



Multi-family Residential Recycling Plan and Waste Generation and Recyclable Collection Worksheet

PART A: Multi-family Residential Recycling Plan

Instructions

Whether you are just starting or are trying to improve a recycling program in your building, it always helps to have a plan. The Recycling Plan will help your building evaluate your current program and comply with Delaware's Universal Recycling Law. Waste haulers operating in Delaware that provide single and multi-family solid waste collection services must also provide single stream recycling collection services. Multi-family single stream recycling services must be implemented by January 1, 2013.

Specifically, your waste hauler must provide the following services:

1. The recycling service must include appropriately sized and centrally located recyclables collection container(s) for the complex being served and ideally located in the same proximity as the complex's waste disposal containers.
2. Notification to the multi-family complex management that the single stream recycling service, including instructions on participation, will be provided.
3. A frequency of recyclables collection that will prevent the recycling containers from overflowing and otherwise causing a nuisance.

Owners/Managers of multi-family complexes must provide to residents at least once a year:

1. Instructions on participating in the complex's recycling program which should include: what can be recycled, how to prepare it, and where to take the recyclables for collection in the complex.

The following information is suggested (but not required) to have in your files:

- Name of waste and recycling hauler(s) and their contact information.
- Location of recycling containers and the recyclable materials accepted by your recycling hauler
- Other waste reduction methods used in building: (See number 3, page 3)
- Educational materials you have provided to your residents
- Annual updates or changes to the building's recycling program
- Does your building include a recycling requirement in its lease agreement or condo by-laws/declarations?
- Include any additional information such as correspondence with haulers or your municipality
- Download the How to Recycle in Delaware guide at: www.recycling.delaware.gov

By completing this Plan, you will be on your way to implementing a successful recycling program. This form and others are available electronically as fillable pdf documents. See "Multi-family Residence Toolkit" at: <http://www.dnrec.delaware.gov/whs/awm/Recycling/Pages/Recycling.aspx>



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Definitions

- **Multi-family:** 3 or more attached structures, such as condominiums or apartments, generally intended for occupancy by individuals or families and where centralized community trash disposal and collection services are typically provided.
- **Single stream recycling:** A system in which all fibers (including but not limited to paper, cardboard, etc.) and containers (including but not limited to plastic, glass and metal) are commingled for collection into one container instead of being sorted into separate commodities and multiple containers.
- **Universal Recycling Timeline:** Implementation of single stream recycling collection services to all Delaware single-family residents and to restaurants and bars by September 15, 2011; single stream recycling collection services to multi-family residents with centralized services by January 1, 2013; and all commercial businesses must actively participate in a comprehensive recycling program no later than January 1, 2014.
- **Recycle or Recycling:** Any process by which solid wastes are separated for use as raw materials, products, replacement of products, including the reuse of organic yard waste, but do not include the incineration of materials for energy.
- **Recyclable materials:** A solid waste that exhibits the potential to be used repeatedly in place of a virgin material. Any material or group of materials that can be collected and sold or used for recycling. The list of acceptable recyclable materials includes newspaper, corrugated cardboard, boxboard (examples: cereal and tissue boxes), mixed paper, junk mail, magazines, catalogs, phone books, juice boxes, milk cartons, aluminum and steel cans, glass bottles and jars, plastic bottles, containers, and jugs, and rigid plastic (examples: laundry baskets and hard plastic toys).



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Multi-Unit Residential Recycling Plan

Property Name: _____

Property Address: _____

Number of units in building: _____

Recycling Program Point of Contact No. 1 and Title: _____

Phone Number: _____

Email Address: _____

Recycling Program Point of Contact No. 2 and Title: _____

Phone Number: _____

Email Address: _____

Waste Service Provider: _____

Recycling Service Provider: _____

Please provide information on the building's recycling program:

1) Location of recycling collection container (check all that apply):

- | | | |
|-------------------------------------|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> Chute Room | <input type="checkbox"/> Common Area | <input type="checkbox"/> Dumpsters |
| <input type="checkbox"/> Alley | <input type="checkbox"/> Mail Room | <input type="checkbox"/> other _____ |

2) The following materials are recyclable in Delaware.

(Check with your hauler with specific questions about what materials they will accept)

- | | |
|--|--|
| <input type="checkbox"/> Newspapers | <input type="checkbox"/> Magazines and catalogs |
| <input type="checkbox"/> Mixed paper (office, junk mail) | <input type="checkbox"/> Glass bottles and jars |
| <input type="checkbox"/> Plastic bottles, jugs, and containers | <input type="checkbox"/> Corrugated cardboard |
| <input type="checkbox"/> Milk & juice cartons and drink boxes | <input type="checkbox"/> Aluminum and steel cans |
| <input type="checkbox"/> Boxboard (ex. cereal, tissue boxes) | <input type="checkbox"/> Telephone books |
| <input type="checkbox"/> Rigid plastic (ex. rigid toys, laundry baskets) | <input type="checkbox"/> Other _____ |

3) Identify any waste reduction methods implemented in the building

Note: Your building's management and residents are encouraged to implement waste reduction methods.

A) If applicable, identify waste reduction methods in the building and building management office
(Check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> Use renewable, refillable, or returnable containers | <input type="checkbox"/> Use mulching lawn mower |
| <input type="checkbox"/> Switch to wipeable or reusable signage | <input type="checkbox"/> Reduce packaging in purchases |
| <input type="checkbox"/> Use long-lasting, energy-efficient light bulbs and fixtures | <input type="checkbox"/> Implement double-sided copying |
| <input type="checkbox"/> Compost yard waste | <input type="checkbox"/> Donate surplus office materials |
| <input type="checkbox"/> Reuse laser printer and toner cartridges | <input type="checkbox"/> Other _____ |



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B) Identify waste reduction methods implemented for residents (Check all that apply):

- Provide long-lasting, energy-efficient light bulbs and fixtures for units
- Provide residents with educational materials on nontoxic or less wasteful products
- Provide opportunities for residents to donate clothing and/or other reusable items to charity
- Provide reusable bags
- Install reusable furnace and air conditioning filters in units
- Other _____

List of additional information:

- Education Program Requirements
 - Flyers provided to new residents and at least annually to all residents which summarize the building's recycling plan, why it's important to recycle and contact information for questions
 - Posters displayed in common areas or provided to residents identifying recyclable materials and collection point locations
 - Written notices to all residents of any changes in the recycling plan
 - Other signs as appropriate, please list _____
 - Do you have multi-lingual material available? If yes, language _____
- Annual recycling program updates
- Copy of Lease Agreement or Condo By-Laws that include request for resident recycling
- Copy of contracts with waste and recycling hauler(s), semi-annual waste hauler quality reports and any reports of contamination

Notes:



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PART B: Waste Generation and Recyclable Collection Worksheet

Starting or improving a recycling program in your building may reduce your total waste collection costs. Waste haulers typically charge based on the size of your container (typically in cubic yards) and collection frequency, not how much trash is actually picked up. Therefore, if you can reduce the trash container size, number of containers or collection frequency by recycling more of your waste, you may save money on your waste collection. The key is diverting as much material from your trash to recycling, as well as reducing the amount of trash and recyclables your building generates in the first place.

You can use this worksheet to help you decide when you should reduce container size or the frequency of pickup to reduce your total waste collection costs. After completion of this worksheet, keep a copy of it with your Recycling Plan so that your building's entire recycling program is documented.

Information you need to complete the Waste Generation and Recyclable Collection Worksheet:

- **The number and size of garbage and recyclable containers on your property.** This information can be found by checking the containers outside your building or checking your invoice from your waste hauler.
- **The number of times per week the garbage and recyclables are collected.** This information can be found on your waste hauling invoice or contract.
- **How full the containers are when they are serviced.** Are they overflowing by the time the truck comes, or are they only half full? Try to come up with an average volume for all your containers at collection time. For example, note whether the containers are half full (50%) or three-fourths full (75%).
- **The cost to collect your garbage and recyclables.** This information can be found on your waste hauling invoice or contract. Generally, this is a monthly or quarterly fee.

Estimating Your Building's Recycling Rate

Estimating your building's recycling rate helps you understand how much waste you are diverting from landfills. It's easy to estimate your recycling rate if your trash containers are the same size as your recyclable containers. For example, a building uses two dumpsters for trash and one dumpster for recycling. If both the trash and recycling containers are full at the time of pickup, then $1/3$ (one recyclable container of three containers total) or about 33% of the total waste generated by volume is recycled! If your containers are different sizes or your dumpsters are not full every week, try estimating your waste generation and recycling rate using the following worksheet. Remember, this is just an estimate, not a precise calculation.

Notes:



Waste Generation and Recyclable Collection Worksheet

Calculate Waste Generation and Recycling Rates	Trash	Recyclables	*Example:	
			Trash 4 yd ³	Recyclables 4 yd ³
1. Size of container Dumpsters are usually sized in cubic yards (typically 1 to 2 yd ³ each). Toters are usually sized in gallons (typically 90/96 gallons or about 0.5 yd ³ each)	1. _____ yd ³	1. _____ yd ³		
2. Number of Containers	2. _____	2. _____	4 dumpsters	2 dumpsters
3. Collection Frequency How many days per week is your trash collected?	3. _____ days/wk	3. _____ days/wk	Once per week	Once per week
4. Total Weekly Trash/Recycling Capacity If your containers are always full at pickup; this is also your Actual Waste Generated (Line 8).	Line (1 x 2 x 3) = 4. _____ yd ³ /wk	Line (1 x 2 x 3) = 4. _____ yd ³ /wk	16 yd ³	8 yd ³
5. Weekly Cost for Trash/Recycling Removal Your waste contract will list the total cost, which is typically provided on a monthly basis. If this is the case, divide the monthly cost by four to obtain the average weekly cost.	5. \$ _____ / wk	5. \$ _____ / wk	\$120	\$20
6. Cost per yd³	Line (5/4) = 6. _____ yd ³	Line (5/4) = 6. _____ yd ³	\$7.50/yd ³	\$2.50/yd ³
7. Average Fullness of Container Observe the fullness of each container by percentage before it is picked up. Add the percentages for each container and divide by the number of containers.	7. _____ %	7. _____ %	75% or 0.75	100% or 1
8. Total Trash/Recycling Generated Compare this value to Line 4. If line 4 is significantly greater than Line 8, you may want to contact your hauler to decrease your collection frequency or container size.	Line (4 x 7) = 8. _____ yd ³	Line (4 x 7) = 8. _____ yd ³	(16 x 0.75) = 12	(8 x 1) = 8
9. Recycling Rate You will need totals from line 8 for both trash (8T) and recyclables (8R) for this calculation.	Line (8R/ (8T + 8R)) x 100 = 9. _____ %		(8/(12 + 8)) x 100 = 40%	

*Note: Where six trash containers were needed before recycling the cost of disposal has been reduced from \$180/wk for trash only to \$140 per week for trash and recycling.