

GUIDE TO GREENING HOTELS THROUGH WASTE MANAGEMENT & GREEN PURCHASING

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Reducing waste and purchasing green products are powerful strategies for reducing the environmental footprint and increasing the operational sustainability of hotels. This document provides a step-by-step approach for materials reduction, reuse, recycling, composting, and green purchasing at hotels. The strategies outlined in this document support the same eligibility requirements for waste management and green purchasing as the green hotel programs in the Northeast states.

I. WASTE MANAGEMENT STRATEGIES

Reducing & Reusing are the first two steps to decreasing a hotel's overall waste. Material reduction and reuse efforts focus on actions that staff can take to reduce their department or individual waste generation while at work.

Recommended waste reduction activities:

- Review all documents that regularly get printed (daily, weekly, quarterly, and annually) and evaluate whether a printed copy is absolutely necessary. If printed versions are not needed, make sure an electronic copy is made available to all appropriate staff. By eliminating needless printing, the hotel will decrease its paper purchasing costs.
- Make the most use of printing and writing paper before tossing it in the recycling bin. Set all printers and copiers to photocopy double-sided as the default and use single-sided printed pages for printing draft copies or as scrap paper. This effort will also save a tremendous amount of money on paper purchases.
- Reduce the amount of disposable beverage cups in the trash by providing staff with a ceramic mug or by asking each staff person to bring in a reusable mug and/or bottle to use at work. By eliminating this waste, the hotel saves valuable space in compactors and dumpsters and saves money on disposal costs.
- Offer unwanted linens and furniture to local non-profits. This will allow the hotel to save money on disposal costs, create a tax benefit, as well as support the work of local organizations.
- Use a Materials Exchange to get rid of unwanted items that the local non-profits can't use. Materials Exchanges are Websites on which unwanted reusable items can be posted. Items posted on Exchanges are offered at a reduced price or for free. A list of Exchanges in the Northeast is available at http://www.nerc.org/documents/material_exchanges_in_the_northeast.html. By using Materials Exchanges, the hotel can save money on disposal and potentially make some money on items it no longer needs.
- Donate unserved food to a local foodbank. The foodbank will provide the hotel with guidelines for packing and storing the food donations.¹

Recycling is the next step to take in reducing a hotel's trash. When developing a new, or improving an existing, recycling program it is important to know how much of the trash is recyclable. This information will help in making decisions on the number and size of recycling collection containers, the recycling dumpster size, as well as the frequency in which the dumpster will need to be emptied.

¹ The federal Bill Emerson Good Samaritan Act protects donors from liability when donating to a non-profit organization. More information about the Act may be found at <http://feedingamerica.org/get-involved/corporate-opportunities/become-a-partner/become-a-product-partner/protecting-our-food-partners.aspx>

It will also be helpful in assessing what size the trash dumpster will need to be once the recycling program is implemented. It may be possible to reduce the trash dumpster size or the frequency of the pick-ups by the hauler once the recycling program is established, which will also reduce trash disposal costs.

Step 1 – Assess the Amount of Recyclables in the Trash. The results of an assessment will provide management with the volume of recyclables being generated at the hotel. The assessment may be done in two ways—a visual assessment or a waste sort.

Visual Assessment - A visual assessment includes looking in trash receptacles throughout the hotel and making a subjective decision about how much of the trash is recyclable. This type of assessment can be done by walking around the hotel and peeking in trash bins or by collecting the hotel's trash from one day and looking in trash bags (labeled with the department from which it was generated) prior to being put in the dumpster. It is important to take note of where the trash was generated so decisions about how to implement the recycling program will be tailored for each department.

Waste Sort – A sort involves collecting all the trash from the hotel for one day, labeling the trash bags with the department from which they were generated, dumping out each bag, sifting through the trash, separating the items in piles of recyclables and trash, weighing each pile, and documenting the results. This process is the most effective method for obtaining the most accurate figures about the type, volume, and weight of recyclables in the hotel's waste stream.

Please note: Before conducting a waste sort, it is important to find out what materials are recyclable in your area. This information can be obtained by contacting the nearest recycling center.

Step 2 - Target Specific Materials for Recycling. Based on the visual assessment or waste sort, it will be obvious which recyclable materials are generated the most and from what departments in the hotel. By focusing on the most common recyclables in the trash, the hotel will be able to substantially reduce its waste disposal fees.

Common Recyclables Found in Hotel Trash

- **Paper Products** (i.e., cardboard, printing and writing paper, copy paper, brochures, newspapers, envelopes, shredded paper) - Paper is heavy and contributes significantly to the weight of trash. By eliminating it from the hotel's waste stream, trash disposal costs will drop noticeably.
- **Bottles and Cans** – Single-use beverage containers are pervasive in our society and add to the convenience of travelling. Although relatively light-weight, the sheer volume of containers takes up valuable dumpster space. By recycling the containers, hotels can reduce the frequency of hauler trash pick-ups, which will result in cost-savings.
- **Food Waste** – For hotels with kitchens and restaurants, food waste is another significant contributor to high disposal costs. Food is heavy and takes up a lot of room in dumpsters. It is also the source of many odor issues in the trash. To eliminate this material from its waste stream, hotels can implement a food waste collection program for composting. More information about food waste collection programs is below.

Step 3 – Contract with a Hauler for Recycling Services. Before a hotel can implement a recycling program, it must find a hauler that handles recyclables. Oftentimes, this may be as easy as contacting the hotel's existing trash hauler and renegotiating its service contract. If the trash hauler does not provide recycling services, companies that do will be listed in the phone book under recycling, or by searching for them via the Internet. It may be helpful to review a list of terms commonly used by haulers before discussing recycling and trash with them. Go to

http://www.nerc.org/documents/hauler_terms_and_waste_conversion_factors.pdf for a list of these terms. It is also important to determine if the hauler can provide recycling collection containers (also known as totes) to be used by janitorial staff when emptying the individual recycling bins, and if there is a charge for these containers.

Step 4 – Purchase Recycling Bins. To make recycling easy for guests and staff, recycling bins should be consistent in color and just as visible and accessible as trash bins throughout the hotel. This will convey the message to guests and staff that recycling is important at the hotel. Recycling bins are easily purchased via the Internet and by asking the hotel's existing suppliers.

Number of Recycling Bins & Placement Throughout the Hotel - To get the greatest participation in the recycling program, place a recycling bin at each point of waste generation. Recycling bins should be placed close to garbage bins and clearly marked for recycling. Guests and staff should not have to look for the recycling bins.

Following are suggested bin placements:

- In each guest room,
- At each staff desk,
- At the front desk,
- At each staff and public use printer and copier,
- In staff lounges,
- In the lobby and breakfast area,
- Outside the exit doors (front and back of building),
- In the pool and exercise rooms,
- In the business center,
- Near each vending machine, and
- A separate container or bag on the cleaning staff's carts.

Step 5 – Collect Food Waste for Composting. Diverting food waste for composting is a great waste diversion activity for hotels and can result in significant savings in trash disposal costs. The key is to come up with a plan for collecting the waste that will work with staff, communicate the plan clearly to staff, monitor the plan implementation, and identify an appropriate hauler that takes food waste.

Identifying a Food Waste Hauler – The first step to finding a hauler that takes food waste to a composting facility is to talk with the hotel's trash hauler and ask if they also haul food waste. If they don't, haulers that do may be found by searching in the local phone book or the Internet under trash haulers.

Once a hauler is identified and the food waste collection contract is negotiated, management can begin developing the plan for collecting the food waste from the facility and determining a start date for the program. The best way to develop the collection strategy is to review all the places where food waste is generated, e.g., in the kitchen, at the restaurant, banquets, in the bar, in the hospitality suite, etc. Once the locations are identified, the actual steps for staff to collect the waste can be formed. Management will be most successful with this process by involving staff because they will easily identify what will work best.

Sample Hotel Food Collection Program

A hotel decides to collect kitchen prep waste and plate waste from banquets, the bar, and the restaurant for composting. As a result, management decides to discontinue the use of the garbage disposal for food waste.

***In the kitchen** - Staff is provided with 5-gallon reusable food buckets at each work station to collect discards. Individual staff are responsible for emptying the container into the food waste toter at a designated location. Each night the last staff in the kitchen transfers the toter to the walk-in cooler for overnight storage. The first staff to arrive in the morning is responsible for taking the toter out of the cooler and placing it back in the kitchen.*

***On the serving floor** – Staff is instructed to scrape plates into a 5-gallon reusable food bucket when clearing plates before bringing back to the kitchen. Full buckets are then emptied into the toter in the kitchen. All staff are responsible for running their bucket through the dishwasher at the end of their shift to eliminate the risk of fruit flies.*

***Food waste pick-up** – Environmental Services brings the full toters to a designated area near the exterior loading dock for pick-up by the hauler. The hauler picks-up the food waste on a daily basis so odors don't become an issue.*

Step 6. Document Waste Management Programs. It is extremely important that the efforts implemented by staff for reducing, reusing, recycling, and composting be documented on a monthly basis in addition to the trash disposal costs. The information to be recorded should include amounts of materials diverted from the waste stream and related costs. This information will be useful when making future decisions about waste management. It will also be important for staff to see the results of their efforts and the volume of material diverted. The diverted tonnages of materials can be entered into [EPA's WARM Tool](http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html) (http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html), an Excel spreadsheet that calculates the environmental benefits of reuse, recycling, and composting efforts. This information can then be used in the hotel's marketing materials.

Sample WARM Model Results

A hotel in the U.S. that collected 9.64 tons of food waste for composting in one quarter, instead of throwing it away, decreased its greenhouse gas emissions by 5 tons of Metric Carbon

Step 7. Review Waste Management Program. It is best to review and re-evaluate the material reduction, reuse, recycling, and composting programs on a regular basis. When new, it is important to monitor the programs weekly until the kinks are worked out. Oftentimes, minor changes can increase efficiencies. Later, this can be done on a quarterly or bi-annual basis.

When monitoring the programs, it is important to take note of the levels of trash and recyclables in the dumpsters prior to emptying. Once the programs are running well, there is a good possibility that the trash dumpster size and/or the frequency of pick-ups can be reduced. This will be another way for the hotel to save money.

When peeking in the dumpsters, also take note of the types of materials being put in the trash dumpster and assess whether any of these materials can be reused or recycled. This will let management know the effectiveness of the existing procedures.

Step 8. Share the Hotel's Progress on Waste Minimization & Diversion. Many people today are concerned with environmental issues. By the hotel sharing its efforts and progress in reducing, reducing, recycling, and composting on its Website, in press releases, and other marketing materials, it helps potential guests know that the hotel cares about the environment and is doing its part to reduce its environmental footprint. Sharing this information may also increase the potential for return guest visits.

II. GREEN PURCHASING

Green purchasing (also known as environmentally preferable products purchasing or EPP) is defined as the purchase of products and services that have a lesser or reduced effect on human health and the environment when compared with competing products and services that serve the same purpose. The list of available green products is quite long. A short list of commonly used products in hotels which green versions are widely available include:

- Printing and Writing Paper;
- Envelopes;
- Toilet paper, Tissues, and Paper Towels;
- Office Supplies;
- Office Electronics (computers, printers, copiers);
- Remanufactured Toner Cartridges;
- Cleaning Products;
- Janitorial Supplies;
- Lamps; and
- Appliances.

Step 1. Identify EPP Priorities & Write Policy Statement. When developing a green purchasing program, it is beneficial to create a policy statement to inform staff of the hotel's purchasing preferences, guide future purchasing decisions, and to notify customers about the hotel's purchasing practices. By posting the policy on the hotel's Website, it also sends a message to customers and staff that the hotel is taking its purchasing and the effect it has on the environment seriously.

Following is a sample EPP policy from the [Green Hotels in the Green Mountain State Program \(http://vtgreenhotels.com/\)](http://vtgreenhotels.com/):

Sample Environmentally Preferable Products (EPP) Purchasing Policy
Preference shall be given to suppliers whose products have environmentally friendly attributes that: maximize post-consumer recycled content, minimize toxicity, minimize packaging, or have any other environmentally preferable attributes, with minimal sacrifice to price, quality, and delivery requirements.

Step 2 – Review Current Purchasing Practices & Products. When starting an EPP program, it is important to inventory and record the existing products purchased, including descriptions (e.g. % of recycled content in paper products, and toxicity levels in cleaning products and other chemicals used). Once the product list is complete, it is time to discuss greener versions of each product with your suppliers to eliminate the non-green items. If they are unable to provide greener choices, other suppliers may be found on the Internet and by contacting the green hotel program in your state. Following are some Websites that provide information on green purchasing and green products:

- [Northeast Recycling Council Web Page on EPP Purchasing \(http://www.nerc.org/topic_areas/environmentally_preferable_green_purchasing.html\)](http://www.nerc.org/topic_areas/environmentally_preferable_green_purchasing.html)
- [Responsible Purchasing Network \(http://www.responsiblepurchasing.org/\)](http://www.responsiblepurchasing.org/)
- [Vermont Green Hotels Program Web Page on EPP Purchasing \(http://www.vtgreenhotels.org/resources.html\)](http://www.vtgreenhotels.org/resources.html)
- [Energy Star \(http://www.energystar.gov/index.cfm?c=business.bus_hospitality_entertainment\)](http://www.energystar.gov/index.cfm?c=business.bus_hospitality_entertainment)
- [Green Seal \(http://www.greenseal.org/FindGreenSealProductsandServices.aspx\)](http://www.greenseal.org/FindGreenSealProductsandServices.aspx)

Following is a list of the green hotel programs in the Northeast States. Program contacts may be very helpful in identifying green product vendors in individual states.

Green Hotel Programs in Northeast States

- [Connecticut Green Lodging Program](http://www.ct.gov/dep/cwp/view.asp?A=3847&Q=464254)
(<http://www.ct.gov/dep/cwp/view.asp?A=3847&Q=464254>)
- [Delaware Green Lodging Program](http://www.dnrec.delaware.gov/p2/Pages/GreenLodging.aspx)
(<http://www.dnrec.delaware.gov/p2/Pages/GreenLodging.aspx>)
- [Maine Green Lodging Program](http://www.visitmaine.com/accommodations/green_lodging/?vm=pphid099scd&nuihs0ogjf1s0q1)
(http://www.visitmaine.com/accommodations/green_lodging/?vm=pphid099scd&nuihs0ogjf1s0q1)
- [Massachusetts Green](http://www.massvacation.com/industry/green.php) (<http://www.massvacation.com/industry/green.php>)
- [New Hampshire Sustainable Lodging and Restaurant Program](http://nhslrp.org/)
(<http://nhslrp.org/>)
- [New York Green Hotel Pilot Certification Program](http://www.dec.ny.gov/chemical/58045.html)
(<http://www.dec.ny.gov/chemical/58045.html>)
- [Pennsylvania Green Hotels and Motels](http://www.dep.state.pa.us/dep/deputate/pollprev/Industry/hotels/default.htm)
(<http://www.dep.state.pa.us/dep/deputate/pollprev/Industry/hotels/default.htm>)
- [Rhode Island Hospitality Green Certification for the Hospitality & Tourism Industry](http://www.dem.ri.gov/programs/benviron/assist/gncert/index.htm) (<http://www.dem.ri.gov/programs/benviron/assist/gncert/index.htm>)
- [Vermont Green Hotels in the Green Mountain State Program](http://www.vtgreenhotels.org/)
(<http://www.vtgreenhotels.org/>)

Step 3. Select Appropriate EPP Products. When deciding which green products to purchase, ask the supplier for samples. This is a common practice that helps purchasers and staff test a product before committing to purchasing it. It may take testing several products before finding the one that satisfies the hotel's requirements. Feedback on tested products also helps the supplier to better understand the hotel's product needs.

Step 4. Document Green Purchases. It is important to keep a list of product purchases, purchase costs, and money saved as a result of using each product. This information will prove to be useful when making future purchasing decisions and will help to promote continued EPP practices.

Following are some well documented examples of the use of EPP in hotels:

- Green cleaners with a dispensing system. The initial cost may seem high for the cleaners and dispensing system, but a significant amount of money is saved by eliminating over-measuring and overuse of products.
- Some green cleaners can reduce the overall number of cleaning products needed.
- Green cleaners improve workers' environmental health and reduce the number of sick days related to long-term exposure to toxic chemicals.
- The longevity of CFL and LED bulbs reduces the frequency of bulb replacement and the associated risk when staff climbing ladders to change bulbs.

Step 5. Evaluate the Program and Measure Environmental Impact. EPP programs, like all other successful programs, need to be monitored and evaluated on a regular basis. This will allow management to review results and current practices, and make any necessary changes for improving the program. As part of the evaluation, the person responsible for purchasing can also plug the

purchasing amounts into various calculators to measure the environmental benefits and cost savings of purchases. This information can be used to help staff and management better understand the connection between purchasing choices and their effect on the environment and their budget.

Following is a table of some of the available calculators:

| Calculator Source and Name | Intended Purpose | Web Address |
|--|--|---|
| EPA's Recon Tool | Measures environmental benefits of recycled content purchases | http://www.epa.gov/climatechange/wy/cd/waste/calculators/ReCon_home.html |
| Environmental Defense Fund's Paper Calculator | Measures environmental benefits of using different papers with recycled content | http://www.edf.org/papercalculator/ |
| Electronics Environmental Benefits Calculator (developed by the Tennessee Center for Clean Products with funding from the US EPA) | Measures environmental and economic benefits of purchasing EPEAT-registered products | http://isse.utk.edu/ccp/projects/benefitcalculator/elecbenecalc.html |
| EnviroCalc (developed by the Massachusetts Operational Services Division) | Measures environmental benefits and cost savings of recycled-content and energy efficient products | http://www.mass.gov/?pageID=afterterminal&L=6&L0=Home&L1=Budget%2C+Taxes+%26+Procurement&L2=Procurement+Information+%26+Resources&L3=Procurement+Programs+and+Services&L4=Environmentally+Preferable+Products+%28EPP%29+Procurement+Program&L5=Download+Publications%2C+Reports+and+Tools&sid=Eoaf&b=terminalcontent&f=osd_epp_es_dlpub_envirocalc&csid=Eoaf |
| Energy Star Calculator | Measures energy and cost savings of energy efficient appliances | http://www.energystar.gov/index.cfm?c=bulk_purchasing.bus_purchasing |

Step 6. Communicate with Other Green Purchasers – [EPPnet](http://www.nerc.org/eppnet)

(<http://www.nerc.org/eppnet/index.html>) is a listserv administered by the Northeast Recycling Council that provides a means for communicating with purchasers throughout the country about EPP products and services. Membership to the listserv is free of charge.

Other Waste Reduction Resources for Hotels

- [Green Lodging News](http://www.greenlodgingnews.com/) (<http://www.greenlodgingnews.com/>)
- [Hotel Recycling Calculator](http://www.ecorewards.com/infostore/ECalculator.asp) (<http://www.ecorewards.com/infostore/ECalculator.asp>)
- [Green Hotel Guide: 8 Step Recycling Program](http://www.ecogreenhotel.com/ecogreen-newsletter/EGH_May_2010/8_step_recycling_program.html) ([http://www.ecogreenhotel.com/ecogreen-newsletter/EGH May 2010/8 step recycling program.html](http://www.ecogreenhotel.com/ecogreen-newsletter/EGH_May_2010/8_step_recycling_program.html))
- [Incorporate Elements of Sustainability and Recycling into Hotel Vendor Contracts](http://eventplanning.about.com/od/conferenceservices/qt/hotel-contracts.htm) (<http://eventplanning.about.com/od/conferenceservices/qt/hotel-contracts.htm>)
- [WASTE REDUCTION & RECYCLING TIPS FOR HOTELS](http://www.wastecare.com/Articles/Waste_Reduction_Recycling_Tips_Hotels.htm) (http://www.wastecare.com/Articles/Waste_Reduction_Recycling_Tips_Hotels.htm)
- [Recycling Program 2 – Hotels should take our health and safety into consideration](http://www.hotelssafety.com/ENVIRONMENT/RECYCLING-PROGRAM-2.html) (<http://www.hotelssafety.com/ENVIRONMENT/RECYCLING-PROGRAM-2.html>)

III. CONCLUSION

The steps outlined in this Guide are not difficult, but they do require a commitment of management and staff to allow the time to implement. By choosing to become a green hotel, the message to potential guests is that the hotel management, staff, and corporation believe the environment is an important factor when operating the hotel. This message can play a powerful role in filling guest rooms and selling other guest services.