

US EPA ARCHIVE DOCUMENT



## Section 2

# PREVENTING WASTE IN THE FIRST PLACE



**W**hile recycling addresses items that have already become trash, waste prevention goes one step further in reducing overall disposal, since waste that is never created does not have to be managed later. Also known as “source reduction,” waste prevention is the practice of designing, manufacturing, purchasing, transporting, and using materials in ways that reduce the amount of trash created. Reusing products is a key element of waste prevention, as it delays the entry of items into the solid waste stream.

Similar to recycling, practicing waste prevention in the retail sector results in environmental stewardship and economic benefits. In addition to reducing the burden on landfills, waste prevention also helps conserve natural resources and reduces the energy and pollution associated with manufacturing. For shopping center tenants, waste prevention strategies can translate into cost savings in a variety of areas other than waste disposal, including transport and labor, as evidenced by the examples below. Your tenants, especially major national retailers, are in the best position to execute waste prevention strategies, but as a shopping center manager or property owner, you can encourage your tenants to consider the approaches below. You can also support reuse efforts by buying certain products and sponsoring public take-back events.

### MULTIPLE APPROACHES

With the variety of retailers today, there is no “one-size-fits-all” approach to preventing waste. There are, however, several key areas

### SOUTHPOINTE PAVILIONS: TAKING WASTE REDUCTION SERIOUSLY

SouthPointe Pavilions is a 500,000 square foot outdoor lifestyle center located in Lincoln, Nebraska. The spacious facility is home to eight restaurants, 34 clothing and specialty stores, and a movie theater complex.

Upon its grand opening in 1999, the shopping center joined Wastecap—a nonprofit, non-regulatory, confidential waste reduction organization—to ensure that proper environmental initiatives would be instituted from the start. Together, Wastecap and SouthPointe Pavilions have made recycling an integral part of the facility’s management and practices.

Wastecap first performed a waste assessment at SouthPointe and suggested ways the shopping center could reduce waste. By purchasing just one compactor, SouthPointe was able to recycle almost one ton of OCC per week. The facility soon added a second compactor. In 2003, SouthPointe recycled an average of 150 tons of OCC per week.

The compacted cardboard is removed two to three times per week. While it costs \$17.00 a ton to dispose of OCC in a landfill, SouthPointe avoids this cost by recycling and is able to save about \$2,550.00 each year.

SouthPointe Pavilions also recycles packaging polystyrene foam “peanuts” which are collected by the individual stores once a week. Neighboring mail stores and jelly and jam shops pick up the peanuts and reuse them for their own packaging needs. This process benefits all participants and the environment by helping reduce waste, especially during the holiday season.



In addition to OCC and packaging materials, SouthPointe also manages the proper disposal of fluorescent lamps. The city requires special handling for fluorescent lamps because of the mercury they contain. A local recycling company picks up the lamps four times a year for safe recycling.



where the retail sector has achieved good results:

- Transport packaging
- Inventory and point of sale
- Material reuse

When a shopping center or mall decides to initiate waste prevention practices in any of the target areas listed above, a methodical approach is recommended. The most critical component is a close working relationship with suppliers, since they often control the amount of packaging and materials used in the first place, but can be greatly influenced by the desires of their retail customers. If a retailer plans to initiate a new waste prevention program from scratch, it might be more feasible to start by focusing on one or two of the areas listed above, then focus on additional areas as time and resources allow.

### TRANSPORT PACKAGING

To ensure the safety of products during transport from distributors to an

#### TARGET: ACHIEVING WASTE PREVENTION THROUGH FLOOR-READY MERCHANDISE

Target's Floor Ready Program aims to minimize transport packaging by shipping "floor-ready" apparel, preventing waste, and saving money. Starting with test shipping runs, the company began eliminating the individual plastic packaging on its softline merchandise such as sweaters and other clothing and instead received them "floor-ready." In the one year since the Floor Ready Program's inception, Target has reduced transport packaging by 1.5 million pounds and has saved \$4.5 million in labor costs associated with unwrapping packaged apparel.

### COALITION TAKES THE WASTE OUT OF PACKAGING

A coalition of retailers and packaging manufacturers have joined together to promote the development of sustainable packaging. Embracing "cradle-to-cradle" concepts, the group is working to develop packaging that provides positive benefits to society and the environment throughout its life cycle without compromising its functionality. The coalition's founding members include Cargill Dow, Dow Chemical Company, Estee Lauder/Aveda, EvCo Research, MeadWestvaco, Nike, Starbucks Coffee Company, Tropicana, and Unilever. For more information visit [www.sustainablepackaging.org](http://www.sustainablepackaging.org).

end market, various types of packaging are used, including pallets, boxes, wraps, and slip sheets.

Transport packaging can be made of materials such as corrugated cardboard, fiberboard, metals, plastics, and wood. Retailers may be reluctant to change transport packaging that has been used for years, since their profits are dependent on the arrival of goods to their store in sellable condition. There are, however, methods that can increase the efficiency of transport packaging while contributing to significant waste prevention and cost savings. The following are different strategies that can be employed to prevent package waste during the transport of goods:

**Elimination.** Careful evaluation of a retailer's current transport packaging system might reveal the potential to eliminate certain packaging components, such as internal inserts or plastic wrap for individual items.

**Lightweighting.** This strategy involves the redesign and remanufacturing of transport packaging to reduce the size of the primary container and/or decrease the thickness of the container walls. These design changes need to be evaluated to maintain the safe transport of merchandise to the end market.

**Bulk Shipments.** When purchasing products from manufacturers or shipping merchandise from the distribution center, doing so in bulk reduces the amount of packaging necessary per product, thus preventing waste.

Shopping centers and retail stores must have sufficient storage space for larger shipments and a larger onsite inventory. This might involve initial costs during construction of a facility or during a renovation to increase storage space; however, long term overall savings can be realized through reduced transport and waste disposal costs.

**Reusable Packaging.** This waste prevention strategy involves the switching from single-use transport packaging, such as corrugated cardboard and plastic shrink wrap, to reusable packaging, such as plastic totes and reusable strapping. Retailers interested in switching to reusable packaging, however, may require a complete overhaul of current shipping logistics, so a pilot/phase-in process is recommended.

### TAKING STOCK: REVIEWING INVENTORIES AND POINT-OF-SALE

For retailers, an accurate inventory of merchandise and/or items required for routine operations is a major part of doing business. Poor inventory management not only leads to over-purchasing and stock surplus, but can also result in waste. Many stores use a retail inventory control system (RICS), a software application that tracks inventory online. RICS can also be used to track and address excess inventory and waste. Just-in-time ordering can also help eliminate overpurchasing



and, in the case of food, spoilage, which leads to unnecessary waste.

Another important location for retailers is the point-of-sale, where items are displayed for shoppers. This is also an area where there is significant potential for waste prevention. Major retailers have learned that, by cutting down on individual product packaging, they not only save waste and can ship more items in bulk, but also save shelf space and stocking time. The "open bin" concept has become much more popular at retail outlets such as hardware and home improvement stores. In fact, when an Ace Hardware store in Alexandria, Minnesota, switched from individual price stickers to one "bin tag" and scanning items at the register, the store realized significant benefits. The number of employees needed each week for price ticketing decreased from two to one, the accuracy of pricing and charges improved, and inventory monitoring efficiency increased. In the first year, the switch resulted in more than \$5,000 savings, or more than 90 percent of the original cost to ticket individual items.

### REUSE, REUSE, REUSE...

Reuse is defined as the use of a material after its originally intended purpose, without breaking it down into its raw components. Reuse is fundamentally different from recycling, because when a material is recycled, it is processed and remanufactured into a whole new product, requiring additional resources and energy.

There are numerous opportunities for the reuse of materials throughout a shopping center, both as part of everyday center operations and in individual stores. You should consider donating any unwanted materials, such as computer equipment, to charitable organizations. There are numerous local and national reuse

organizations across the country that can help you find reuse opportunities. See the [Resources Section](#) of this guide for EPA's list of state materials exchanges and other sources of information.

The following are typical items from retail operations that can be reused:

**Office paper.** Instead of recycling used office paper, use the back side of printouts and copies as notepads. Not only can this reduce your waste disposal costs, you can also save the money you would have spent on purchasing new notepads.

**Toner cartridges.** Most toner and ink jet cartridges can be refurbished or remanufactured. Many manufacturers offer closed-loop collection programs, which accept used cartridges in the original packaging and refurbish or remanufacture them. Before throwing away your cartridges, contact the manufacturer or vendor and ask if they will collect them. If not, consider donating your cartridges to an organization that offers collection (see [Resources](#), page 33).

**Computers.** As you and your tenants upgrade computer equipment, think before you throw. Consider contacting area schools to see if they might be able to use your unwanted equipment or host an electronics recycling event (see "Reap the PR Benefits" on page 13).

**Reusable air filters.** By replacing disposable air filters throughout your shopping center with reusable ones, you will reduce waste and save on the cost of new filters.

**Clothes hangers.** Clothes hangers are integral to apparel merchandising. Some retailers prefer to display merchandise on their own hangers and discard hangers provided by suppliers. Other retailers discard hangers once the item is sold.

## FROM PALLETS TO SLIPSHEETS, HOME DEPOT SAVES BIG!

In 1995, Home Depot, the world's largest home improvement retailer, conducted a thorough assessment of its transport packaging logistics and realized that it could significantly reduce the amount of wooden pallets it used. The company adopted a new corporate policy requiring its vendors to switch from the use of wooden pallets to plastic slipsheets. This switch has eliminated 36,000 tons of wood from the wastestream and saved Home Depot an estimated \$2 million in the inaugural year of the slipsheet program.

*Source: "Case Studies in Source Reduced and Reusable Transport Packaging," Source Reduction Forum of the National Recycling Coalition, Inc., 1997.*

## ACE HARDWARE FILTERS ITS COSTS WITH REUSE

Henricksens Ace Hardware in North St. Paul, Minnesota, uses electrostatic permanent air filters in the store's heating, ventilation, and air conditioning equipment to reduce the cost of replacing air filters and the associated waste disposal costs. Warranted for five years, the permanent filters cost \$18 compared to \$0.89 for disposable filters. While this does represent an initial higher cost, valuable waste reduction results can be realized.

As a result of this substitution, in one year the store avoided 33 pounds of waste and saved \$56, representing a 90 percent reduction in waste and a 50 percent cost savings. The payback on the initial investment is estimated to be five years.

*Source: "Retail Hardware Best Practices for Waste Management," July 1998, The Water Foundation.*



## MIDWEST-BASED RETAILER TARGETS SHOPPING CART REUSE

Target has found a great way to deal with old and damaged shopping carts. The Minnesota-based retailer has a vendor that picks up old carts for both recycling and reuse. In 2002, Target reused 6,700 carts internally, sold 28,500 nationwide, and recycled more than 8,000 (producing 228 tons of plastic and metal for remanufacturing).

Instead of disposing of unwanted hangers, tenants can donate them to thrift shops and homeless shelters. This will not only reduce your onsite waste generation, but also strengthen your shopping center's community relations.

**Shopping carts.** Several large shopping center "anchors" and "big box" retailers offer shopping carts to customers as a convenience while shopping. While these carts offer shoppers an easier and more enjoyable experience, they also represent a source of waste when carts are damaged. Shopping carts, however, can be refurbished for reuse or dismantled into their plastic and metal components for remanufacturing. Retailers that are interested in reducing cart waste should work with their suppliers to develop a program.

**Wooden pallets.** Wooden pallets can be repaired or rebuilt with wood from old pallets. Wooden pallets are often reused many times to transport merchandise and when they can no longer be refurbished untreated wooden pallets can be ground up and used for such things as playground mulch, animal bedding, and wood stove pellets. These alternative end uses can significantly reduce waste.

**Unsold or damaged merchandise.** While unsold or damaged merchandise represents a loss for a retailer, there are many organizations that can use clothing and other products. Consider educating your tenants by holding collection drives with all stores. Retailers can also set up long-term commitments with a local charity.

## WASTEWISE: PREVENTING WASTE, RECYCLING, AND BUYING RECYCLED

For shopping centers and other businesses that want to formalize their commitment to waste reduction, EPA has created a voluntary partnership program—WasteWise—to recognize organizations who undertake waste prevention, recycling, and buy recycled efforts. Understanding that waste reduction can be effectively implemented in various ways, the WasteWise program is flexible, allowing partners to customize their waste reduction programs to their individual needs and goals.

Several large and small retailers are already WasteWise partners. Your shopping center or holding company may want to join this program and take advantage of the myriad benefits that WasteWise partners enjoy.

**Becoming a WasteWise Partner.** EPA asks that all WasteWise partners sign on for at least a three-year commitment to developing and implementing a comprehensive waste reduction program. Partners are free to invest as much time as desired and set individual goals that are the most cost-effective and feasible. Upon completing registration, all WasteWise partners are expected to complete a Goals Identification Form, which outlines their specific waste reduction goals over their three-year commitment. These goals

cover three specific areas:

1. Waste prevention
2. Recycling collection
3. Buying or manufacturing recycled-content products

**Reaping the Benefits.** All WasteWise partners gain valuable access to free online technical assistance and abundant resources and tools that help develop, implement, and measure the success of waste prevention and recycling initiatives, including:

- The *WasteWise Toolkit*, which includes tips for developing a successful program, guidance on measuring program success, an online reporting system, and guidance on integrating WasteWise into an Environmental Management System (EMS).
- Outreach materials.
- Resource directory.
- *WasteWise Bulletin*, a bimonthly member newsletter.
- Personalized technical assistance from WasteWise representatives.
- Public recognition—a major function of the WasteWise program is to generate public awareness of the benefits of partners' waste reduction activities. EPA promotes its partners' waste reduction accomplishments through an annual awards program, published case studies, and features in well known media outlets, such as CNN, National Public Radio, and *The Wall Street Journal*.

For more information about joining WasteWise, see the [Resources Section](#) on page 33.