

Commercial Recycling Toolkit

Malls and Shopping Centers



Recycling Waste Makes Good Business Sense

Yes, recycling can save money! Recycling is often less expensive than trash disposal. Whether you are just starting, or trying to improve an existing program, it always helps to have a plan. Designing an effective waste reduction program will insure that you comply with the Universal Recycling Law, help reduce your waste stream, save natural resources and energy, and could lead to significant waste disposal savings. This toolkit will help you set up a new recycling program and will help you evaluate your current waste programs. If your mall has a food court, please review our recycling toolkit for restaurants.

Other elements of waste reduction include ways you reduce and reuse the waste you generate. The first and most effective component of the waste hierarchy is reducing the waste created. Generators of waste are encouraged to reduce their waste by purchasing in bulk, buying items with less packaging and switching to reusable instead of single-use items. In addition to benefiting the environment, these efforts often offer a financial incentive as well. Despite efforts to reduce the amount of waste generated, consumers and businesses still create a substantial amount of waste. The U.S. Environmental Protection Agency estimates that each American generated 4.3 pounds of waste daily. Much of this waste can be reduced, reused, or recycled to minimize the strain on the environment and municipal waste management. Examples include repairing, as opposed to replacing, broken items, and reusing raw materials in production. A very simplistic example is consumers using refillable water bottles to minimize the number of plastic bottles being discarded. Consumers have a financial incentive in this example as well because municipal water is far cheaper than bottled water.

Recycling Plan

Step 1: Identify your recycling program coordinator

The facility manager or their designee should plan and oversee the recycling program. This individual should be motivated, have a good rapport with tenants, vendors, and shoppers, and take an interest in waste reduction, reuse, and recycling. Announce the program and the new recycling coordinator to all staff to encourage cooperation and compliance. The recycling coordinator should:

- Establish recycling policy and procedures.
- Interface with staff, tenants, vendors, recycling service providers, and the public
- Determine the start date of the program.
- Facilitate education & promotion of recycling by explaining how recycling works and why it is important.
- Track the progress and success of the recycling program.
- Assemble a green team to help plan, implement, evaluate and manage the program. The team should include employees from each area recyclables are generated.

Step 2: Conduct a characterization of your waste stream



A waste characterization quantifies the types of wastes and recyclables being generated in your trash and recycling. During a waste characterization, the types of materials discarded in your trash and recycling bins are literally inspected, identified, and sometimes weighed. This will help you identify recycling and waste prevention opportunities, potential savings from reduced disposal costs or income from the sale of your recyclables, and establish baseline data. To conduct a waste characterization:

- Utilize knowledgeable staff (*see: Additional Resources –Northeast Recycling Council*) or contact your waste hauler, recycling service provider, or a waste/recycling consultant to perform the characterization.
- Small businesses may request a free characterization of their waste stream by contacting DSWA at 800-404-7080 or DNREC at 302-739-9403. Requests for a free waste characterization will be addressed on a first come, first serve basis as

resources allow.

Step 3: Identify the materials to be collected

Work with your waste hauler, service provider, or waste/recycling consultant to collect and analyze the information collected during your waste characterization. Once you see what you're discarding, identify opportunities for waste reduction, reuse, and recycling. The following materials can be commingled in one single-stream recycling container:

- | | | |
|--|--|--|
| <input type="checkbox"/> Newspapers | <input type="checkbox"/> Glass bottles and jars | <input type="checkbox"/> Corrugated cardboard |
| <input type="checkbox"/> Magazines and catalogs | <input type="checkbox"/> Plastic bottles, jugs, containers | <input type="checkbox"/> Aluminum and steel cans |
| <input type="checkbox"/> Mixed paper (office, junk mail) | <input type="checkbox"/> Aseptic containers | <input type="checkbox"/> Boxboard |
| <input type="checkbox"/> Telephone books | <input type="checkbox"/> Milk cartons and juice boxes | <input type="checkbox"/> Rigid plastic |

Large quantities of certain materials may be sorted for cost-effective recycling, such as corrugated cardboard, plastic film, and office paper. Following are some examples of material streams that may be beneficial to recycle separately:

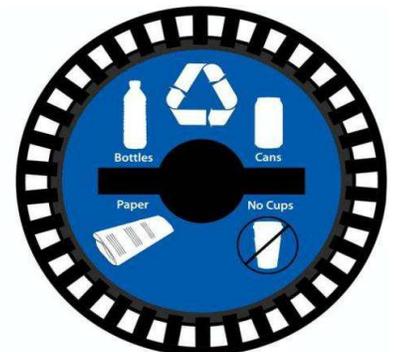
- | | | |
|---|---|--|
| <input type="checkbox"/> Batteries | <input type="checkbox"/> Construction & demolition debris | <input type="checkbox"/> Used textiles |
| <input type="checkbox"/> Packing peanuts (EPS loose fill) | <input type="checkbox"/> Pallets | <input type="checkbox"/> Landscaping waste (organic) |
| <input type="checkbox"/> Carpet | <input type="checkbox"/> Electronics | <input type="checkbox"/> Food waste |
| <input type="checkbox"/> Paint | <input type="checkbox"/> Plastic film / shrink wrap | <input type="checkbox"/> White goods |
| <input type="checkbox"/> Ink and toner cartridges (Many suppliers provide take-back programs) | | |
| <input type="checkbox"/> Fluorescent lamps and bulbs (consider using high efficiency fluorescent ballasts and lamps (T-5 & T-8)) | | |
| <input type="checkbox"/> Hazardous waste (see: www.dnrec.delaware.gov/whs/awm/SHWMB/Pages/HazardousWaste.aspx) | | |

For more information see: www.recycling.delaware.gov and www.dswa.com/programs.asp

Step 4: Determine collection program logistics

Making recycling easy and convenient will boost levels of tenant and shopper participation. Recycling should be as easy as throwing something in the trash, so recycling containers should be placed wherever you currently have trash containers (parking lot, entrances and exits, corridors, food courts, theaters, etc.) Take the following criteria into consideration when choosing containers:

- | | | |
|------------|-------------------|---------------------|
| •Placement | •Durability | •% recycled content |
| •Location | •Ease of handling | •Appearance |
| •Capacity | •Cost | •Opening type |



The recycling containers should look different from trash cans, be easily identified, and be clearly labeled. You can produce labels on your own or purchase them. Lids should have restricted openings. Consider choosing blue bins for recycling, black for trash, and green for food wastes. Use clear liners for recycling so housekeeping staff can easily identify recyclables from trash. Use compostable bags for food wastes. Other considerations include:

- Is your recyclable storage area of adequate size for your hauler to pick up?
- Do your recyclable materials need to be crushed, baled, banded or compacted?
- Is a recycling service needed for a specific material stream?

Step 5: Select a recycling service provider

Recycling service providers are vendors that pick up your recyclables for processing. While many waste haulers offer recycling services, some specialize in providing strictly recycling services. Services might include baling, shredding, crushing, or compacting; as well as transporting and marketing the recyclable materials.

Discuss collection schedules and options with a variety of service providers and request a billing structure that will reduce your waste disposal costs. Monitor how full collection dumpsters get, and make arrangements to adjust the collection schedule based on

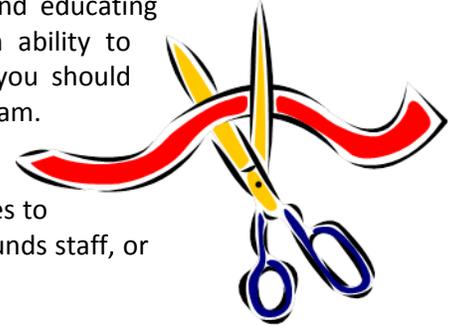


volume. You can also self-haul your recyclables to a recycling processor if you prefer to not pay for collection.

Step 6: Outreach and Education

Before you launch the program, spend time promoting your recycling effort and educating tenants and staff about recycling procedures. Implementation will require an ability to motivate tenants and shoppers to participate. Once the program has begun, you should reinforce good habits and keep tenants, staff, and shoppers interested in the program.

Choose a launch date to officially start the program and alert staff and tenants well in advance. Prepare simple information explaining the benefits and procedures to promote the program. Organize training sessions for any housekeeping staff, grounds staff, or tenants who will be involved with the implementation of the program.



Prepare a press release to publicly announce and promote the program – and your shopping center!

Plan an event to launch the program and to generate enthusiasm. Involve the local community, your shopping center tenants, and government leaders with a “ribbon-cutting” ceremony.

For a recycling program to be effective you must educate participants. For a shopping mall, this may include tenants, vendors, housekeeping and grounds staff, and even security. This can be done in a variety of ways including:

- Download and distribute the ‘How to Recycle’ guide: www.recycling.delaware.gov.
- Download and post the ‘How to Recycle’ poster in both English and Spanish throughout the shopping center.
- Meet with staff to discuss the recycling procedures and program goals.
- Inform vendors about the program: Distribute literature, electronic media, ‘How to Recycle’ guides, and posters.
- Place recycling information in guest rooms.
- Make announcements over the loudspeaker to remind people to recycle.
- Stress the importance with staff that recyclables be kept free of trash and contamination.
- Display recycling goals and/or promote the amount that has been recycled on signs and displays.
- Request feedback from staff regarding contamination or issues surrounding recycling.
- Send out press releases to publicize your recycling program when milestones are reached.
- Consider sustainable purchasing or green procurement policies: require purchasing of materials made with post-consumer recycled content, or bid specifications that give preference to ‘green’ products.
- Publicize recycling program successes through newsletters, e-mails, posters, and new employee orientation.

Step 7: Sustaining the program

Monitor and evaluate the recycling program on a regular basis. Request a monthly disposal report stating the amounts of recyclables by material type and disposal data in tonnage or cubic yard measurements.

- Post results and accomplishments listing the quantity of recyclables collected, total waste diverted, and revenue from the commodities.
- Percentage of waste diverted by your recycling program – compare the tonnage of recyclables collected to the tonnage of waste generated.
- Maintain records for charges for hauling waste and recyclables. Calculate savings from reduced disposal costs.
- Request contamination reports from recycling hauler or perform routine inspections of recyclables.
- Monitor progress and make the diversion rates mean something – Translate the data into terms the average person can understand.
- Consult DNREC or a private consultant for assistance.

Additional strategies for waste reduction

In addition to recycling, the following waste reduction strategies can reduce operating costs associated with unnecessary material use and waste.

Reduce – Purchase, consume, and throw away less. Use upstream control of the volume and types of wastes generated through purchasing decisions. Source reduction actually prevents the generation of waste in the first place, making it the

preferred method of waste management. Methods may include:

- Provide water coolers or water fountains to minimize use of single-use bottles
- Encourage suppliers to reduce packaging in purchases and shipping
- Supply air dryers in the restrooms
- Encourage staff to bring their own travel mug and water bottle for beverages
- Discourage use of disposable items such as plastic straws and stir sticks
- Use long-lasting, energy efficient light bulbs and fixtures
- Reuse laser and printer cartridges by participating in take-back programs
- Implement double-sided copying as the default setting on all printers and copiers
- Purchase or donate surplus office materials

Reuse – Reusing items by repairing, donating, or selling them. Reuse is even better than recycling because items do not have to be reprocessed before they can be used again.

- Pallets, hangers, packing peanuts, shipping boxes and containers
- Set-up a 'Reuse Area' in the workplace for office supplies you no longer need
- Use reusable mugs, plates, and cutlery in all break rooms
- Food waste can be composted on-site or picked up by a local composting facility
- Donate leftover construction materials, such as lumber, fixtures, and paint to a reuse organization

Buy Recycled – If you are not buying recycled content products you are not recycling! Purchase products that are re-manufactured or made from post-consumer waste (PCW) recycled content such as:

- Office paper
- Toner and printer cartridges
- Recycling and trash containers
- Carpeting
- Office furniture
- Paper towels, napkins, and toilet tissue

Additional Resources:

Delaware Recycles: www.recycling.delaware.gov and www.facebook.com/DelawareRecycles

(Download 'How to Recycle' guide and Commercial Recycling toolkits)

DNREC, Division of Waste and Hazardous Substances: www.dnrec.delaware.gov/whs/awm or call (302) 739-9403

Delaware's Universal Recycling Grant and Low Interest Loan Program:

www.dnrec.delaware.gov/services/Pages/Loans.aspx

Delaware Solid Waste Authority (DSWA): www.dswa.com or call 1-800-404-7080.

Electronic waste: For guidance in disposing of electronic waste and take-back programs

DSWA: www.dswa.com/programs_EGRbusiness.asp

EPA: www.epa.gov/epawaste/conserva/materials/ecycling/index.htm

EPA Environmentally-Preferable Purchasing Program: www.epa.gov/epp (Costs and benefits of purchasing choices)

EPA Food Recovery Challenge: www.epa.gov/foodrecoverychallenge (Food waste reduction)

Food Bank of Delaware: <http://www.fbd.org/> (Food donations)

Green Business: www.greenbiz.com

Habitat for Humanity: www.habitat.org/restores/directory/de

More recycling information: www.earth911.com

Northeast Recycling Council: www.nerc.org/documents/town_business/recycling_makes_sense_guide.pdf

(See Appendix C)

Product Stewardship: www.productstewardship.us/index.cfm

Special Wastes: www.dnrec.delaware.gov/whs/awm/Recycling/Pages/Recycling.aspx or www.dswa.com/programs.asp

(Some material streams including: batteries, fluorescent lamps and bulbs, ink and toner cartridges, paint, prescription medication, scrap tires, used motor oil, and white goods may require special handling)

Sustainable Business: www.sustainablebusiness.com

The Emerson Good Samaritan Food Donation Act: [www.gpo.gov/fdsys/pkg/PLAW-104publ210/pdf/PLAW-](http://www.gpo.gov/fdsys/pkg/PLAW-104publ210/pdf/PLAW-104publ210.pdf)

[104publ210.pdf](http://www.gpo.gov/fdsys/pkg/PLAW-104publ210/pdf/PLAW-104publ210.pdf) Encourages food donation to nonprofits by minimizing liability