

EcoPurchasing Guide for Hotels and Motels

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Foreword

EcoPurchasing saves time, money, energy, and natural resources

Rising economic and environmental costs mean hotels can no longer afford to just “get rid of the garbage”

In 1992, 99% of hotel/motel GMs said they will buy environmentally-friendly products if made available by vendors

The **EcoPurchasing** Guide is designed to assist hotel and motel managers to initiate a program utilizing selective purchasing practices and aggressive management to reduce waste, toxicity and disposal costs. **EcoPurchasing** includes strategies such as purchase avoidance, product reuse, purchase of recycled products, and extending the life of products.

EcoPurchasing saves energy and protects workers, the public and the environment. Hotels and motels implementing initiatives in **EcoPurchasing** lower their material procurement expenditures and reduce waste disposal costs.

In the past, the commercial sector focused on an efficient system for waste removal. However, businesses are now experiencing a dramatic change in the complexity and costs of managing waste. At the same time, the public concern over the environmental consequences of waste has also changed. In response, hotel and motel managers are analyzing ways to make changes in their operations to cut costs, protect the environment and increase customer loyalty. Including EcoPurchasing into long-term business planning and operations reduces waste and enhances overall efficiency.

According to a 1992 University of Florida Hotel and Motel survey, 99% of the General Managers indicated they would purchase environmentally friendly products if they were available from their vendors. To assist in this endeavor, the EcoPurchasing guide and video were developed to provide resources and guidelines to implement an EcoPurchasing program. These practical tools will be useful in assisting management and the EcoPurchasing Team to establish programs **in Offices, Housekeeping and Laundry, and Food and Beverage Departments**. A successful program is built on a team concept of management and employees working together on source reduction strategies suitable to their hotel operations.

The EcoPurchasing Guide for Hotels and Motels is a companion to the **Recycling Guide for Hotels and Motels**, which was also developed by the University of Florida. Videos are available to assist in program design and employee training.

Copies of the guide and video tape are available at cost from:

Dr. Thomas McCall
Instructional Materials Service
101 Rolfs Hall
University of Florida
Gainesville, FL 32611-0130
904-392-0502; Fax: 904-392-9585

Overview

More public attention is being paid to the volume of waste generated by businesses

In the late 1980's as a result of legislation and a surge of public interest in the solid waste issue, recycling and source reduction programs emerged nationally in the residential sector. The commercial sector has lagged. In 1992 EPA estimated the fraction of municipal solid waste (MSW) generated by residential and commercial sources. It was estimated that 55 to 65 percent of MSW comes from residential sources and that 35 to 45 percent comes from commercial sources. In order to make an impact in reducing the municipal waste stream, more attention is now being directed to the impact of the waste generated by the commercial sector.

EcoPurchasing as a source reduction strategy utilizes purchasing power to control the amount and the toxicity of a facility's potential waste stream. Until recently, the standards for purchasing products centered around quality, cost, color, availability and convenience. In EcoPurchasing, consideration is also given to hazardous content, product and distribution packaging, materials content, recyclability and energy efficiency.

EcoPurchasing saves hotels and motels thousands of dollars in waste disposal costs

Innovative businesses, such as hotels and motels, are beginning to incorporate EcoPurchasing strategies in their daily operations. EcoPurchasing makes sense, both economically and environmentally. By practicing EcoPurchasing, the amount of waste is reduced thus saving the hotel and motel industry thousands of dollars in waste disposal costs. Using less toxic products reduces potential employee hazards, hotel liability and environmental impacts. Use of less toxic products decreases the cost to dispose of containers, unused products, and waste water.

EcoPurchasing saves energy and reduces environmental impact

EcoPurchasing also saves energy. For example, computers are now available that use sixty percent less electricity when idling. A purchase that reduces electricity use in Florida by one thousand kilowatt hours prevents seventeen hundred pounds of emissions into the atmosphere. Purchasing energy efficient equipment, such as air conditioners, refrigerators, and ice machines that use ozone friendly chemicals, prevents negative impacts on the environment.

EcoPurchasing conserves resources

Reducing waste slows the depletion of natural resources, reduces pollution associated with the extraction of raw materials and the manufacture of products, and conserves valuable landfill space. EcoPurchasing as a source reduction effort also makes incineration and landfilling less harmful by reducing toxic constituents in the solid waste stream.

Introduction

EcoPurchasing is a procurement strategy that reduces the volume and toxicity of wastes and also reduces material costs and supports recycling. EcoPurchasing is both economically and environmentally sound.

What a business buys directly affects what it throws away

A direct correlation exists between what a business purchases and what it throws away. In addition, all of the environmental resources and economic costs of materials, manufacturing, labor, transportation, packaging, merchandising, storage, and disposal are wasted when a product is discarded. A waste reduction program helps a business preserve environmental quality, and reduce disposal costs. For example, paper waste is the largest component of the waste stream in hotels and motels, Paper averaged 39.93% of the waste in an industry-wide waste composition analysis of New York City hotels and 60% of the waste stream in a 1991 study of six large hotel properties in central Florida. In the Florida study it was estimated that 50% of the paper waste could be recycled. If source reduction strategies of an EcoPurchasing program were applied to this volume of waste paper, a considerable reduction would occur in disposal costs, resulting as well in reduction of materials costs and volume to be recycled or discarded.

EcoPurchasing appeals to the environmentally-conscious traveler

43 million adults were willing to spend 80% more in 1991 for "ecotravel"

Competing for the environmentally conscious traveler, the Eco-Tourist, presents another incentive for implementing an EcoPurchasing program. More than 85% of travelers interviewed in 1991 indicated that they are likely to support companies that preserve the environment. Forty three million adults nationwide reported their willingness to spend up to 8% more for EcoTravel. Eight million tourists nationwide-in 1992 claimed to have selected traveling arrangements for at least one EcoTrip based exclusively on environmental sensitivity, and nearly one-third of all travelers are likely to do so in the next three years. Translating these figures to the industry in Florida, that could mean that at least 10 million tourists visiting Florida in any given year are shopping for *green* accommodations and are willing to spend more to get them. The impact of EcoTourism on the hospitality industry in Florida is a potential opportunity that should not be ignored. A recent New York Times/CBS News Poll found that a majority of Americans, a whopping 65 percent, agree that "protecting the environment is so important that requirements and standards cannot be too high, and continuing environmental improvements must be made regardless of costs."

EcoPurchasing means:

- ✓ *reduce waste volume*
- ✓ *reduce toxicity*
- ✓ *avoid purchase*
- ✓ *reuse products*
- ✓ *increase durability*
- ✓ *buy recycled products*
- ✓ *use energy efficiently*

EcoPurchasing includes the following components which target waste reduction through purchasing decisions and better management of resources:

- **Reduce waste volume.** Purchasing in bulk or concentrate reduces the volume of packaging, i.e., purchasing chemicals in concentrate form and premixing into reusable containers eliminates the disposal of single-use containers.

- **Reduce toxicity.** Purchasing products with less hazardous ingredients and storing chemicals properly to avoid leaks decreases the potential for contaminants to enter the water supplies through runoff or by requiring special treatments for disposal.

- **Avoid purchasing.** Choosing not to purchase a product because of the environmental and economic costs to dispose of the end waste product is also an effective way to practice EcoPurchasing. For example, purchasing dispensers for personal care products in Hotels avoids purchasing single-use containers.

- **Reuse products.** Substituting reusable products for single-use disposable products reduces operational costs. Increasing the number of times that items are reused in the hotel reduces waste disposal costs. After equipment and supplies are no longer useful to the hotel donate them to non-profit organizations or waste exchanges for distribution. See *Educational Resources and Waste Exchanges*.

- **Increase durability.** Purchasing furniture and equipment designed to be repaired rather than replaced is an important consideration in EcoPurchasing. Maintaining heavy duty equipment reduces replacement and disposal costs as well as the resources used in manufacturing, transporting, and disposing of durable goods.

- **Purchase recycled products.** Purchasing recycled products is critical to the long- term success of recycling. Purchasing agents are in a unique position to help solve the problem. Learning about recycled products and how they can be used in hotel and motel applications can place a property on the leading edge of technology, appeal to the ecotourist, save waste disposal costs, support community and commercial recycling efforts, and foster goodwill among employees, guests and the community.

Some believe that recycled products are inferior to those made of virgin materials. Although certain recycled products may not be suitable for all hotel applications, objections are often based more on resistance to change rather than the quality of the product. In the past, the contamination of recycled materials resulted in the inability to maintain quality control. Today technology and education work together to insure higher quality post consumer materials.

Objections to *buying recycled products* are often based more on resistance to change than on the quality of recycled products

Purchasing recycled products will help reduce costs

The cost for recycled products varies from comparable to higher than the cost of products made from virgin materials. Since recycling is still in its infancy, start-up costs for manufacturing recycled products are still being recovered. Also, the availability of clean, high quality raw materials from local recycling processors is just beginning to impact the marketplace. Purchasing recycled products will help reduce costs. An approved recycled product list provided to each department in the hotel will inform department managers of their options.

A recycling program compliments a waste reduction program

Although recycling is not by definition source reduction, it is one way for a hotel facility to reduce the waste requiring disposal by landfilling or combustion. A recycling program compliments a waste reduction program with the ultimate benefits being cost savings for the property and conservation of natural, nonrenewable resources and pollution prevention. The companion, **Recycling Guide for Hotels and Motels**, is available for use in planning and implementing a recycling program.

- **Increase energy efficiency.** Energy efficiency considerations in EcoPurchasing includes the energy savings when purchasing products made from recycled materials, the energy savings from the selection of energy efficient equipment and products, the energy that would have been used in their manufacture, distribution and disposal, and the savings from avoided costs. See **Energy Efficient Equipment** beginning on page 23.

Steps to Organizing a Hotel and Motel EcoPurchasing Program

Commitment To EcoPurchasing

EcoPurchasing depends on a commitment from management

Hotel and motel owners, general managers and department managers must make a commitment to reducing the hotel's waste. For the EcoPurchasing program to be successful, time and effort is needed in planning, organizing and implementing the program. Research and evaluation of the hotel's current purchasing and waste disposal practices are needed prior to the program development. This can be accomplished by a team or departmental committee who research the hotel's purchasing and waste handling practices and then design an EcoPurchasing program to reduce the amount of waste to be disposed of by the hotel. The Team approach has proven to be a successful method of addressing energy management and recycling programs in hotels and motels.

Responsibilities of the Hotel and Motel General Manager

Communicate the importance of reducing waste to hotel and motel department managers

- Inform the owners and appropriate corporate franchise managers of the hotel's intent to reduce the waste stream through EcoPurchasing. This is important as it may affect purchasing decisions at the corporate level.
- Appoint the Purchasing Manager or another employee who is knowledgeable of the hotel's purchasing practices as the leader of the EcoPurchasing Team.
- Assist the Team in establishing program goals.
- Support the EcoPurchasing Team's Employee Awards Program by providing funds for employee recognition programs.
- Communicate the importance of reducing waste to hotel and motel department managers.
- Include specific waste reduction methods in employee position descriptions (e.g., removing cases of food items from shipping pallets: stacking pallets on the loading dock to be picked up by the vendor).
- Support purchasing decisions made by the EcoPurchasing Team which reduce waste. Switching products may be a problem with some department managers and supervisors who are resistant to change and loyal to specific products and vendors.
- Inform the EcoPurchasing Team of planned renovation, including equipment or furniture replacement, as these activities require special arrangements for removal.

Develop a green plan to highlight the EcoPurchasing and recycling programs in news media

- Establish an accounting system that accurately reflects waste management costs and provides a monthly report to the EcoPurchasing Team for use in tracking waste disposal costs.
- Devise a system to calculate the impact of EcoPurchasing in avoided inventory costs.
- Promote the hotel's EcoPurchasing successes in company newsletters, announcements on employee bulletin boards and electronic in-house mail.
- Develop an environmentally *green* marketing plan for the hotel. Work with the hotel's advertising/marketing company to highlight the hotel's EcoPurchasing and Recycling programs in all marketing materials, news releases, printed materials and mass media.
- Prepare news articles with pictures and submit to hospitality journals and advertising publications for national publicity of the hotel's environmental programs.

Organize an EcoPurchasing Team

The EcoPurchasing Team

- Organize an EcoPurchasing Team composed of department heads and/or managers who make purchasing decisions. Once the program is organized and successfully functioning, department managers may be replaced with supervisors or other employees who have contributed to the program and have leadership abilities.
- Establish a schedule for the EcoPurchasing Team meetings. Managers need to know in advance when meetings are to be held. Send an electronic mail reminder a week before the scheduled meeting and another reminder on the day before the meeting. Post the meeting announcement on the employee bulletin board and list the meeting with the hotel's meeting planner so it will appear on the hotel's meeting schedule which is reviewed daily by department managers. In the beginning, the team will need frequent meetings but once the program is implemented and operating successfully, monthly meetings should be sufficient.
- Conduct departmental waste audits to identify types of materials/products to be targeted for EcoPurchasing. An audit identifies areas where waste can be reduced by recycling or changes in purchasing. Determine the composition of the waste stream by categories (paper, metal, glass, plastic, etc.). Audits and past disposal records from various time periods will establish a benchmark for evaluating the results of an aggressive EcoPurchasing program. See *Publications* beginning on page 44.
- Establish program goals. The goals will provide a guide for specific waste reduction efforts within the departments.

Conduct departmental waste audits to determine targets for EcoPurchasing

Establish program goals and post them for employees

Evaluate products by packaging, form, energy efficiency, toxicity, safety, quality, and performance

Vendors will work to offer new products once they are aware of a hotel's commitment to EcoPurchasing

- Develop a waste reduction policy to create a clear understanding of the goals. Post the policy on bulletin boards in employee areas of the hotel and discuss them in staff meetings. Copies of the policy may be given to vendors when notifying them of the hotel's new purchasing requirements.
- Review existing purchasing practices to determine how purchasing decisions impact the hotel's waste disposal costs. Purchasing practices differ from hotel to hotel because of differences in management styles, property type and ownership. In franchised hotel properties, to ensure quality and consistency, purchasing decisions for specific products are made at the corporate level. Usually, little consideration, if any, is given to waste disposal costs when these products are selected. Guest room amenities are an example of corporate level purchasing decisions that impact the waste disposal costs at the local property level. For example, if a hotel is a franchised property, switching from individual portion sized bottles of personal care products to bulk dispensers requires corporate approval. However, as the *Green/EcoTourist* movement gains momentum, corporate purchasing is changing to reflect these trends.
- Evaluate each product's impact on the hotel's disposal and energy costs before purchasing. Increasing waste disposal and energy costs, safety considerations and environmental impacts necessitate that products be evaluated for product packaging, toxicity, energy efficiency, and safety prior to placing orders with vendors.
- Develop an acceptable products list for use by hotel department managers when making product changes. Seek input from the supervisors and employees before making final selections. Employees are more accepting of changes in products and procedures of operation when they have been a part of the planning and research prior to implementing the changes.
- Notify vendors of the hotel's EcoPurchasing Program and provide them with product specifications for packaging, material content, and toxicity. Include a statement in all solicitations for goods and services requiring bidders and contractors to adhere to the specifications. Once vendors are aware of the hotel's commitment to being a *green* hotel they will work closely with the hotel's purchasing manager to find products that meet the hotel's new purchasing specifications. Many manufacturers are already producing and packaging products for the *green* business demand.
- Establish a computerized inventory control system for products which are purchased frequently to avoid wasteful duplication and product out-dating.

*Reward employees
who contribute to
reducing the hotel's
cost of operations*

- Involve department managers and employees in developing the hotel's EcoPurchasing strategies, and seek their suggestions. Reward employees whose suggestions are used. This may be a weekend at a sister property, money, dinners, a paid day from work, a special parking place, etc. When challenged, employees will generate ideas for the EcoPurchasing Awards Program.
- Encourage employees to think of creative ways to reduce waste.
- Post the EcoPurchasing Program's progress reports, news clippings, newsletters, etc., on departmental bulletin boards so employees can receive feedback.
- Recognize employees who have contributed to the program's success. Let them know the value of their ideas and assistance in reducing the hotel's cost of operations.
- Evaluate EcoPurchasing's impact on the total waste bill and report this information to owners, managers, and employees.

Note: Disposal costs will vary monthly depending on seasonal fluctuations, construction and renovation, and state of the economy.

Helpful suggestions for EcoPurchasing in the **Housekeeping and Laundry Departments**, in **Food and Beverage Departments**, and in Offices are included in this guide and in the Hotel and Motel EcoPurchasing video. Hotel purchasing managers, with the assistance of other department managers, will be able to add items to the lists that are more specific to their needs and hotel operations.

EcoPurchasing Guidelines for Hotel and Motel

Offices

EcoPurchasing guidelines will assist hotel and motel purchasing managers reduce the volume and toxicity of wastes generated in **OFFICES**.

To successfully reduce disposal costs, conduct a departmental audit to determine the types and volumes of wastes generated for disposal. Plan your EcoPurchasing program by targeting specific products or materials which contribute the greatest volume and/or weight to the waste stream or which create disposal problems. Establish short and long term departmental goals for waste reduction and implement appropriate EcoPurchasing strategies,

Reduce waste by:

Using less paper reduces the hotel purchase costs and makes better use of the energy and other resources used in the manufacture, transportation, use and disposal of paper

- using a centrally-placed or electronic bulletin board for messages instead of making multiple copies of memos
- shredding office paper and using it to package shipments
- reusing polystyrene peanuts or other shipping material
- making double sided copies
- purchasing white office paper fax machines
- decreasing the number of hard copies of documents by establishing a central filing system to store documents on computer disks
- using electronic mail for correspondence when possible
- reusing obsolete forms and stationary for drafts and memo pads
- reusing envelopes and folders for routing in-house mail and correspondence
- printing directly on envelopes to eliminate non-recyclable labels
- using reusable mugs for coffee instead of disposable cups
- using staff routing slips when sharing information in-house
- purging mailing lists to reduce returned mail
- eliminating fax cover sheets by using a rubber stamp designed for fax use
- offering newspapers in centrally located places such as lobbies, restaurants, and news stands rather than distributing them to each guest room to reduce the volume of discarded newspapers and plastic bags
- combining office supply orders from various departments: ordering in bulk reduces packaging waste and saves time, energy, and money

Order in bulk to reduce packaging waste and save time, energy, and money

Give employees the opportunity to purchase used equipment and furnishings

- charting the shelf life of items (i.e., toner, correction fluid) and purchasing only the needed quantity
- requesting that vendors avoid excessive boxes, bags, and wrappings when shipping to your property
- collecting short pencils to send to schools
- shipping typewriter and computer ribbons and printer cartridges to a recycler
- planning a surplus garage sale so employees have the opportunity to purchase office equipment and furniture, etc. before giving it to a waste exchange and/or nonprofit organization
- recycling cardboard boxes
- reducing junk mail by sending each solicitor a postcard requesting that they remove your hotel's address from their mailing list; reuse their original mailing label for your return address

Note: For personal mail only, write to Mail Preference Service, Direct Marketing Association, P.O. Box 9008, Farmingdale, NY 11735, requesting they remove your name from their mailing lists.

Reduce hazardous waste by purchasing:

- non-toxic inks
- unbleached and chlorine-free papers
- nontoxic, biodegradable correction fluid
- equipment that does not require batteries
- rechargeable batteries for communication radios

Support recycling by purchasing:

- paper products made from recycled paper (i.e., letterhead, envelopes, computer, copier, fax, and laser papers, calculator and cash register tapes, file folders, note pads, and legal pads)

Note: use the recycling symbol on letterhead, envelopes, and other printed materials to inform the public about your environmental commitment.

- recycled offset papers and cardstocks for pocket folders, table tents, business cards, and guest cards
- file boxes, clipboards, binders, and computer diskettes made from recycled materials
- furniture, carpet, carpet padding, trash cans, and recycling containers made from recycled plastic
- bulletin boards and floor mats made from recycled tires

Use the recycling symbol on printed materials to advertise your environmental commitment

*Purchase
remanufactured toner
cartridges to save
materials costs*

- plain envelopes with water-based adhesives which dissolve during the recycling process: avoid window envelopes with plastic inserts
- uncoated vs. coated, glossy papers when printing hotel promotional materials: check locally for information on paper recycling
- remanufactured toner cartridges for office machines (i.e., copiers, laser printers, fax machines, typewriters, cash registers, and ATM machines)
- refillable pens and pencils rather than throwaways
- services from contractors, printers, graphic artists, and other subcontractors who use recycled products and recycle at their business sites

While all avoided use and reuse saves energy in manufacturing, distribution, and disposal, more direct savings come from purchasing office equipment that is energy efficient. For example, computers are now available that use 60% less energy when idling. Similarly, there are energy efficient copy machines, printers, fax machines, and office refrigerators. Remember, for each one thousand kilowatts of electricity saved, seventeen hundred pounds of emission into the air are avoided.

In summary, when you purchase new office equipment, ask about their energy efficiency. See *Energy Efficient Equipment* beginning on page 23.

EcoPurchasing Guidelines for Hotel and Motel Housekeeping & Laundry Departments

EcoPurchasing guidelines will assist hotel and motel purchasing managers reduce the volume and toxicity of wastes generated in HOUSEKEEPING and LAUNDRY departments.

To successfully reduce disposal costs, conduct a departmental audit to determine the types and volumes of wastes generated for disposal. Plan your EcoPurchasing program by targeting specific products or materials which contribute the greatest volume and/or weight to the waste stream or which create disposal problems. Establish short and long term departmental goals for waste reduction and implement appropriate EcoPurchasing strategies.

Reduce waste by:

- purchasing vacuum cleaners with reusable bags vs. disposables
- using vendors who take back reusable chemical containers and other waste packaging
- reusing shipping containers for recycling collection containers
- requesting vendors deliver products in returnable and/or reusable boxes, crates and pallets
- rotating draperies to expose different portions to sunlight and extend their useful life
- refinishing and reupholstering damaged and dated furniture
- redyeing linens and carpet to match remodeled decor
- planning a surplus *garage* sale so employees have the opportunity to purchase linens, furniture, paint, draperies, etc., before donating to waste exchanges and nonprofit organizations
- participate in disaster relief programs by donating food and furnishings
- using reusable baskets or plastic containers for guest laundry, thus avoiding disposable paper or plastic wrap
- returning clothes hangers to dry cleaners and recycling plastic garment bags
- purchasing cleaning and laundry products in concentrated form, diluting and pouring into reusable containers for individual use
- reusing the concentrate empties by adding pumps and using them as spray bottles for cleaning solutions
- purchasing sheets with a high thread count for longer wear
- redyeing stained bath towels and wash cloths for reuse as pool towels and cleaning cloths

Ask vendors to deliver products in returnable boxes, crates and pallets

Purchase cleaning and laundry products in concentrate

- purchasing refillable bath soap, shampoo, hair rinse and hand lotion dispensers for guest rooms to eliminate soap pieces and plastic bottles
- organizing a recycling program for plastic, glass and paper

Reduce hazardous waste by:

Purchasing pump-style sprays instead of aerosol cans

- purchasing cleaning products with less hazardous constituents
- purchasing pump-style sprays instead of aerosol cans
- using a hazardous chemical containment pan to prevent leaching of unused chemicals
- cleaning up chemical leaks and spills immediately
- checking chemical containers periodically: replace as needed
- storing unused portions in original containers in a cool, dry place away from equipment, and keeping storage areas well-ventilated
- disposing of chemicals per label instructions. Call your county environmental protection office if you are unsure of how to dispose of hazardous wastes properly

Dispose of batteries properly

- collecting dead alkaline, dry cell and rechargeable batteries used in department radios and calculators at a central collection point and disposing of them at the battery recycling area in your county
- reducing the need for pesticide applications in guest rooms and employee work areas by removing food containers, garbage and recycling containers daily: cleaning employee break rooms daily to remove crumbs and spills: and reporting cracks around doors and windows to the Engineering Department for repairs to prevent crawling pests from entering

Support preventive measures to reduce mildew and smoke odors

- check labels on room deodorizers for hazardous chemical content. Deodorizers are often used to mask smoke and mildew odors. Reduce the need for these products by implementing practices, such as changing air conditioning filters every three to four weeks: sealing cracks around windows, doors, and air conditioning units: and operating air conditioning equipment at temperatures recommended by the Engineering Department.

Support recycling by purchasing:

- toilet and facial tissues and paper towels made from recycled paper fibers
- housekeeping and laundry carts, waste containers, floor signs, caddies, and mop buckets made from recycled plastics, carpet, carpet padding, mats, vertical blinds, and furniture made from recycled materials

EcoPurchasing Guidelines for Hotel and Motel Food and Beverage Department

EcoPurchasing guidelines will assist hotel and motel purchasing managers reduce the volume and toxicity of wastes generated by the **FOOD AND BEVERAGE DEPARTMENT**.

To successfully reduce disposal costs, conduct a departmental audit to determine the types and volumes of wastes generated for disposal. Plan your EcoPurchasing program by targeting specific products or materials which contribute the greatest volume and/or weight to the waste stream or which create disposal problems. Establish short and long term departmental goals for waste reduction and implement appropriate EcoPurchasing strategies.

Reduce waste by:

- using reusable coffee filters
- using only reusable dishes and flatware for restaurants and employee cafeteria
- installing a magnet on food waste containers to recover silverware accidentally thrown away with food waste
- using linen hand towel dispensers in employee rest rooms to reduce paper waste as well as litter, or purchasing dispensers which control the amount of paper being dispensed or use less than standard width paper
- using washable hats and aprons for kitchen employees instead of disposable paper ones
- using only cloth napkins, tablecloths and china for restaurants, meetings, and conventions
- using stained wash cloths and towels for cleaning rather than paper towels
- redyeing tablecloths and napkins to match new color schemes when remodeling: reuse worn table linens as cleaning rags or remake into aprons and tool pouches
- reusing coasters to reduce cocktail napkin waste
- reusing the five (5) gallon PVC buckets, or offer them to employees for personal use
- donating plastic buckets and jars to schools, nurseries or churches
- purchasing fruits, vegetables and meats packaged in reusable crates or boxes made from recycled materials, not in nonrecyclable waxed boxes
- distributing condiments, paper napkins, and straws upon request instead of offering them self-serve for take out orders
- purchasing beverages with the least distribution packaging

Use cloth napkins, tablecloths, and *china* **for restaurants, meetings, and conventions**

Purchase **foods** and beverages with the least packaging waste

Dispenser beverages
*reduce waste and save
money*

Purchase in bulk and concentrate; select:

- condiments in bulk and dispense the items in smaller, refillable containers
- concentrate bar mixes: reconstitute and serve from reusable containers
- dispenser beverages (i.e., juice, iced tea, hot chocolate) in concentrate or bulk and pour into reusable serving containers
- milk in five (5) gallon dispenser bags delivered in reusable plastic crates, rather than by the gallon: if milk is purchased by the gallon, select recyclable plastic jugs, not waxed cartons
- frozen foods in bulk and store unserved portions in airtight reusable food containers
- flours and grains in bulk and store properly in reusable food containers
- draught beer in returnable/refillable kegs to reduce the quantity of bottles and cans requiring disposal
- carbonated fountain beverages in refillable cylinders and dispense into reusable glasses.

**Purchase cleaning
products with the least
hazardous chemicals**

Reduce toxicity by:

- purchasing cleaning products that contain the least amount of hazardous chemicals
- purchasing pump-style spray containers for cleaning products
- disposing of unused portions of cleaning products according to the labels
- disposing of used appliances to scrap dealers who recycle CFC's
- purchasing refrigerators, freezers, and coolers which are CFC-free
- using dry, concentrated dishwasher chemicals in dispensers to reduce chemical spills and waste
- recycling unusable furniture and equipment to scrap dealers who recycle materials, or donating to a waste exchange or local homeless shelter
- reducing the need for pesticide applications by eliminating clutter where pests might hide: sealing cracks around doors where pests may enter: and removing garbage, recycling bins and open food containers at closing time
- wiping down all food preparation surfaces, tables and other areas which might contain crumbs

*Ask vendors for
goods containing
postconsumer
recycled content*

Support recycling by purchasing:

- recycled paper for menus, table tents, guest checks, inventory sheets, calculator and cash register tapes: use the recycling symbol on printed materials to inform guest of your hotel's commitment to the environment
- napkins, place mats, and paper towels made from recycled paper
- serving carts and food storage containers made from recycled plastic
- plastic condiment squeeze bottles made from recycled plastic
- reusable food storage containers made from recycled materials
- floor mats made from recycled rubber
- carpet, vertical blinds, and furniture made from recycled materials
- waste and recycling containers made from recycled plastics

EcoPurchasing Guidelines for Hotel and Motel Energy Efficient Equipment

*Equipment can impact
operating expenses
and the environment*

Energy Efficiency Considerations

The hotel industry is equipped with energy intensive equipment and lighting. Air conditioning, heating, ventilation, refrigeration, motors, cooking, laundry, cleaning and office equipment are purchased and used in most hotel operations. Choices made when purchasing equipment and lighting can have a major impact on the hotel's operating expenses and on the environment: therefore, it is important that energy efficiency be considered before purchasing energy intensive equipment.

Air conditioning (A/C) efficiency considerations:

- purchase A/C equipment sized for the area of use
- look for a high Energy Efficiency Rating (EER): a Seasonal Energy Efficiency Rating (SEER) of 10 or higher is recommended
- use high efficiency motors for A/C air handler unit fans (fan speeds)
- select A/C units with variable air volume controls
- install heat recovery units on large A/C systems to preheat water
- compare efficiency of gas and electric air conditioning systems before making a selection
- purchase washable, commercial grade A/C filters and change them every four weeks during hot humid months

*Consult with a
qualified energy
engineer for a
cost-savings
analysis*

Electric motor efficiency considerations:

- choose high efficiency motors with variable speed controls
- consider the hours the system needs to operate before selecting motor sizes
- consult with a qualified energy engineer for a cost-savings analysis: two small motors may operate more efficiently than one large motor

*Energy costs over a
bulb's useful life
are many times the
original purchase cost*

Lighting efficiency considerations:

In purchasing light bulbs, as a general rule, the bulb cost is the smallest cost. Energy costs over a bulb's useful life are many times the original purchase cost. Evaluate bulbs by comparing lumens per watt.

- convert inefficient incandescent bulbs to efficient fluorescent bulbs in exit signs, guest room lamps and other areas where incandescent bulbs are used. A 9-watt compact fluorescent bulb.

*Install automatic timers
in unoccupied areas*

replacing a 60-watt incandescent bulb, is 85% more energy efficient and lasts nine times longer. The newer 95-watt incandescent bulb replaces the older style 100-watt incandescent bulb

- replace incandescent reflector bulbs with lower wattage ellipsoidal reflector bulbs
- install lighting controls (timers or occupancy sensors) to turn off lights in unoccupied areas such as storage rooms, employee rest rooms, walk-in coolers, etc.

Increase the energy efficiency of fluorescent lighting systems by purchasing:

- high efficiency fluorescent bulbs: for example, replace a T-8 with a T-12 bulb
- energy efficient ballasts which provide a more efficient energy transfer
- reflectors which direct more light out of the fixture into the room
- high intensity discharge bulbs (Low Pressure and High Pressure Sodium and Metal Halide) for outside parking lot lighting, security lighting, and for select indoor use,
- photovoltaic lighting systems for lighting advertising signs, walkways, plants, trees, decorative water fountains and remote outdoor areas.

*Purchase a timer for
the kitchen exhaust
hood that turns off the
system when the
kitchen is closed*

Kitchen equipment considerations include purchasing:

- air-miser hoods that use outside air as make-up air instead of discharging conditioned inside air
- a timer for the kitchen exhaust hood that turns off the system when the kitchen is closed
- smaller convection ovens to replace oversized conventional ovens
- an air-to-water heat pump water heater for kitchen use
- refrigeration equipment with high energy efficiency ratings

Note: Compare energy efficiency ratings before making a purchasing decision. Consult with refrigeration experts when replacing old compressors and motors to guarantee proper sizing.

*Excessive use of water
costs money, energy,
and resources*

Water use considerations:

Water use in hotels varies depending on geographical location, occupancy, property type and season of the year. The average water use is 218 gallons per occupied room per day. Larger properties use more water due to the water intensive facilities often found in the larger hotels, i.e., pools, laundries and restaurants. Excessive use of water

increases the cost of operation, increases electrical energy required for pumps, depletes the water supply and puts extra demands on waste water disposal plants.

Increase water use efficiency by purchasing:

*Thaw foods instead
of running water
over them*

- dishwashing machines that use final rinse water for the prewash of the next load of dishes
- water-saving showerheads and sink faucet aerators: 2.5 gallons per minutes (GPM) showerhead and 0.5 GPM aerator are recommended for water savings and guest satisfaction respectively. Showerheads with less water flow often increase the number of guest complaints
- a food-thawing machine instead of running water over foods for faster thawing
- laundry washers which use final rinse water for prewashing of the next load of laundry

Note: Reduce the number of laundry loads per day by asking guests how often they would like their bed linens and towels laundered. Some hotels are changing sheets every two to three days and towels every other day.

Office equipment considerations include purchasing:

*Computers with power
down features
consume 60%
less energy*

- computers, monitors and printers with power *down* features that consume 60% less energy when machines are idle
- copy and fax machines which have *power down/stand-by* features that operate when machines are idle

For additional information on increasing energy efficiency in hotel and motel operations request a copy of the "Energy Efficiency For Florida's Hospitality Industry" available from Dr. Thomas McCall, Instructional Materials Service, 101 Rolfs Hall, University of Florida, Gainesville, FL 32611-0130, 904-392-0502; Fax: 904-392-9585.

Appendix A. Bibliography

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Appendix B. Key Words and Definitions

Bulk Products • products packaged in large quantities, requiring less packaging and producing less waste.

Cardboard • a synonym for paperboard; not a recognized term in container materials. See OCC.

Concentrates • products packaged in higher strength requiring dilution before use: concentrates require less packaging and produce less waste.

Consumption • the amount of any resource (material or energy) used in a given time.

DEP (Florida Department of Environmental Protection, formerly Departments of Environmental Regulation and Natural Resources) • the agency charged with the enforcement of all environmental laws and regulations in Florida; the lead agency implementing the Solid Waste Management Act.

Disposable • products, items and/or packaging designed to be used once or a few times and discarded.

Disposal Cost Savings • economic savings from reduced waste hauling operational expenses (e.g., labor, storage, containers, balers, transportation and hauling fees, etc.) and avoided tipping fees as a result of waste reduction.

Durable Goods • generally defined as products having a lifetime of three years or more (e.g., air conditioning units, furniture, dishwashers, dryers, refrigerators, cooking equipment, etc.).

EcoPurchasing • a source reduction strategy empowering purchasing managers to select durable and non-durable goods that create the least amount of waste and toxicity. EcoPurchasing also promotes reuse of products and materials and supports recycling and resource/energy conservation.

EcoTourism • responsible travel that helps to conserve the environment and sustains the well-being of the local people.

EPA (United States Environmental Protection Agency) • the agency charged with the enforcement of all federal regulations regarding air and water pollution, radiation and pesticide hazard, ecological research, and solid waste disposal. Also known as *U.S. EPA*.

Hazardous Substance • a chemical or product that is dangerous to human health and/or the environment while being stored or used.

Hazardous Waste • waste that requires special precaution in its storage, collection, transportation, use, treatment, or disposal to prevent damage to human health and/or the environment. Hazardous wastes include corrosive, explosive, flammable, ignitable, radioactive, reactive, toxic, volatile, and pathological materials.

Landfill • see *sanitary landfill*.

Municipal Solid Waste (MSW) • the combined nonhazardous wastes generated by households, commercial establishments, institutions, and light industrial manufacturers within a community; it excludes industrial process wastes, agricultural wastes, mining wastes and sewage sludge.

Non-durable Goods • products having a lifetime of less than three years (e.g., paper and plastic plates, disposable food service products, uniforms, etc.).

Nonrecyclable • not capable of being recycled or used again.

Nonrenewable (Resources) • not capable of being naturally restored or replenished; resources available in a fixed amount in the earth's crust: they can be exhausted either because they are not replaced by natural processes or because they are replaced more slowly than they are used.

OCC (Old Corrugated Cardboard) • the term used by the solid waste industry for corrugated paperboard container materials.

Packaging • the materials used to wrap, contain, and protect products: classified as primary, secondary, or tertiary depending on use or layer.

Postconsumer Waste • any product that has completed its useful life, served the purpose for which it was intended, and has been recovered from the user or otherwise diverted from the solid waste stream for the purpose of recycling. This is in contrast to preconsumer waste or scrap from manufacturing.

Recyclables • materials that still have useful physical or chemical properties after serving their original purposes and that can, therefore, be reused or remanufactured into additional products.

Recycled Content • that part of a product which has been produced using preconsumer or postconsumer recycled material: measured by percentage.

Recycling • the process by which materials otherwise destined for disposal are collected, reprocessed or remanufactured and reused.

Resource Stream • a new perspective on what has commonly been considered to be garbage, trash, or waste; recognizes the inherent economic and environmental value of resource materials that have been landfilled or incinerated: the waste stream becomes the *resource* stream.

Returnable • can be returned for deposit and/or reuse; the terms *returnable*, *reusable*, and *refillable* are often used synonymously. In this guide they are used interchangeably and have similar meanings.

Reuse • the use of a product more than once in its same form for the same or similar purpose.

Sanitary Landfill • a land waste disposal site that is located to minimize water pollution from runoff and leaching. Waste is spread in thin layers, compacted, and covered with a fresh layer of soil each day to minimize pest, aesthetic, disease, air pollution, and water pollution problems.

Solid Waste Management • the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment, and disposal of solid waste.

Source Reduction • the design, manufacture, acquisition, and reuse of materials so as to minimize the quantity and/or toxicity of waste produced. Source reduction prevents waste either by redesigning products or by otherwise changing societal patterns of consumption, use, and waste generation.

--**Tipping Fee** • a fee, usually dollars per ton, for the unloading or dumping of waste at a landfill, transfer station, recycling center or waste-to-energy facility. Also called *disposal fee or service fee*.

UsefulLife • the period of time beginning when a product arrives in the hands of the user and ends when that product is discarded.

Vendors/Companies • organizations who provide products and services.

Virgin Materials • term describing raw materials as yet unused (e.g., virgin bauxite has not yet been processed into aluminum and fabricated into cans).

Waste • anything that is discarded, useless, or unwanted; opposite of conserve, as in "to waste."

Waste Exchange • a computer and catalog network that redirects waste materials back into the manufacturing *or* reuse process by matching companies generating specific wastes with companies that use those wastes as manufacturing inputs.

Waste Reduction • reducing the amount or type of waste generated: sometimes used synonymously with *source reduction*.

Waste Stream • the total flow of solid waste from homes, businesses, institutions, and manufacturing plants that must be recycled, burned, or disposed of in landfills, or any segment thereof such as the commercial waste stream.

Waste-To-Energy • a process of recovering energy from the burning of waste.

Appendix C. EcoProducts Directory

How To Use This Directory

This directory includes two sections: ❶ manufacturers of recycled products; and ❷ manufacturers of products designed to produce less waste and toxicity. Manufacturers were identified in directories, public documents, and regional trade shows. An effort was made to compile a comprehensive list of manufacturers located in the southeastern United States. Phone numbers are provided to assist in locating their nearest distributors. Some products are not widely distributed and may be ordered directly.

A LISTING DOES NOT CONSTITUTE AN ENDORSEMENT BY THE AGENCIES INVOLVED IN THE DEVELOPMENT OF THIS GUIDE.

I. Recycled Products

Manufacturers of recycled products are classified by the materials used in their products (i.e., glass, plastic, paper, etc.); however, office supplies and building materials can vary widely in content, so they are identified as mixed materials.

Terminology can be confusing. This outline may help when asking vendors about the recycled content of the products they carry.

Recycled Content which comes from community recycling efforts:

- Postconsumer recycled materials (fully used by the consumer and returned to a processor for recycling). Expressed in percentages, postconsumer is the only portion of a product which supports your recycling efforts.

Comparable Materials included in Total Recycled Content labeling:

- Mill broke (paper recovered during the papermaking process)
- *Industrial Waste* (scrap materials recovered during the manufacturing process of non-paper products)
- Preconsumer recycled materials (trimmings, printing overruns, flawed or contaminated finished products unsuitable for sale)

Specify a minimum percentage of postconsumer content for all products you purchase. Recommendations have been developed by the Recycling Advisory Council (RAC), the National Recycling Coalition (NRC) and the US Environmental Protection Agency (EPA). For more information, see NRC in Educational Resources and Waste Exchanges.

Recycled Glass Products

Recycled glass beads are used in various applications including road markers, highway signs, highway paint, and reflective tape; floor tiles; acoustical tiles and new glass jars and beverage bottles.

- OK Beads Inc., P.O. Box 441, E. Rutherford, NJ 07073, 201-438-5431. 90% postconsumer recycled glass beads for use in traffic paint.
- Pave-Mark Corp., P.O. Box 94108, Atlanta, GA 30377-9823, 1-800-327-5917. Thermoplastic pavement markings made with 30% glass beads.
- Stoneware Tile Co., 1650 Progress Drive, Richmond, IN 47374. 317-935-4760, Floor tiles made from postconsumer recycled glass.

Recycled Paper Products

Recycled papers for writing and printing are widely available from all paper distributors. Postconsumer recycled fiber affects the flexibility, opacity, and printing quality of papers. Papers which are not de-inked or which carry a higher percentage of postconsumer fiber will exhibit flecks that in some cases enhance the texture and appearance of the finished products. Asking to see samples and inquiring about percentages of postconsumer and recovered fiber will help you to determine the paper which best suits your needs.

It is important to point out that requesting “vegetable-based” inks for your large printing orders will result in lower toxic emissions. Avoid **W** coatings which contain carcinogens and don’t break down in landfills; instead ask your printer to use aqueous (water-based) coatings. Request that your order be slipsheeted or paper-banded.

Institutional Tissue and Paper Products

- Atlantic Recycled Paper Co., P.O. Box 39179, Baltimore, MD 21212, 1-800-323-28 11. 40-60% postconsumer paper towels, napkins, toilet paper: 5% postconsumer facial tissue.
- Fort Howard, P.O. Box 19130, Green Bay, WI 54307-9130, 414-435-8821. Envision™ 90-95% postconsumer recycled paper products.
- Georgia Pacific Environmental Products, 233 Peachtree Street NE, Harris Tower, Suite 1800, Atlanta, GA 30303, 1-800-477-2737. 1-800-243-2547. Cormatic™ dispenser systems, recycled paper products in reduced sizes; lightweighted corrugated packaging.
- G.E. Robertson & Co., (Gratton-Weeks) P.O. Box 25, Hinsdale, NH 03451, 603-336-5981. Postconsumer recycled paper products.
- Marcal Paper Mills, Inc., 8213 Eagle Point Court, Charlotte, NC 28277, 1-800-631-845 1; Fax: 201-703-6402. Recycled paper products.
- Paper Service, Ltd., P.O. Box 45, Hinsdale, NH 03451. 603-239-6344. Recycled paper products.
- Scott Paper Company, Scott Plaza, Philadelphia, PA 19113, 215522-5000. Recycled paper products and paper/soap dispensers.
- Tagsons Paper, 99 Broadway, Menands. NY 12110, 1-800-824-7667. Recycled paper products.

- Wisconsin Tissue. 800 Parkway 575, Suite 805, Woodstock. GA 30188. 404-926-4824, 1-800-451-3595. Recycled paper products.

Office Papers and Supplies (mixed materials)

- American Pad and Paper Co., 2624 B Weaver Way. Atlanta GA 30340, 404-449-4556. Writing paper, envelopes and paper products.
- ATAPCO. 12312 Olive Boulevard. Suite 400, St. Louis, MO 63141, 314-542-5400. File folders, file pockets, cards, binders, etc.
- Beautone Specialties, Co.. Ltd., 200 High St., Boston, MA 02110, 617-261-0099; Fax: 617-261-6006. 100% postconsumer waste "Stick On Notes" in popular sizes, colors, and packaged units.
- Better Business Forms, 1201 Hays St.. Tallahassee, FL 32301, 904-222-1875. Stock computer and carbonless forms, 10% postconsumer.
- Cutting U.S.A. Inc., 6666 Guion Road, Indianapolis, IN 46268. 317-293-6660, 1-800-428-3786; Fax: 1-800-521-1106. Cash register tapes, adding machine rolls, Adviro™ two-ply carbonless available made from 10% postconsumer paper. 40% recovered paper.
- Eberhard Faber, 1611 Spring Lane, Brandon, FL 33510, 813-689-3471; Fax: 813-689-3879. American EcoWriter™ pencil: barrel is made from 100% recycled, 60% postconsumer cardboard and newspaper.
- EnviroSafe Products, Inc., P.O. Box 1074 Murray Hill Station, New York, NY 10156-0604, 718-968-0199; Fax: 718-968-0196. Wall clock from 60% postconsumer plastic, 40% recovered plastic.
- Esselte Pendaflex Corporation, 71 Clinton Road, Garden City, NY 11530, 516-873-3442; Fax: 516-747-7476. Hanging file folders, expanding files and more made from 10% postconsumer, 90% recovered paper.
- Full Circle Paper Outlet Inc., 2830 Hillsborough Road, Durham, NC 27705. 919-286-0140; Fax: 919-286-0141. Computer papers, adding machine rolls, packaging envelopes made from 10% postconsumer paper, 40% recovered paper; bulletin boards, pens made from 60% postconsumer rubber, 40% recovered rubber; calendars from 15% postconsumer paper, 85% recovered paper; push pins, rulers, scissors made from 70% postconsumer plastic.
- House of Doolittle, 1851 Touhy Avenue, ElkGrove Village, IL60007, 708-228-9591, 1-800-621-9546; Fax: 708-228-9051. Appointment books, calendars and erasable boards made from 15% postconsumer, 85% recovered paper.
- Japan Pulp & Paper (USA) Corporation. 1625 M Rock Mountain Boulevard, Stone Mountain. GA30083, 404-938-0145. 1-800-874-1905; Fax: 404-938-8619. Reborn™ facsimile paper, 80% postconsumer.
- Mailwell Envelopes, P.O. Box 37007, Jacksonville, FL 37236, 1-800-766-4869. #10 envelopes, plain or window, 5-15% postconsumer content, 50% recovered materials.

- Mattick Business Forms. 333 W. Hintz Road, Wheeling, IL 60090, 1-800-MATTICK, 708-541-7345. Postconsumer content carbonless forms.
- MeadProducts, The Mead Corporation, Courthouse Plaza Northeast, Dayton, OH 45463, 513-222-6323. Post 100%™ postconsumer three-holed filler paper, legal pads, wirebound steno books, memo pads, wirebound notebooks, and padded writing papers.
- Paige Co., 400 Kelby St., Fort Lee, NJ 07024. 201-461-7800, 1-800-223-1901; Fax: 201-461-2677. Document storage boxes and recycling systems made from 30%-40% postconsumer paper.
- PaperDirect, Inc., P.O. Box 677, 205 Chubb Avenue. Lyndhurst, NJ 07071-0677, 1-800-A-PAPERS. Technotes™ three-ring binder and clipboard are made from recycled, one-of-a-kind circuit boards.
- Peripherals, 1363 Logan Avenue, Costa Mesa. CA 92626, 1-800-468-6888; Fax: 714-540-2026. Computer diskettes, magnetic computer tape, and tape cartridges made from postconsumer recycled plastic.
- PIMBYCO, Products In My Backyard, P.O. Box 240. Purdys, NY 10578, 914-277-8872; Fax: 914-277-3277. Desk accessories: bulletin boards and ball point pens made from recycled rubber tires; scissors, push pins, business card holders, pencil cup holders, rulers, note tray made from recycled plastic.
- Riverside Paper Corporation, P.O. Box 179. Appleton, WI 54912-0179, 414-749-2200; Fax: 414-733-7704. Ecology™ 100% recycled, water-marked papers, 10% postconsumer waste; legal pads, steno books, index cards, "While You Were Out" pads.
- SCM Office Supplies, Inc., 2409 W. 2nd St., Marion, IN 46952. 317-664-1241, 1-800-428-0211; Fax: 1-800-553-6025. EverGreen™ 10% post consumer add rolls, envelopes, copier paper, pocket folders, hanging file folders, legal pads, gummed pads, memo slips, quadrille pads, desk pads, easel pads, "While You Were Out" pads, wirebound steno books.
- Signature Marketing, 134 West Street, Simsbury. CT 06070. 203-658-7172; Fax: 203-651-8376. Desk clock from 100% postconsumer plastic.
- Smead Manufacturing Co., 3015 Highway 42. Locust Grove, GA 30248-9411. 404-957-1812; 10% postconsumer, file folders, file pockets.

Remanufactured Toner Cartridges

These companies specialize in remanufacturing cartridges for laser printers, word processors, dot-matrix printers, PC copiers, photocopiers, credit-card imprinters, ATM's, cash registers and other business machines. Check the yellow pages for local listings, and call before sending cartridges. Some companies offer prepaid shipping.

- Cartridge King USA, AMR Group, Inc., 5366- 115th Ave. N., Clear-water. FL 34620, 813-573-5464; Fax: 813-571-1556.

- Florida Ribbon Company, 2306 58th St., Palmetto, FL 3422 1,8 13-723-2265, 1-800-966-0546; Fax: 813-729-9091.
- General Ribbon Corp., Southeast Marketing Group, 1471 Briargrove Way, Oldsmar (Tampa), FL 34677, 813-787-8965.
- Kraynak Office Machine, 308 NE 3rd Ave., Ft. Lauderdale, FL 33301, 305-764-2900. 1-800-800-2735.
- Laser Products. Inc., 13018 SW 133rd Ct., Miami, FL 33186. 305-235-9544.
- Orlando Laser, etc., P.O. Box 720221, Orlando, FL 32872, 407-282-6070.
- Quality Charge of Ocala, P.O. Box 1080, Belleview, FL 32620,904-843-1698, 904-538-5370.

Food Service Products (mixed materials)

- Colorwrap, Inc.. 15655 SW 82 Circle Lane #57, Miami, FL 33193, 305-386-5594; Fax: 305-444-8038. Placemats made from 100% postconsumer paper.
- Keyes Fibre Company, Foodservice Products, P.O. Box 5317 Norwalk, CT 06856, 207-873-335 1; Fax: 207-872-2525. Chinet™ bowls, trays, plates and platters, from postconsumer paper. or postconsumer plastic.
- Packaging Corporation of America, 1603 Orrington Avenue, Evanston, IL 60204. 708-492-5780; Fax: 708-570-4019. Trays and plates from postconsumer paper.
- Signature Marketing, 134 West Street, Simsbury. CT 06070, 203-658-7172; Fax: 203-651-8376. Distributor. Foodservice coasters and mugs.

Recycled Plastic Products

All of the manufacturers listed in this section use postconsumer recycled plastic as raw material for their products. Products are manufactured with up to 100% recycled HDPE (e.g., milk jugs): PETE (e.g., soda bottles): and PS (e.g., polystyrene cups).

Recycled plastic products are an ideal replacement for wood, metal, fiberglass, and concrete in the following applications:

- where wood is attacked by organisms (e.g., piling and staging in wetlands, harbor works, boat docks, fence posts, waterspouts, etc.):
- in outdoor furniture and playground equipment where wood and metal require frequent refinishing or replacement of rusted parts, deterioration, weather-erosion, and splintering;
- for landscape timbers for soil retainers, tree and flower planters, borders, decorative fencing, etc.

Products manufactured from recycled polystyrene include: foam peanut packaging, block-molded foam packaging, office products, egg cartons,

food clamshells, wall and building insulation, video cassettes, flower planters, and hard plastic food trays. Recycled polystyrene is also being mixed with other recycled plastics to produce playground equipment, traffic signs/barriers, park benches and marine construction materials.

Brooms - Industrial

- Emsco, Inc., P.O. Box 2151, Girard, PA 16417, 814-774-3137. 1-800-458-0839; Fax: 814-774-3463. 50% postconsumer recycled plastic.
- Recycled Plastic Products Corp., Gary Plastic Packaging Corp., 770 Garrison Avenue, Bronx, NY 10474-5693, 203-629-1480; Fax: 203-629-1160. 100% recovered plastic.

Carpeting

- Image Carpets, Inc., P.O. Box 5555, Armuchee, Georgia 30105. 706-235-7547. All carpeting contains postconsumer recycled plastic, some with 100% postconsumer content.
- Talisman Mills, Inc., 6000 W Executive Drive, Mequon, WI 53092, 1-800-482-5466. Envirolon™ carpeting contains 100% recycled plastic, most of it postconsumer PETE.

Containers

- Hammer's Plastic Recycling Corp., RR#3, Box 182, Iowa Falls, IA 50126. 515-648-5073. Trash containers made from recycled plastic.
- Poly-Anna Plastic Products, 6960 N. Teutonia Avenue, Milwaukee, WI 53209. 414-351-5990; Fax: 414-351-3443. Recycling bin (18 gallon, "Enviro-Green") made from 100% postconsumer bottles.
- Rehrig Pacific Co., 1000 Race Court, Lawrenceville, GA 30245, 404-339-9888. 1-800-241-9693. Up to 25% postconsumer HDPE. HuskyLite 95 & 65 gallon universal carts, stacking bins, recycling bins.
- Routed Signs, P.O. Box 4596, Ocala, FL 34478-4596, 904-622-7066. Trash containers made from recycled plastic/wood combination.
- Rubbermaid Commercial Products, 3124 Valley Avenue, Winchester, VA 22601, 1-800-347-9800, 713-667-8700; Fax: 703-665-8821. 20%-100% postconsumer resin recycling and refuse containers, ash/trash receptacles, indoor/outdoor waste containers, can be imprinted: 15% postconsumer soft receptacles with imprint.
- VitalVisions Corporation, RR #1, Box 95, Freeport, FL 32439, 904-835-2121. Postconsumer plastic containers with unique design.
- Windsor Barrel Works, P.O. Box 47, Kempton, PA 19529. 215-756-4344. Clusters™ trash, recycling, and litter cans made from recycled plastic.
- Zam, Inc., P.O. Box 1350, Reidsville, NC 27320, 919-349-3323. Refuse and nursery containers, recycling bins made from postconsumer plastic.

Dust Pans

- 4E Technologies, 200 East 6th St., Austin, TX 78701, 512-476-9888; Fax: 512-472-3745. 80% postconsumer plastic.
- Wiltec. Inc., 35 Tisdale Avenue, Leominster, MA 01453, 508-537-1497; Fax: 508-537-7806. 30-100% postconsumer plastic.

Furniture, outdoor

- Al-Fla Plastics, Inc., P.O. Box 70166, Mobile, AL 36670. 205-457-0800; Fax: 205-457-0814.
- BTW Industries Inc., 2000 SW 31st Avenue, Pembroke Park. FL 33009, 305-962-2100.
- Enviro-Cycle, Inc., P.O. Box 921581, Norcross, GA 30092. 404-840-7010.
- Falcon Products Inc., 9387 Dielman Industrial Drive, St. Louis, MO 63132. 314-991-9200. 1-800-873-3252; Fax: 314-991-9227.
- Futurewood Products, National Waste Technologies, 934 Easton Street, Ronkonkoma. NY 11779, 516-RECYCLE.
- Golf Adventures, Inc., 2101 E. Edgewood Drive, Lakeland. FL 33803, 813-665-5800.
- Hammer's Plastic Recycling Corp., RR#3, Box 182, Iowa Falls, IA 50126, 515-648-5073.
- Jeanell Sales Corp., Sharon Industrial Park, Sharon, TN 38255-0537. 901-456-2681; Fax: 901-456-2252.
- Routed Signs, P.O. Box 4596, Ocala. FL 34478-4596. 904-622-7066.
- Recycled Plastic Man, 2430 Shamrock Drive, P.O. Box 3368, Venice, FL 34293, 813-497-1020.
- Santana Products, Inc., Highway 60 West, Bar-tow, FL 33830, 813-425-3081, 1-800-622-88850; Fax: 813-425-2260.
- Super-wood of Alabama, Inc., P.O. Box 2399, Selma, AL 36701, 205-874-3781.
- Yemm & Hart, Limited. RR #1, Box 173, Marquand, MO 63655-9610. 314-783-5434.

Lawn and Garden

- Packer Plastics, 2330 Packer Road, P.O. Box 219. Lawrence, KS 66049, 913-842-3000. PackerWare™ downspout splashblock, grower pots, landscape and garden borders.
- Yemm & Hart, Limited, RR #1, Box 173, Marquand, MO 63655-9610. 314-783-5434. Birdhouses, planters.

- Zam, Inc., P.O. Box 1350, Reidsville, NC 27320.919-349-3323. Nursery containers.

Lighting - Fluorescent Covers

- Alaric, Inc., 2110 N 71st Street, Tampa, FL 33619.813-626-0458: Fax: 813-620- 1653. 100% recovered plastic.

Mattress Pads

- Sunrise Medical Bio Clinic, 4083 E. Airport Drive, Ontario, CA 91761, 714-460-6385; 1-800-388-4083; Fax: 714-391-0063. 30% postconsumer plastic.

Packaging

- Astro Valcour Inc., 7578 Presidents Drive, Orlando, FL 32809,407-855-7297; 1-800-848-4770: Fax: 407-859-2730. Foam cushions and foam planks made from 66% recovered plastic.
- International Plastics, 185 Commerce Center, Greenville. SC 29615, 803-297-8000: Fax: 803-297-7 186. Protective packaging made from 100% postconsumer plastic and 100% recycled cardboard.

Pallets

- Hammer's Plastic Recycling Corp., R.R. #3, Box 182. Iowa Falls, IA 50126-0182. 1-800-338-1438; Fax: 515-648-5074. 97% postconsumer plastic.
- Innovative Plastic Products, Inc., P.O. Box 898, Greensboro, GA 30642, 706-453-7552: Fax: 706-453-7582. 100% postconsumer plastic.
- Jeanell Sales Corp., Sharon Industrial Park, Sharon, TN 38255-0537. 991-456-2681; Fax: 901-456-2252.

Pillows

- Sunrise Medical Bio Clinic, 4083 E. Airport Drive, Ontario, CA 91761, 714-460-6385; 1-800-388-4083: Fax: 714-391-0063. ReNew Comfort™ made from 19-30% postconsumer plastic.

Posts

- ARW Polywood, Inc., P.O. Box 5186, 700 E. Wayne Street, Lima, OH 45802.419-224-2283. Playground equipment made from 60% postconsumer commingled plastic.
- BTW Industries Inc., 2000 SW 31st Avenue, Pembroke Park, FL 33009. 305-962-2 100.
- Enviro-Cycle, Inc., P.O. Box 921581. Norcross. GA 30092. 404-840-7010. Bicycle racks, planters made from 100% recovered plastic, sawdust and wood.

- Jeanell Sales Corp., Sharon Industrial Park, Sharon, TN 38255-0537, 901-456-2681; Fax: 901-456-2252.

Recreational Equipment

- American Playtime Systems, Inc., 230 Route 109. Farmingdale, NY 11735-1503. 1-800-231-PLAY. PLAYLINKS™ children's playgrounds made from postconsumer plastic.
- ARW Polywood, Inc., P.O. Box 5186, 700 E. Wayne Street, Lima, OH 45802. 419-224-2283. Playground equipment made from 60% postconsumer commingled plastic.
- BTW Industries Inc., 2000 SW 31st Avenue, Pembroke Park, FL 33009, 305-962-2100. Sand boxes made from 97% postconsumer plastic.
- Enviro-Cycle, Inc., P.O. Box 921581. Norcross, GA 30092. 404-840-7010. Bicycle racks, planters made from 100% recovered plastic. sawdust and wood.
- Santana Products, Inc., Highway 60 West, Bar-tow, FL 33830, 813-425-3081, 1-800-622-88850; Fax: 813-425-2260. Playground equipment made from 20% postconsumer, 40-45% recovered plastic.
- Super-wood of Alabama, Inc.. P.O. Box 2399, Selma, AL 36701, 205-874-3781.

Shower Dividers

- Santana Products. Inc., Highway 60 West. Bar-tow. FL 33830, 813-425-3081, 1-800-622-88850; Fax: 813-425-2260. Made from 40-45% recovered plastic.

Shower Seats

- DURATECH Industries, Inc., P.O. Box 536. Lake Odessa, MI 48849, 616-374-7443; Fax: 616-374-3170. Made from 100% postconsumer plastic.
- Plastic Pilings, Inc., 8560 Vineyard, Suite 510. Rancho Cucamonga, CA 91730. 714-989-7685; Fax: 714-944-6842. Made from 30-50% postconsumer plastic.

Trash bags

- Amer A Can Consultants & Suppliers, P.O. Box 560266. Orlando, FL 32856, 407-894-5110. 20% postconsumer plastic.
- DYCO. International, Inc., P.O. Box 312, Wilkes-Barre, PA 18703, 717-823-3001. 70% recovered LDPE.
- International Plastics, 185 Commerce Center, Greenville, SC 29615, 803-297-8000; Fax: 803-297-7186. 70% postconsumer plastic.
- Whitehall Plastics, Inc., P.O. Box 3348, Tampa, FL 33601. 813-247-2500. Postconsumer plastic.

Recycled Rubber Products

Carpet Backing

- DURA Undercushions. 8525 Delmeade Rd., Montreal. Canada H4T 1M1, 514-737-6561. 514-342-7940.

Mats

- ANI-MAT/Caoutech. Inc., 284 Cheemin Godin, Elie d'Orford, Quebec, Canada JOB 2S0, 819-821-2091.
- Durable Corporation of Tennessee. Box 826, Crossville, TN 38555. 615-484-3502, 1-800-373-3502; Fax: 615-456-7682.
- Mats, Inc., 91 French Avenue, Braintree, MA 02184, 617-848-6313.
- No Fault Industries, Inc., 1745 Dallas Drive, Baton Rouge, LA 70806, 504-293-7760; Fax: 504-927-9719.
- Wear-well/Tennessee Mat Co., Inc.. 1400 Third Avenue south, Nashville, TN 37210-0186, 615-254-8381, 1-800-264-3030: Fax: 615-255-4428.

Retread Tires

- Bandag, Inc., Bandag Center, Muscatine. IA 52761, 319-262-1400. Retread tires.
- Casselberry Tire Company, 600 Lemon Lane, Casselberry, FL 32707, 407-83 1-0544. 70% postconsumer tires.

Recycled Building Materials (mixed materials)

Asphalt Products

- Rouse Rubber Industries, Inc., P.O. Box 820369. Vicksburg, MS 39 182-0369, 601-636-7141; Fax: 601-636-1181. 100% postconsumer tires.

Bricks

- Phoenix Scientific Industries, 3620 North High Street, Columbus, OH 43214. 614-267-0100; Fax: 614-268-3051. 50% postconsumer brick, 50% recovered fly ash.

Ceiling Finish - Spray-on

- International Cellulose Corp., 12315 Robin Boulevard, Houston, TX 77045. 713-433-6701; Fax: 713-444- 1252. 100% recovered paper.

Ceiling Tile - Acoustical

- Apache Products Company, P.O. Box 4099 West Station, Meridian, MS 39304, 601-693-0254; Fax: 601-693-0258. 18% postconsumer newsprint, 45% recovered mineral wool.

- The Celotex Corporation, 4010 Boy Scout Boulevard. Tampa, FL 33607. 813-873-4027; Fax: 813-873-4487. 4-21% postconsumer newsprint, 3-90% recovered steel mill slag.

Insulation

- AMOFOAM-RCY. Amoco Foam Products Company, 400 Northridge Road, Suite 1000, Atlanta, GA 30350-3297, 404-587-0535. 1-800-241-4402. Insulation board made without CFCs and with 50% blend of postconsumer and industrial waste polystyrene.
- Suncoast Insulation Manufacturing, 7102 N. 30 Street. Tampa, FL 33610, 813-238-0486. 1-800-666-4824; Fax: 813-234-9741. Fire-retardant, spray-on. cellulose insulation made from 100% recycled newspapers; no asbestos, fiberglass, or mineral wool.

Plastic Lumber

Plastic lumber is made from recycled plastics (including polystyrene), wood filler, or a combination of both.

- American Plastics Recycling Group, Ltd., 1790 E. Bluewater Highway., P.O. Box 68, Ionia, MI 48846. 616-527-6677.
- ARW Polywood, Inc., P.O. Box 5186, 700 E. Wayne Street, Lima, OH 45802, 419-224-2283.
- BTW Industries Inc., 2000 SW 31st Avenue, Pembroke Park, FL 33009. 305-962-2100.
- Futurewood Products, National Waste Technologies, 934 Easton Street, Ronkonkoma, NY 11779. Call 516-RECYCLE.
- Hammer's Plastic Recycling Corp., RR#3. Box 182. Iowa Falls, IA 50126, 515-648-5073.
- Jennell Sales Corp. Sharon Industrial Park, Sharon, TN 38255-0537. 901-456-2681; Fax: 901-456-2252.
- Obex NovaWood Products, P.O. Box 1253, Stamford, CT 06901, 201-975-9094.
- Superwood of Alabama, Inc. P.O. Box 2399, Selma, AL 36701, 205-874-3781.

Tile - Floor

- Durable Corporation of Tennessee, Box 826, Crossville, TN 38555, 615-484-3502, 1-800-373-3502; Fax: 615-456-7682. Made from 75-95% postconsumer tires.
- Weaxwell/Tennessee Mat Co., Inc., 1400 Third Avenue South, Nashville, TN 37210-0186, 615-254-8381, 1-800-264-3030; Fax: 615-255-4428.

II. Products To Reduce Waste and Toxicity

Cleaning and Laundry Products

- Blue Ribbon Paint Company, P.O. Box 6442, Wheeling, WV 26003, 304-233-1670; Fax: 304-233-1674. Cleaning solvent made from 100% recovered spent waste solvent mixture.
- S.C. Johnson & Son. Inc., 1525 Howe St., Racine, WI 53403, 414-631-2000; Fax: 414-631-2632. Solutions Center dispenses concentrated cleaning solutions into reusable trigger spray bottles with back-flow preventer that protects the potable water supply.
- Walton-March, Inc., 1620 Old Deerfield Road, Highland Park, IL 60035, 708-831-2200. Neutral pH water soluble toilet bowl cleaner.

Containment Systems

- Plastic Recycling Technology, P.O. Box 2631, Lakeland, FL 33806-2631, 813-667-0209. HAZSTOP hazardous chemical containment pan for preventing leakage through floors where hazardous chemicals are stored.

Furniture Repair

- Sunbrite Casual Furniture, 3019 John Young Parkway., Orlando, FL 32804, 407-294-9041. Restrap lawn chairs and other outdoor furniture.

Linens

- Artex International. Marketing Department, 1405 Walnut Street, Highland, IL 62249, 618-654-2113. This tablecloth/napkin manufacturer will redye linens to match new color schemes when remodeling.

Motor Oil

- AMSOIL. Inc., AMSOIL Building, Superior, WI 54880, 1-715-392-7101, 1-800-777-7094; Fax: 715-392-5225. Synthetic motor oils, gear lubes, oil filters, gasoline engine oils.
- Enviropur (Motor Oils Refining Co.), 7601 West 47th Street, McCook, IL 60525. 708-442-6000; Fax: 708-442-6027. Postconsumer re-refined basestock.

Appendix D. Educational Resources and Waste Exchanges

Associations and Government Agencies

Aluminum Recycling Association, 1000 16th Street NW. Suite 603. Washington, DC 20036. 202-785-0951. Provides assistance for recycling programs.

American Forest and Paper Association, 1250 Connecticut Avenue NW, Suite 200, Washington, DC 20036. 202-463-2700; Fax: 202-463-2785.

American Retreaders Association, P.O. Box 37203, Louisville, KY 40233, 502-968-8900; Fax: 502-964-7859. Information on retreaded tires.

Council for Textile Recycling, 7910 Woodmont Avenue, Bethesda, MD 20814, 301-656-1077. Network for government, nonprofit, and private sector collection programs.

Florida Business and Industry Recycling Program (BIRP). 7200 C Aloma Avenue, Winter Park, FL 32792. 407-678-4200, 1-800-FIA-BIRP (hotline).

Florida Center For Solid and Hazardous Waste Management, University of Florida, 3900 SW 63rd Boulevard, Gainesville, FL 32608. 1-800-348-1239, 904-392-6269. Consortium for university-level solid waste management research, training, and public service.

Florida Department of Environmental Protection (DEP). formerly Departments of Environmental Regulations (DER) and Natural Resources (DNR). Division of Waste Management, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, 904-488-0300.

Florida Department of Management Services, Bureau of Standards, Recycled Materials Research Section, Koger Executive Center, Knight Building, Suite 200, 2737 Center-view Drive, Tallahassee, FL 32399-0950. 904-487-3231. Responsible for specifications for and vendors list of recycled products for government purchasing agents.

Florida Hotel and Motel Association, 200 W. College Avenue, Tallahassee, FL 32301, 1-800-476-3462.

Florida State University, Department of Hospitality Administration, College of Business, Tallahassee, FL 32399, 904-644-1463. Cosponsors with Callaway Gardens a program of study, *Resort Management and the Environment*.

Florida League of Cities, P.O. Box 1757, 201 Park Avenue, Tallahassee, FL 32302. 904-222-9684. Provides advice on source reduction and recycling.

International Association of Wiping Cloth Manufacturers, 7910 Woodmont Avenue, Suite 1212, Bethesda, MD 20814, 301-656-1077; Fax: 301-656-1079. Manufacturers and distributors of industrial wiping cloths, recycled textile products. 15 member countries.

Keep America Beautiful, Inc., 9 W. Broad Street, Stamford, CT 06902, 203-323-8987.

Keep Florida Beautiful, 325 John Knox Road, Building M, Suite 240, Tallahassee, FL 32303, 904-385-1528, 1-800-828-9338; Fax: 904-385-4020.

National Consumers League, 815-15th Street NW, Suite 516. Washington, DC 20005, 202-639-8140. Information on source reduction and recycling.

National Polystyrene Recycling Company, 25 Tri-State International. Lincolnshire. IL 60069, 708-945-1991; Fax: 708-945-2147. Provides a list of haulers who deliver recovered polystyrene to the company.

National Recycling Coalition, Inc. , 1101 30th Street NW, Suite 305, Washington, DC 20007. 202-625-6406; Fax: 202-625-6409. Operates the Buy Recycled Business Alliance and also publishes the Buy Recycled Guide.

National Textile Processors Guild. Inc., 75 Livingston Street, Brooklyn, NY 11202. 718-875-2300. Processors of recovered textiles.

National Wooden Pallet and Container Association, 1800 N Kent Street, Suite 911, Arlington, VA 22209-2109. 703-527-7667. Manufacturers, distributors. and recyclers of pallets. wooden skids, and cord reels.

Polystyrene Packaging Council, Inc., 1025 Connecticut Avenue NW, Suite 515. Washington, DC 20036. 202-822-6424; Fax: 202-331-0538. Provides a list of companies making products from recycled polystyrene.

Recycling Advisory Council (RAC), 1101 30th Street, NW, Suite 305. Washington, DC 20007, 202-625-5410; Fax: 202-625-6409. Develops labeling guidelines and buy-recycled initiatives.

Society of the Plastics Industry, Inc., 1275 K Street NW, Suite 400, Washington. DC 20005. 202-371-5200. 1-800-837-3626. Publishes a list of companies that purchase bulk plastic bottles, produce recycling equipment, or use reprocessed resin.

Southeast Glass Recycling Program, P.O. Box 59512, Clearwater, FL 34618. 813-799-4917. Publishes newsletter and promotes glass recycling programs.

Steel Recycling Institute, Southeastern Regional Office, 4900 Bayou Boulevard, Suite 110 C. Pensacola. FL 32503.904-479-7208. Publishes newsletter, provides education, and assists with commercial recycling programs.

Textile Bag and Packaging Association, 1024 W. Kinzie Avenue, Chicago, IL 60622.312-733-3660; Fax: 312-733-2644. Manufacturers and distributors of new and reprocessed paper, burlap, polypropylene and cotton bags.

Tire Retread Information Bureau (TRIB), 900 Weldon Grove, Pacific Grove, CA 93950, 408-372-1917. Provides information and list of manufacturers of retread tires.

TREEO. Center for Training Research and Education for Environmental Occupations, University of Florida, 3900 SW 63rd Boulevard, Gainesville, FL 32608-3848.904-392-9570. Provides continuing education courses in solid waste management and other environment-related fields.

U.S. Environmental Protection Agency (U.S. EPA), Office of Solid Waste, 401 M Street SW, Washington, D.C. 20006. EPA Procurement Hotline: 713-941-4452. Publishes numerous publications, bibliographies, reports on recycling and other solid waste issues. **Southeast Region IV**, 345 Courtland Street NE, Atlanta, GA 30365. 404-347-2091.

Publications

A Business Guide for Reducing Waste, EPA/530-K-92-004, U.S. EPA, Office of Solid Waste, 401 M Street SW, Washington, DC 20460, 713-941-4452

American Recycling Market, P.O. Box 577, Ogdensburg, NY 13669. 1-800-267-0707. 19,000 subscribers (recycling professionals); also The Reporter, a monthly industry newsletter with a buy-recycled focus.

Business Recycling Manual., Recourse Systems, Inc. and INFORM, Inc., 381 Park Avenue S., New York, NY 10016-8806, 212-689-4040.

Buy Recycled Guide. National Recycling Coalition, Inc., 110130th Street NW, Suite 305, Washington, DC 20007, 202-625-6406; Fax: 202-625-6409.

Characterization of Municipal Solid Waste in the United States: 1992 Update, EPA/530-R-92-019, U.S. EPA, Office of Solid Waste, 401 M Street SW, Washington, D.C. 20006, 713-941-4452.

Co-Composting of *Yard and Vegetable Waste from Food Service Facilities.* Brinen, G. and R. Nordstedt. Unpublished report to Alachua County Solid Waste Management Department. Cooperative Extension Service, 1062 McCarty Hall, University of Florida, Gainesville, FL 32611, 904-336-2402.

Decision Makers Guide To Solid Waste Management, EPA/530-SW-89-072. U.S. EPA, Office of Solid Waste, 401 M Street SW, Washington, D.C. 20006. EPA Procurement Hotline: 713-941-4452.

Energy *Energy Efficiency For Florida's Hospitality Industry*, Florida Energy Extension Service, P.O. Box 110940, Gainesville, FL 32611, 904-392-1511; Fax: 904-392-9033.

Food *For Thought*, San Francisco Restaurants' Guide to Waste Reduction and Recycling, San Francisco Recycling Program, Office of the Chief Administrative Officer, 4145 Market Street, #401, San Francisco, CA 94103. 415-554-3400.

Guide to Recycled Products *for Consumers and Small Business*, Pennsylvania Resources Council, P.O. Box 88, Media, PA 19063. Phone: 215-565-9131.

How Businesses are Saving Money by Reducing Waste, EPA/530-K-92-005, U.S. EPA, Office of Solid Waste, 401 M Street SW, Washington, DC 20460, EPA/RCRA Hotline 1-800-424-9346.

How To Organize a Hotel/Motel Recycling *Program*, Townsend, J. and J.F.K. Earle, PhD, PE. Florida Energy Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611, 904-392-1511 or 904-392-1945.

Making Less Garbage: A Planning Guide *For Communities*, Fishbein, B. K. and C. Gelb. INFORM, Inc., 381 Park Avenue S., New York, NY 10016-880, 212-689-4040.

Recycling Guide *For Hotels and Motels*, publication and video, available from Dr. Thomas McCall, Instructional Materials Service, 101 Rolfs Hall, University of Florida, Gainesville, FL 32611-0130, 904-392-0502; Fax: 904-392-9585.

Recycled Products Guide, P.O. Box 577, Ogdensburg, NY 13669. 1-800-267-0707. Over 400 recycled product classifications and 2600 cross-referenced listings; published twice yearly.

Science and Engineering of Composting: Design, Environmental Microbiological and Utilization Aspects, Renaissance Publications, 7819 Barkwood Drive, Worthington, OH 43085, 614-885-9568.

Solid Waste Management In Florida: Annual Report. Florida Department of Environmental Protection, Division of Waste Management, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, 904-488-0300. September, 1992.

What A Waste!, Vermont WasteCap. P.O. Box 630, Montpelier, Vermont 05601, 802-223-3441; Fax: 802-223-2345.

Waste in the Workplace, Keep America Beautiful, Inc., 9 W. Broad Street, Stamford, CT 06902. 203-323-8987.

Periodicals/Solid Waste Management

Fiber Market News, 156 Fifth Avenue, New York, NY 10010. Journal for the textile and waste paper industries.

Garbage, P.O. Box 51674, Boulder, CO 80321-1647. 303-447-9330. Trade journal.

Recycling Today, 156 Fifth Avenue, New York, NY 10010. Magazine about recycling scrap materials, emphasizing non-ferrous metals.

Recycling Times, 1730 Rhode Island Avenue, Suite 1000, Washington, DC 20004. 202-659-4613. Recycling market tabloid.

Recycling World, Environmental Defense Fund, 257 Park Avenue S., New York, NY 10010, 212-505-2100. General solid waste newsletter.

Resource Recovery Report, 5313 38th Street NW, Washington, DC 20015, 202-298-6344. Waste-energy industry newsletter.

Resource Recycling, P.O. Box 10540, Portland, OR 97210. 503-227-1319. Postconsumer recycling efforts tracking report.

Scrap Tire News, Recycling Research, Inc., 133 Mountain Road, Suffield, CT 06078. Scrap tires recycling newsletter.

Solid Waste Report, Box 1067, Blair Station, Silver Spring, MD 20910, 301-585-2898. General solid waste newsletter.

State Solid Waste Report, 3918 Oglethorpe Street, Hyattsville, MD 20782. 301-864-3088. State and local waste regulations and legislation newsletter.

Waste Age, 1730 Rhode Island, NW, Washington, DC 20036. A comprehensive solid waste management magazine.

Waste Exchanges

A waste exchange is an information clearinghouse and marketing facilitator for materials which otherwise might be wasted. Companies with materials that are unusable at their facility, but have potential value to someone else, can market their materials through the exchange. Likewise, companies which can make productive use of waste, surplus, or recoverable materials, are invited to seek users through the exchange. Some exchanges offer technical assistance and information only while others list materials wanted or available. Some specialize in specific materials such as paints, used textiles, or building materials.

A computerized waste information clearinghouse includes:

- data on industry successes and production improvements
- waste reduction methods and markets for recovered materials
- documentation of economic benefits and energy savings
- trade and professional associations offering industry waste reduction, elimination and minimization information.

Enviro-Line. Keep Florida Beautiful, 325 John Knox Road, Building M, Suite 240, Tallahassee, FL 32303. 904-385-1528, 1-800-828-9338; Fax: 904-385-4020. Provides a database and message center for solid waste information (e.g., Governor's Market Development Task Force, Adopt-A-Shore, etc.).

Florida Food Link Program, Florida Association for Community Action, 901 NW 8th Avenue, Suite A 2, Gainesville, FL 32601. 904-378-6517; Fax: 904-378-0219. Hunger Hotline: 1-800-329-3663. Inquire about their guidelines for food donations, storage, and handling.

Florida Network of Youth & Family Services, 820 East Park Avenue, Suite D 100, Tallahassee, FL 32301, 1-800-733-8988; Fax: 904-561-8405. A partnership with Florida Hotel and Motel Association to collect old linens, draperies, furniture, etc., to refurbish 23 runaway shelters or sell to raise funds. Contact them when renovating or redecorating your hotel.

Florida Waste Reduction Assistance Program (WRAP), Bureau of Solid and Hazardous Waste, Florida DEP, 2600 Blair Stone Road, Tallahassee, 32399-2400, 904-488-0300; Fax: 904-922-4939. A group of volunteers, all former engineers, who help businesses prevent pollution through waste reduction. Contacts are confidential and the service is free.

Florida Recycling Marketing System (FRMS), Florida Center For Solid and Hazardous Waste Management, 3900 SW 63rd Boulevard, Gainesville, FL 32608, 904-392-6269. 1-800-348-1239. Service for leaving messages, copying files, listing materials wanted or available, equipment, services; conference option.

Louisiana/Gulf Coast Waste Exchange, 1419 CEBA, Louisiana State University, Baton Rouge, LA 70803, 504-388-8650; Fax: 504-388-4945. Resource exchange and publication, *BICUS*.

Northeast Industrial Waste Exchange Inc., 620 Erie Boulevard W., Suite 211, Syracuse, NY 13204, 315-422-6572; Fax: 315-422-4005. Catalogue.

PenCycle. 25 W. Third Street. P.O. Box 88. Media, PA 19063,215-565-9131: leave messages, resource exchange, jobs, legislation.

Recyclers Market Exchange, P.O. Box 11468, Montgomery,AL 36111,205-277-7050; Fax: 205-277-7080. Developed by EnviroSouth, Inc., and supported by EPA Region IV. A computerized listing of dealer/processors, brokers, and end users in the southeast who buy recovered materials.

Solid Waste Assistance Program (SWAP), P.O. Box 7219, Silver Spring, MD 20907, 1-800-677-9424; Fax: 1-301-585-0297. SWAP is a joint project of the U.S. EPA, Office of Solid Waste, and SWANA. A technical information service designed to collect and distribute materials.

Solid Waste Information Clearinghouse (SWICH), P.O. Box 7219. Silver Spring, MD 20910: 301-585-2898, 1-800-67-SWICH; Fax: 301-589-7068. On-line library system for members of the Solid Waste Association of North America (SWANA); legislation. conferences; users share technical knowledge.

Southeast Waste Exchange, University of North Carolina, Urban Institute, Charlotte, NC 28223, 704-547-4289. Publishes a bimonthly catalog of materials available. materials wanted, services, regulations, workshops: bulletin board service available.

Southern Waste Information Exchange Clearinghouse (SWIX), P.O. Box 960, Tallahassee, FL. 32302, 1-800-441-SWIX; Fax: 904-574-6704. Provides information on solid and hazardous waste management, current legislation. alternative technologies, waste exchange, services and products.

Join the Partnership

FH & MA + Florida's Troubled Kids = Real Value for the 90's

Florida has the second largest number of runaway teenagers in the nation. Last year, we fed, clothed, housed and counseled more than 23,000 of these troubled kids. 90% of them come from within the state -- they are your kids and your neighbor's kids; and they need your help. Through a unique partnership between the Florida Hotel/Motel Association and the Florida Network of Youth & Family Services, Florida's lodging industry can play a key role. You can keep kids off the streets and reunite them with their families.

How Can You Help?

When you renovate or redecorate your hotel, please donate the used furnishings to the Florida Network's 23 runaway shelters. We'll do all the work. We'll have the items removed from your loading docks and taken away. All items will be used to refurbish the shelters or will be resold, with proceeds earmarked for the shelters. All donations are tax deductible.

It's the INN thing to do!

800-733-8988 or **904-224-2888** (FHMA)

Cooperative Extension Services, Southeast Region

Contact the Cooperative Extension Service in your state for research-based information and publications on all areas of solid waste management, including hazardous waste, yard trash and commercial composting/mulching, source reduction, Enviroshopping, recycling, and technical waste management systems.

Alabama Cooperative Extension Service, Solid Waste Management Programs, 202 Duncan Hall, Auburn University, Auburn AL 36849-5614, 205-844-4451; Fax 205-844-9650.

Florida Cooperative Extension Service, Solid Waste Management Programs, Center for Biomass Programs, University of Florida, Box 110940, Gainesville, FL 32611, 904-392-1511; Fax: 904-392-9033.

Florida Energy Extension Service, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, Florida 32611, 904-392-1511.

Georgia Cooperative Extension Service, Solid Waste Management Programs, University of Georgia, Athens, GA 30602, 404-542-8935; Fax: 404-542-8845.

Kentucky Cooperative Extension Service, Solid Waste Management Programs, Kentucky State University, Box 196, Frankfort, KY 40601. 502-227-6389; Fax: 502-227-5933.

Mississippi Cooperative Extension Service, Solid Waste Management Programs, P.O. Box 5446, Mississippi State, Starkville, MS 39759, 601-325-3141; Fax: 601-325-8407.

North Carolina Agriculture Extension Service, Solid Waste Management Programs, Box 7602, North Carolina State University, Raleigh, NC 27695, 919-515-3252; Fax: 919-515-3135.

South Carolina Cooperative Extension Service, Solid Waste Management Programs, 212 McAdams Hall, Clemson University, Clemson, SC 29634-0357, 803-656-4075; Fax: 803-656-0338.

Tennessee State Planning Office, Solid Waste Management Programs, 308 J. Sevier Street, Office Boulevard, Nashville, TN 37243-0001, 615-741-5782; Fax: 615-741-2883.

National Cooperative Extension Service, Solid Waste Management Programs, USDA, Room 3871 South Boulevard, U.S. Department of Agriculture, Washington, DC 20250-0900, 202-720-8744; Fax: 202-690-4869.

Appendix E. Packaging Guidelines

Packaging is the term used to describe the container or combination of materials used to store, transport, and protect products from damage, theft, or decay. Packaging is considered excessive when the “layers” of materials exceed what is necessary to transport, use, or sell a product.

Packaging can be categorized into three types:

- Primary - the first container which touches the product;
- Secondary - the second layer to contain one or more primary packages;
- Tertiary - includes the shipping container and all additional packaging materials, other than primary and secondary, if any.

Packaging accounts for about one-third of the volume of the waste stream¹⁹ and, therefore, the greatest potential for waste reduction. The following guidelines will assist you in making a determination about reducing the packaging which comes with your products.

Primary containers should be recyclable or reusable/refillable

Secondary wrapping materials (e.g., plastic six-pack collars) should be avoided or returned to the vendor.

- ✓ Tertiary cartons, drums, pallets, boxes, skids, and all other internal wrapping materials (e.g., Styrofoam popcorn, shrink wrap, string, etc.) should be made of durable materials and designed to be returned/reused by the vendor.
- ✓ Packaging should be made from a minimum of 25% postconsumer recycled content in corrugated cartons and 20% postconsumer in plastic containers.
- ✓ Packaging should use the least volume and weight of materials necessary to protect the product.

eco hotels are in close conjunction with ethnographic tourism. Therefore, their guests often have the opportunity to become acquainted with the culture and traditions of different ethnic groups. Meals in environmental hotels often repeats local traditions. If the hotel is located on the territory of the African savannah, the guests will be offered the local food: couscous, topinambour porridge, buffalo milk. Hotel cuisine in the Siberian taiga will include such products as pine nuts, fish and game. Some eco hotels offer a rather extreme way of recreation, when guest should look for food themse Explore 25 eco-friendly hotel ideas that boost sustainability. Find valuable tips for properties launching green initiatives or improving existing programs. Sustainable hotels are businesses that significantly reduce their environmental impact through green best-practices in maintenance, services, logistics, products, and supplies. The core elements revolve around reducing waste, saving energy, and cutting down on water usage. There are many steps a hotel can take to move toward sustainability. This Eco Hotel & Lodging Guide highlights the 7 best online platforms for an eco-friendly stay in 2020 and beyond. Table of Contents. Principles of Eco Tourism. Eco tourism is growing. What is Eco Accommodation? What's the difference between an eco hotel, eco resort and eco lodge? Where to find Eco Accommodation. Beyond the Eco Hotel. Whereas eco hotels are usually smaller than resorts and guests may leave the grounds for eating or entertainment. Eco Lodges are usually a room only and food, activities, etc. need to be sourced outside of the property. Where to find Eco Accommodation. This means that we may get a small commission if you purchase through them. © 2021 The Dharma Trails. This site uses cookies to help your experience.