program.

Education of your employees and customers should help guarantee the success of your recycling program. For the program to excel, workers need to consistently follow the rules about separating material. Sometimes customers may also get involved.

At minimum, businesses should promote their recycling program to their customers as a sign of efficiency and environmental stewardship. Over time, people may forget the policies — repetition, reminders and promotion is an ongoing process. Some education tips appear below.

Employees

- ! Provide education as part of new employee orientation.
- ! Tell your staff what you hope to accomplish recycling.
- ! Periodically reinforce education during staff meetings.
- ! Have special training for janitorial staff on how to consolidate material for the hauler.
- ! Empower janitorial staff to monitor the program for any new problems.

- ! Train grounds crews to handle yard waste.
- ! Make a DO and DON'T list for recyclables and post it near work stations.
- ! Remember to ask your staff for their input — include them in the decision process to encourage participation.

Customers

- ! Promote your program in-house with charts and posters.
- ! Include information in your advertising.
- ! Mention the program in your guest information packets.
- ! Always put a recycling container next to a garbage can .
- ! Make recycling bins stand out.



Case Studies

Learn from other businesses.

Ben & Jerry's in Georgetown

Located in Georgetown, Ben & Jerry's is an ice cream store with headquarters in Vermont. This site has 45 employees who all participate in the recycling program. Ben and Jerry's motivation to recycle is built into the company's social mission. The company tries to be as environmentally conscious as possible; therefore, it was imperative to start a recycling program when the first store opened in the Washington area in 1989. From the start, metal, plastic, cardboard and glass have been recycled at all locations.



The most beneficial part of the program is that customers are excited about participating. In each of the stores, there are built-in wooden bins to collect the plastic spoons used by patrons. In fact, some regular customers now bring their plastics from other restaurants in the area to have Ben & Jerry's recycle them.

Materials Recycled: Plastic spoons, other plastics, cardboard

Cost Savings: Recycling saves money by diverting waste from regular trash disposal.

Waste Reduction: Includes double-sided copies, using other side of paper for scrap, and e-mail. Reusable espresso cups are for in-store customers. Plastic tubs/buckets and popsicle sticks are donated to school groups for use in crafts and gardening, and to greenhouses, where popsicle sticks serve as plant markers.

Buy Recycled: Fax paper, office paper, gift items (e.g., plastic frisbees), napkins

Education: During the first two days of training, new employees are told about the company's environmental involvement including recycling. The public sees permanent bins for plastic spoon recycling. A bulletin board in the store displays letters from headquarters.

Keys: Be sure one of the first things you tell your employees is how to recycle on the job. Be consistent. Get employees involved.

Challenges: Getting employees to do it right. Getting everything to go in the correct bin.

Hauler: Allen Services

Starbucks Coffee Company

Starbucks Coffee Company is a specialty coffee retailer with corporate headquarters in Seattle, Washington. The corporation has developed an environmental mission statement for all its stores.



The Mid-Atlantic Green Team oversees the Washington area environmental effort. The team is composed of representatives from the environmental affairs department, zones, regional area, districts, and individual stores. The Green Team holds monthly conference calls and quarterly meetings to evaluate the company's environmental progress and to establish future goals. It communicates with the company employees through the Starbucks monthly newsletter, e-mail, and open meetings. The Green Team also performs an annual recycling audit in stores to track progress and determine development opportunities. The information below comes from the Springfield, Virginia, location, which has 15 employees.

Materials Recycled: Plastics, corrugated cardboard, and soon newspapers

Cost Savings: Starbucks has found that it can operate more profitably and save money if it recycles. The most money is saved from the promotion of reusable items like coffee mugs.

Waste Reduction: Starbucks provides in-store customers with ceramic mugs, glasses, glass plates, and stainless flatware. It provides a \$0.10 per cup incentive for customers to bring their own mug or customers can purchase a mug at the store and receive a free fill of coffee. Customers can also pick up coffee grounds at the store to use for their backyard composting. To reduce paper, Starbucks uses double-sided copying and e-mail. Employees are asked to use reusable mugs.

Buy Recycled: The store sells a "coffee paper" note card set made from post-consumer paper containing coffee tree fibers. The store's paper bags, napkins, shopping bags, cardboard boxes, paper towels, receipt tape and tissue paper all contain varying amounts of pre- and post-consumer recycled content.

Education: Education has been the key to success at Starbucks. The employees undergo training, participate in community clean ups, and help the stores improve their recycling. The store newsletter discusses environmental issues. Starbucks also instituted an internal environmental award called the "Green Bean Award" that is presented to a store or department that meets certain environmental leadership criteria. Customers are educated through signs posted in the store.

Keys: Instill environmental values in the employees through education. It is important that employees at all levels know the company's environmental policy and support it.

Hauler: BFI

Lansdowne Conference Resort

The Lansdowne Resort, located in Leesburg, Virginia, opened in 1991. The Resort has 305 guest rooms, 550 employees, golf and swimming, dining, and conference space. Lansdowne implemented a recycling program in 1991, and in the fall of 1997 expanded it significantly with a new hauler and two full-time employees who were hired specifically for recycling. The number of recycling containers and locations was increased to be more convenient. Mixed paper is now picked up from guest rooms and recycled. The cost of waste disposal decreased by about 20%. The amount of trash landfilled decreased by 25%.

Materials Recycled: Commingled paper, newspaper, glass bottles, aluminum cans, #1 & #2 plastic containers, corrugated cardboard, wooden pallets, cooking grease.

Cost Savings: Saved 20%, almost \$2,000 per month. Lansdowne pays about \$3,800/month for trash disposal, \$395/month for recycling.

Waste Reduction: Includes double-sided copying and use of e-mail. Dispensers are used for some beverages, and employees and guests use china and glass dining ware. Two of their newspaper companies, *The Washington Post* and *The Wall Street Journal*, collect their newspapers after use. Good pallets are taken back by vendors.

Buy Recycled: Office pads of paper, toner cartridges

Education: Operational meetings are held every day in the property operations department and other departments meet monthly. Managers stress the importance of recycling at the meetings and the message is reinforced with the latest cost savings.

Keys: Hire staff for recycling. Get recycling bins for each office. Acknowledge recycling's economic and environmental benefits.

Challenges: Space on the loading dock is limited.

Hauler: BFI

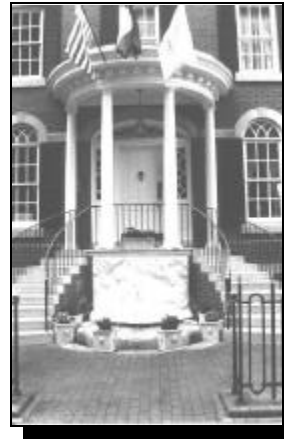
Recycled: 20 tons/month; 240 tons/year

Waste Disposed: 60 tons/month; 720 tons/year

Recycling Rate: 25%

Morrison House

Located in Alexandria, Virginia, Morrison House is a privately owned, four star/four diamond hotel and restaurant. There are 70 employees and 45 guest rooms. Morrison House started recycling in Fall 1993 because they recognized an environmental need that could also save the company money. Once the proper containers were ordered and put in place, the program proceeded smoothly because of the high volume of metal food containers, wine bottles, cardboard delivery boxes and newspapers involved in the operation. The recycling containers provided adequate holding space, whereas the previous single refuse bin always seemed to overflow before pickup.



Materials Recycled: Commercial mix: all paper, newspaper, cardboard
commingled containers: glass, aluminum, plastics #1& #2 , metal cans

Cost Savings: Pay \$443.20/month for trash disposal; \$369/month for recycling services;
more than \$200/month savings in waste disposal services overall.

Waste Reduction: Cloth towels are used in the restrooms. Drinking glasses and china are used in the rooms and dining areas. A water filter system for tap water was installed instead of buying bottled water. Old linens are used for rags, cloth laundry bags are used. Old stationery is used for scrap paper and a two-sided copier cuts down on paper. Instead of providing every guest a newspaper, there is a selection on the credenza on each floor.

Buy Recycled: Paper products, z-fold towels, plastic trash bags

Education: Employees have orientation within 30 days of hire. Management discusses recycling at employee meetings. Recycling bins are labeled in English and Spanish.

Keys: It is cost effective to recycle. Instill a sense of pride from recycling in employees.

Challenges: Educating a diverse staff, multi-language, cultural barriers, and motivation for staff.

Hauler: BFI

Recycled: 67,000 lbs/yr (33.5 tons/yr) commercial mix; 99,000 lbs/yr (49.5 tons/yr)
commingled containers

Waste Disposed: 124,800 lbs/yr (62.4 tons/yr)

Recycling Rate: 57%

Washington Convention Center

The Washington Convention Center, located in the District of Columbia, hosts international, national, and local single and multi-day events. Recycling is handled by the 40 housekeeping staff who pick up already separated recyclables. Recycling receptacles are strategically located throughout the building to facilitate ease in source separation.



The Center established its recycling program in 1991 when it hosted the National Solid Waste Management Association's annual conference. The Center also hosts several events throughout the year when recycling is expected by show managers and attendees. The convention industry has begun to promote "green meetings" and has gone so far as encouraging meeting planners to only use facilities that have an active recycling program.

Recycling has decreased the amount of waste taken for disposal, thereby reducing billing from the refuse hauler. The Center has received many compliments and requests for assistance from other organizations and convention centers on starting a recycling program. The positive image gained as a result of the program has made the Washington Convention Center one of the leaders in this particular industry.

Materials Recycled: Cardboard, glass, aluminum cans, newspaper, white paper

Cost Savings: Incorporating recycling has saved the organization money. Even though approximately \$14,000/year is spent to recycle, trash disposal costs have been reduced by 30-40% since the program started.

Waste Reduction: Double-sided copying; e-mail

Buy Recycled: Paper products: tissue, paper towels; toner cartridges

Education: Provide employees with a fact sheet entitled "Why recycling makes sense," which discusses how recycling saves raw materials, energy and reduces environmental pollution. At pre-event meetings, clients are told that the Center recycles and they are asked to participate.

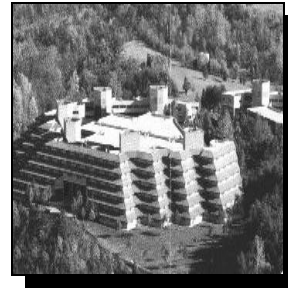
Keys: Have a person in charge of the recycling program. Continue to remind employees to practice recycling, train new employees. It is important to explain why recycling is good for the environment without just saying it has to be done because it's the law. Strategically place recycling bins. Convince people to participate starting from the top down.

Challenges: Getting everyone to participate.

Hauler: Eagle Maintenance Services for recycling; Urban Services Systems Corporation for refuse.

Xerox Document University / Xerox Corporation

Located in Leesburg, Virginia, the Xerox Document University is a corporate training center and conference facility including a hotel, food services, classrooms and labs with 350 employees. The 860 guest rooms accommodate visitors that range from the military to large corporations to church groups. Xerox's recycling program started in 1976 by recycling white paper and returning yard debris to nature. Xerox has sponsored a cross-functional Recycling Team that includes representatives from purchasing, food services, housekeeping, facilities and grounds maintenance, plus other interested employees.



Materials Recycled: White paper, mixed paper, corrugated cardboard, newspaper, aluminum/steel, plastic, wooden pallets, glass, polystyrene packing peanuts

Cost Savings: Spends \$3,000/month on disposal and \$500/month on recycling. In FY 97 recycling revenue was \$8,444 and disposal cost avoidance was \$14,520

Waste Reduction: Includes returning yard debris to wooded areas for natural decomposition. Transferring, selling or donating surplus assets such as furniture, linens, bedding, fixtures and equipment. Returning wooden pallets to motor freight companies for reuse, donating them for fire training, or recycling into wood chips. Double sided copying and e-mail. Beverages are from a dispenser. China and glass dinner ware are used. A pulper was installed in the kitchen to grind food waste. It separates the water from the solids, which reduces their waste volume by 80%.

Buy Recycled: pencils, all paper products

Education: Flyers, labels on waste baskets, posters, newsletter, video tapes

Keys: Look at your waste or have a recycling company audit your business. Find out how much you can save and how much you can afford to recycle.

Challenges: Transient guest population. Educating new employees sufficiently. The marketplace. If recycling areas are not kept clean, you could have a bug or rodent problem. Where and how to collect, labor intensive.

Hauler: BFI

Recycled: Total: 220.12 tons

Materials	Aluminum	Steel	Plastics	Glass	News- papers	Mixed Paper	High Grade Paper	Cardboard	Wood
Tons	6.86	9.56	6.02	20.76	9.06	46.91	68.46	42.87	9.62

Waste Disposed: Total: 733.54 tons

Recycling Rate: 23%

Westfields Marriott International Conference Center

Located in Chantilly, Virginia, the Westfields Marriott International Conference Center has 345 guest rooms, three dining rooms and 425 employees. John Huppman started the recycling program in 1991 after Fairfax County mandated it. Slowly, he kept adding different materials to the program and now 20% of the waste stream is recycled.



Materials Recycled: Paper, glass, metal cans, cardboard, motor oil, antifreeze, tires, fat/oil

Cost Savings: Reduced tonnage of regular trash which decreased the amount of pickups overall, decreasing the cost of hauling the trash. Recycling is not costing more but is breaking even and paying for itself.

Waste Reduction: Includes use of china and glassware in all dining areas and serving beverages from dispensers. Double-sided copying and use of scrap paper saves paper. Use of cloth towels in restrooms. Return pallets and large plastic tubs to vendors.

Buy Recycled: cardboard, steel

Education: Through meetings, classes, sessions about recycling. Made containers easily accessible. There are recycling bins next to trash cans for guests to use during coffee breaks from conferences.

Keys: Keep it simple. Get the guest involved because it makes them feel good. Separate at the source.

Challenges: People putting trash in the recycling bins.

Hauler: BFI

Recycled: 110 tons

Waste Disposed: 440 tons

Recycling Rate: 20%

Tempo Restaurant

Located in Alexandria, Virginia, Tempo restaurant was opened in 1990 by a husband and wife chef team. Mrs. Albert, a native of California, could not stand the thought of putting all of their recyclables in the trash. When she found that having the recyclables hauled away was too expensive, she decided to use the Wheeler Avenue Public Recycling Center and haul the recyclables herself.



Materials Recycled: Glass, aluminum, metal cans, plastics, newspapers, telephone books

Cost Savings: Tempo does not pay for the recyclables to be hauled away because it uses the recycling dropoff center.

Waste Reduction: Reuses tough plastic containers as allowed by the health department. Use of china and crystal in restaurant.

Buy Recycled: All paper products: toilet paper, hand towels, office paper, stationery, menus

Education: Told employees initially how to recycle. There's not much employee turnover, but the old employees explain it to any new employees.

Keys: Recycling glass alone decreases the weight and volume of waste dramatically. Restaurants also generate a lot of recyclable cardboard.

Challenges: Having a big name hauler for recycling is too expensive for a small restaurant. Hauling it yourself is especially difficult in the winter.

Hauler: C & B Trash Service

Recycled: 16,000 lbs/yr

Waste Disposed: 57,000 lbs/yr

Recycling Rate: 22%

Glenn Dale Country Club

The Glenn Dale Country Club is located on 125 acres in Glenn Dale, Maryland. The recycling program began in 1991 because the country club wanted to put forth a positive image for their operation. Prince George's County offered a grant which helped with the purchase of recycling containers. The recycling bins were placed at all teeing areas, the driving range, the swimming pool, equipment areas, the clubhouse, the snack bar, common grounds areas and at the three private residences. The 25 full time employees and 30 seasonal employees along with the customers help to give this program a 64% recycling rate.



Materials Recycled: Corrugated cardboard, glass bottles, tin/steel cans, aluminum cans, #1 & #2 plastic containers, paper, yard waste

Cost Savings: Costs have increased 15% because the hauler makes 5 pickups to collect trash and recyclables, there is not enough volume to be profitable.

Waste Reduction: The yard waste is all composted or mulched.

Buy Recycled: Paper, toilet tissue, paper towels, paper plates, napkins

Education: Use repetition in teaching employees. Customers participate because the recycling bins are located on every hole and throughout the buildings.

Keys: Communicate, clearly mark the recycling containers, don't confuse anyone.

Challenges: Contamination, people putting trash in recycling containers or recyclables in trash containers. Not enough recyclables volume.

Hauler: Affordable

Recycled: 11 ½ tons not including yard waste.

Yard waste: 858 tons composted/recycled on the property.

Waste Disposed: 6 ½ tons

Recycling Rate: 64% not including yard waste, 99% including it.

Appendix A: Government Recycling Laws and Contacts

Locality	Business Recycling Law	Recyclables Required	Reporting Requirement	Contact
Alexandria	Voluntary for all businesses.	Voluntary	Voluntary for all businesses.	Paula Dade (703) 751-5872
Arlington County	Mandatory for all businesses.	Each business must recycle the two recyclable materials that it generates annually in the greatest quantities.	Businesses must file a recycling implementation plan and report every three years on recycling activity to the County (no recycling tonnage information is required).	(703) 228-6570
District of Columbia	Mandatory for all businesses.	newspaper, corrugated cardboard, office paper, aluminum cans, steel cans, glass bottles and jars	None for waste generators.	Bill Easley (202)645-0746
Fairfax County	For single businesses which generate an annual total waste stream of 100 tons or more; business complexes and institutions which generate an annual waste stream of 100 tons or more; or office buildings and commercial complexes having an average annual occupancy of 200 persons or more	Mandatory for recyclable material that comprises the greatest percentage of the combined waste stream.	Annual reporting is mandatory for all businesses, institutions, and federal, state, and local government agencies.	Ed Harris (703) 324-5436
Frederick County	Voluntary	Voluntary	None	Kim Stavely (301) 631-3041
Loudoun	Voluntary	Voluntary	Voluntary	Scott McDonald (703) 777-0187

Locality	Business Recycling Law	Recyclables Required	Reporting Requirement	Contact
Montgomery County	Mandatory for all businesses.	office paper, newspaper, corrugated cardboard, steel/tin cans, aluminum cans, glass bottles and jars, plastic containers, and yard trimmings	Mandatory for businesses with 100 or more employees. Smaller businesses are required to report upon notification by the County.	Eileen Kao (301)217-2770
Prince George's County	Voluntary	Voluntary	Mandatory twice a year for waste generating businesses.	Chelo Cole (301) 883-5045
Prince William County	Mandatory for all businesses.	Mandatory for the recyclable material that comprises the greatest percentage of the business' waste stream.	Mandatory annual reporting.	Stott Mason (703)792-6001

Appendix B: Glossary

Baler- A compactor used to compress recyclables or trash. In some cases, balers can make materials like cardboard easier to collect and recycle.

Closed Loop Recycling - The process of collecting an item, like a bottle, and processing it back into another bottle for repurchase.

Commingled Materials - Recyclables, all mixed together, such as plastic bottles with glass and metal containers. Commingled materials require sorting after collection.

Composting- Controlled decomposition of organic matter to produce a fertilizer or soil amendment.

Contaminant- Any non-acceptable material mixed in with recyclables.

Disposal Cost Savings - Economic savings from reduced waste hauling service expenses due to waste reduction and recycling.

HDPE (#2)- High-density polyethylene - Colored or opaque plastic used in laundry product bottles and milk jugs and other containers.

PETE or PET (#1)- Polyethylene terephthalate - Clear or tinted plastic used in some cleaning product bottles, soda bottles, and other containers.

Post-Consumer Content- Recycled content that comes from materials that have been used by consumers.

Pre-Consumer Content - Scraps and trash created during the manufacturing process, such as paperboard trimmed away when making cartons.

Source Separation - Any method that separates recyclables from waste at the generation point.

Waste Audit- A process that examines a waste stream, identifies its components and makes recommendations on how to reduce, reuse, recycle and better manage the waste stream.

Waste Stream- All the recyclable and refuse that your establishment generates.

Appendix C: Bibliography

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California Integrated Waste Management Board.

Waste Reduction in Hotels and Motels and Food Service Waste Reduction Tips and Ideas. <http://www.ciwmb.ca.gov/mrt/wpw/wpiz/fshotelz.html>

Fairfax County Business Recycling Task Force.

Source Reduction in Restaurants and Hotels.

Greater Chicago Recycling Industry Council.

Eat, Drink, and Recycle: A Guide to Recycling for Restaurants, Bars and Clubs. 1994.

Green Hotels Association.

Ways you can help save our planet.

Lee, Mie-Yun. "Don't throw money away on trash collection."

South Florida Business Journal 17.20 (1997) : 8.

METRO & River City Resource Group, Inc.

Green Key Guide - Room for Improvement: Developing a resource efficient program at your hotel.

METRO & River City Resource Group, Inc.

Green Plate Restaurant Recycling Guide: Resource efficient options for cutting operations costs.

Pennsylvania Department of Environmental Protection, Recycling and Waste Reduction.

Developing a recycling program for commercial, institutional & municipal establishments; Conducting a Waste Audit; Pennsylvania Businesses Recycle!"; Tip sheet: Hotels and Motels; Tip sheet: Restaurants and Taverns.

<http://www.dep.state.pa.us>.

Appendix D: Directory of Resources

Web Pages:

Metropolitan Washington
Council of Governments
Recycling Mentor Web Page for
Restaurant and Hotels
<http://www.mwcog.org/dep/recycle/mentor>

Montgomery County, Maryland
What Restaurants Can Do to Reduce, Reuse,
and Recycle
<http://www.dpwt.com/SolWstSvcDiv/solid/busrec7d.htm>

Green Hotels Association
(713) 789-8889
<http://www.greenhotels.com>

Green Restaurant Association
<http://www.dinegreen.com/>

Pennsylvania Department of Environmental
Protection Tip Sheets
<http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/Tips/Hotels.htm/>

<http://www.dep.state.pa.us/dep/deputate/airwaste/wm/recycle/Tips/Restaurants.htm>

Recycling Tips and Case Studies for
Restaurants and Hotels in the Las Vegas
Area
<http://www.state.nv.us/ndep/recycl/reshot.htm>

ChefNet: Tips for Reducing, Reusing and
Recycling in Your Restaurant
<http://www.chefnet.com/cc2k/html/tips.html>

Steel Recycling Institute:
Recycling Steel Cans From Food Service
Facilities
(800) 876-7274
<http://www.recycle-steel.org>

Case Studies:

Wendy Albert
Tempo Restaurant
Owner/Chef
4231 Duke St. Alexandria, VA 22304
(703) 370-7900

J. Wayne Compton
Starbucks
Store Manager and
Green Team Regional Coordinator,
East Coast
6525-B Frontier Drive
Springfield, VA 22150
(703) 924-0215

John Huppman
Westfields Marriott International Conference
Center
Executive Chef
14750 Conference Center Drive
Chantilly, VA 22021
(703) 818-0300 ext. 550

Lori Johnston, Ben & Jerry's
Owner and Manager
3135 M Street, NW
Washington DC 20007
(202) 965-2222

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Washington Convention Center
Manager, Building Services, Operations
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900 Ninth Street, NW
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