Commercial Recycling Toolkit
Schools

Recycling Makes Good Economic, Environmental, and Educational Sense

Recycling can save money, can reduce your environmental footprint, and can offer environmental education. Schools generate tons of waste – from paper and computers to food scraps and books. Designing an effective waste reduction program will insure that you comply with Delaware's Universal Recycling Law, has the potential for significant waste disposal savings, and offers students an opportunity to learn about how their decisions impacts the environment. School district waste reduction programs have the potential to foster student achievement through curriculum choices and by transforming the school environment into a laboratory for learning. This toolkit is designed to provide assistance to start a recycling program or to help you expand your existing program.

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 to reduce 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 the financial incentive of lower expenses in purchases. Despite efforts to reduce the amount of waste generated, consumers, businesses, and institutions still create a substantial amount of waste. The U.S. Environmental Protection Agency estimates that each American generates about 4.3 pounds of waste daily. Much of this waste can be reduced, reused, recycled, or composted to minimize the strain on the environment and extend the life of our landfills.

Recycling Plan

Step 1: Identify your recycling program coordinator or Team

Decide who will handle the day-to-day tasks of your recycling program. For individual schools, teachers, staff, and students may be able to commit enough time to implement the program. For districtwide waste reduction programs, a centralized coordinator or sustainability manager may be more efficient. This individual should be motivated, have a good rapport with staff and students and takes an interest in waste reduction, reuse, and recycling. Announce the program and the new recycling coordinator to all staff and students to encourage cooperation and participation. The recycling coordinator should:

- Assemble a green team to help plan, implement, evaluate and manage the program. The team may include staff, teachers, students, and parents.
- Establish recycling policy and procedures.
- Communicate with teachers, custodial and cafeteria staff, students, school district officials, and recycling service providers.
- Facilitate education & promotion of recycling by explaining how recycling works and why it is important.
- Track the progress and success of the recycling program.

Step 2: Perform a waste stream assessment

A waste assessment is the process used to quantify the types of wastes and recyclables being generated. You literally inspect, identify, and sometimes weigh the types of materials discarded. A waste assessment will help you identify recycling and waste prevention opportunities, potential savings from reduced disposal costs, potential revenue from the sale of recyclables, and establish baseline data for measuring the future effectiveness of the program. To conduct a waste assessment you could:

- Utilize knowledgeable staff and teachers, and involve students
- Contact your waste hauler or recycling service provider
- Request a free waste stream assessment by contacting DSWA at 800-404-7080 or DNREC at 302-739-9403. The assessment includes a facility walk-through to visually inspect your school's waste generation practices and to offer helpful advice.

Step 3: Identify the materials to be collected

Work with your waste hauler, recycling service provider, or waste/recycling consultant to analyze the information collected during your waste assessment. Once you see what you're discarding, identify opportunities for waste reduction, reuse, and recycling. Discuss recycling collection options with your waste hauler or recycling contractor. For single-stream recycling programs, all of the following materials can be commingled:

- ☐ Mixed paper
- ☐ Newspapers
- ☐ Magazines and catalogs
- ☐ Plastic bottles, jugs, containers
- ☐ Corrugated cardboard
- ☐ Glass containers
- ☐ Aluminum and steel cans
- ☐ Boxboard containers
- ☐ Telephone books

Large quantities of certain materials may be sorted for cost-effective recycling. Here are some examples of material streams commonly found in institutional settings which may be beneficial to reuse or recycle separately:

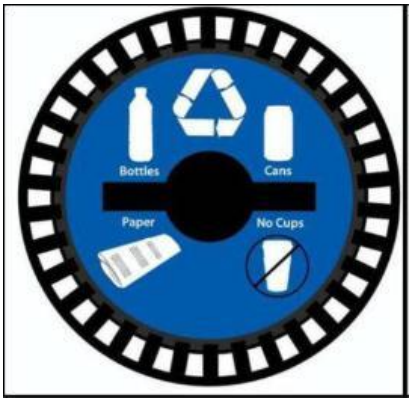
- ☐ Office paper
- ☐ Electronics
- ☐ Corrugated cardboard
- ☐ Ink and toner cartridges
- ☐ Construction & Demolition debris
- ☐ Batteries
- ☐ Packing peanuts
- ☐ Carpet
- ☐ Fluorescent lamps and bulbs
- ☐ Food scraps
- ☐ Landscape wastes (organic)
- ☐ Plastic film / shrink wrap
- ☐ Pallets

Step 4: Determine program collection logistics

Making recycling easy and convenient will boost levels of staff and student participation. Recycling should be as easy as throwing something in the trash, so recycling containers should be placed wherever you currently have trash containers (classrooms, cafeteria, offices, lobby, break room, file/copy room, etc.)

Take the following criteria into consideration when choosing containers:

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



The recycling containers should look different from trash cans, be easily identified, and be clearly labeled. Labels can be self-made or purchased. Lids may have restricted openings. Consider choosing blue containers for recycling, black for trash, and green for food scraps. Use clear liners so staff can easily identify recyclables from trash once bins are emptied.

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

A recycling service provider can be one or more vendors that will pick up your recyclables for processing. While many waste haulers offer recycling services, some companies specialize in providing strictly recycling services. For example, some paper recyclers may pick up high quality office paper at a reduced charge, or even pay you for sufficient quantities. Other services might include baling, shredding, crushing, or compacting as well as transporting and marketing the recyclable materials. If you choose not to use a collection service your school or district can self-haul your recyclables directly to a recycling processor. Other considerations may include:

- To review your waste management contracts to see if they allow renegotiation to include recycling services
- To monitor how full dumpsters are and make arrangements to reduce trash dumpster size and/or adjust the collection frequency based on volume.

- To discuss collection schedules and options with a variety of service providers and request a billing structure that will reduce your waste disposal costs.

Step 6: Outreach and Education

Before you launch the program, spend time promoting your recycling effort and educating staff and students about recycling procedures. Implementation will require an ability to motivate staff and students to participate. Once the program has begun, you should reinforce good habits and maintain interest in the program. Alert staff and students well in advance and prepare simple information explaining the benefits and procedures to promote the program. Organize training sessions for staff that may have new responsibilities with the program.

For an effective recycling program, you must educate staff, teachers, and students.

This can be done in a variety of ways, including (but not limited to):

- Meet with staff to discuss the recycling procedures and program goals.
- Download the How to Recycle Guide and posters: How to Recycle Poster and How to Recycle Poster - Espanol
- Inform vendors and members of the community about the program.
- Determine if the waste reduction program will be incorporated into school curricula.
- Stress the importance that recyclables be kept free of trash and contamination.
- Place labeling and signage with recycling information on trash and recycling containers and dumpsters.
- Sample signage could read: “Recycling Only, NO Trash” and “Trash Only, NO Recycling”
- Display recycling goals and/or promote the amount that has been recycled on signs and displays.
- Encourage students to participate in program through classroom or service learning projects
- Have students encourage participation and publicize program successes through newsletters, e-mails, and posters

Step 7: Sustaining the program

Monitor and evaluate the recycling program on a regular basis. Request a monthly disposal report from your hauler 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.
- Troubleshoot the program and perform routine inspections of recyclables to check for common problems like contamination issues
- Get students involved to monitor progress and to translate the data into spread sheets or charts
- Student involvement will develop a sense of program ownership which can continue as they advance grades

Additional strategies for waste reduction

The following waste reduction strategies can reduce 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 by your school 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:

- ☐ Implement an electronic records system to reduce paper usage
- ☐ Double-sided copying as the default setting on all printers and copiers
- ☐ Encourage staff to bring in reusable water bottles and mugs
- ☐ Provide alternatives to single-use cream, sugar, and stir sticks for coffee
- ☐ Install air dryers in the restrooms
- ☐ Adjust your heating and cooling systems when the building is not in use
- ☐ Use long-lasting, energy efficient light bulbs and fixtures
- ☐ Ask suppliers to reduce packaging in purchases and shipping
- ☐ Use renewable, refillable, or returnable shipping containers

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.

- ☐ Donate office furniture and appliances to a local charity
- ☐ Put new labels on old file folders
- ☐ Reuse laser and printer cartridges by participating in take-back programs
- ☐ Set-up a 'Reuse Box' in the classroom for extra school supplies students no longer need
- ☐ Place a 'Reuse Crate' in the school cafeteria for uneaten and unopened food
- ☐ Use reusable mugs, plates, and cutlery in the cafeteria and staff lunch room, and for parties and events
- ☐ Establish a compost pile for organic landscape waste and food scraps or have your organic waste collected by a local composting facility

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:

- ☐ Classroom or office paper
- ☐ Paper towels, napkins, and toilet tissue
- ☐ Recycling and trash containers
- ☐ Toner and printer cartridges
- ☐ Carpeting
- ☐ Classroom or office furniture
- ☐ Packaging

Additional Resources:

Delaware Recycles: www.recycling.delaware.gov and Delaware Recycles Facebook

Delaware Universal Recycling Grant Program: DNREC Universal Recycling Grant Program

DNREC, Division of Waste and Hazardous Substances: DNREC / DWHS or call (302) 739-9403

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

Electronic waste: For guidance in disposing of electronic waste and take-back programs
Delaware Solid Waste Authority: DSWA E-waste Program
U.S. Environmental Protection Agency: EPA E-waste Program

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

EPA: Tools to Reduce Waste in Schools

Food Bank of Delaware: Food Bank of Delaware (Food donations)

Food Recovery Challenge: EPA - Food Recovery Challenge Program

Food Scrap Reduction: www.epa.gov/foodscraps

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

More recycling information: Earth911

Northeast Recycling Council: NERC- Recycling Makes Good Sense

Replenish Food Scrap Diversion Program: Eden Delmarva

Special Wastes: DNREC - How to Manage Special Wastes or DSWA Programs - Special Wastes
(Material streams including: batteries, fluorescent lamps and bulbs, ink and toner cartridges, paint, scrap tires, used motor oil, and white goods may require special handling)

The Emerson Good Samaritan Food Donation Act: Good Samaritan Food Donation Act
Encourages food donation to nonprofits by minimizing liability

US Green Building Council: USGBC