

GOVERNMENT OF THE DISTRICT OF COLUMBIA  
DEPARTMENT OF GENERAL SERVICES



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## School Cafeteria Waste Audit Method – Background and Instructions

Thank you for contributing to the roll out of organics recycling at your school! The data you collect will be used to inform the DGS recycling program at your school and across all DCPS schools.

The objectives of the waste audit are:

- 1) Generate ideas and recommendations from students on how to roll out the program
- 2) Estimate potential diversion rate and determine the level of pick up services needed

According to the U.S. Environmental Protection Agency, food waste accounts for 21% of waste going into municipal landfills or incinerators.<sup>1</sup> This takes up space and contributes to greenhouse gas emissions in the form of methane. It's also a waste of resources!

Food waste that is recovered and “recycled” by composting turns into a valuable product – compost, which can be used to improve soil health and grow more food. More importantly, if food waste can be avoided in the first place, more people can be fed using fewer resources. Worldwide, agricultural production is a major source of greenhouse gas emissions and a driver of tropical deforestation, contributing to global challenges such as climate change and biodiversity loss as well as local problems such as water pollution.<sup>2</sup>

The Healthy Schools Act of 2010 sets a target diversion rate for all DCPS schools of 45% by 2015. All municipal buildings and commercial facilities including schools have been required to recycle in the DC Municipal Regulations since 1989. A **recycling diversion rate** is usually calculated as the percentage of the total solid waste generated that is recycled or composted rather than sent to a landfill or incinerator.<sup>3</sup>

As the owner of the municipal buildings, the Department of General Services (DGS) is responsible providing recycling services, supplies, and support to DCPS. As detailed on the DGS website,<sup>4</sup> DGS provides every school with a dumpster or compactor for paper and cardboard only, and two 96-gallon containers (“toters”) for recyclable plastics, glass, and metals. DGS also provides a set of recycling supplies that DCPS schools can order at no cost.



Toter for organics pick up

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<sup>1</sup> <http://www.epa.gov/waste/consERVE/foodwaste/>

<sup>2</sup> <http://www.wri.org/our-work/project/world-resources-report/world-resources-report-2013-2014-creating-sustainable-food>

<sup>3</sup> Although it is not technically defined in the Healthy Schools Act how to calculate the “diversion rate.”

<sup>4</sup> <http://dgs.dc.gov/page/healthy-schools>

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In 2013-2014, DGS initiated a pilot compost program in 11 DCPS schools and composted a total of 22 tons of waste. In 2014-2015 the program is expanding to all DCPS schools. The compost is currently taken to the closest major industrial composting facility in Wilmington, Delaware. More local options will be preferred when they are available.

DGS also provides supplies and signage to set up in their kitchens and cafeteria to capture food and compostable paper.



A major challenge for the composting programs is **contamination**. Contamination occurs when materials that are not compostable – such as glass or plastics - end up in the compost bins. Although the composting facility has the ability to remove some contaminants during the sorting process, containers that have too much contamination cannot be sufficiently sorted and therefore are emptied as trash and sent to a landfill. Since the trucks that pick up the containers are on a commercial route, contamination from one school can actually cause a whole truck load to become trash rather than compost.

Therefore, it is very important for a school composting program that everyone in the school participates correctly!

In order to set up a composting program at your school, DGS needs to not only provide the basic services and materials but to identify leadership within the school who will take on the challenge of setting up the cafeteria, communicating with students and staff, and monitoring bins.

This waste audit is a first step in gathering the data and feedback needed to make the program succeed.

**COMMUNITY SERVICE HOURS:** If you are interested in taking a leading role or volunteering with this program for community service hours, please contact Beth Gingold, DGS Schools Conservation Coordinator, [beth.gingold@dc.gov](mailto:beth.gingold@dc.gov).

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## Waste Audit Instructions

### Step 1: Preparation

Before you start, make sure you listen to the instructions and safety precautions, and gather the materials for your team which will include:

- DGS Cafeteria Waste Audit Data Sheet and pencil/pen
- Gloves and aprons
- A tarp with signs (compost, recycle, trash)
- A large collection bin with measurement marks for estimating volume
- A bucket for liquids
- Several bags of unsorted cafeteria waste
- Electronic fishing scale
- Extra clear plastic bags

**Safety precautions:** Wear apron and gloves. If you notice any hazardous waste or sharp materials do not touch it and notify an adult immediately.



**Setting up:** Make sure that your collection bin for estimating volume has marks at 25%, 50%, 75%, and 100% full. Make sure that you measure and record the weight of the empty bucket on your data sheet.

Lay out a blue tarp with signs for compost, recycle, and trash to indicate where to put each type of waste. Place the bucket next to the recycle sign, since beverage containers (including milk cartons) will go in the recycle pile.



### Step 2: Data Collection – Unsorted Waste

Record all data on the DGS Cafeteria Waste Audit Data Sheet.

Begin data collection by recording the total number of bags you will be sorting. For each bag, use the electronic fishing scale to find the weight in pounds. You will need to tie the bag tightly to hang it from the hook. Make sure the units are set in pounds, and that you wait until the red light shows before recording the weight.



Place the bag in the collection bin and use the markings on the bin to estimate how full it is in liters. This will be a rough estimate of volume of waste, so don't worry about measuring exactly. Record the total weight and total estimated volume for all of the bags on the data sheet.

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### Step 3: Sorting

Carefully open each bag and begin to pull out any materials (except for food waste) to place in the appropriate piles (compost, recycle, or landfill) using guidance from the signs provided.

If you have any questions, ask DGS staff!

Try to tap as much food waste as possible into the bag as you pull items out. Empty any liquids that are in containers into the bucket before placing these items in the appropriate piles.

*Make sure that if you find any hazardous waste or unsafe objects to not touch them and notify an adult immediately.*

**At the end of sorting you should have a bag full of food waste only, a pile of compostable paper products, a pile of recyclables, a pile of landfill waste, and a bucket with the excess liquids.**

Before you begin your data collection, take a photo of your sorted piles and take note of their contents. Fill out the comments section on the data collection sheet. **Which items could have avoided becoming “waste”?**

### Step 4: Data Collection – Sorted Waste

Collect each pile into one or more clear plastic bags. Each plastic bag will contain one of each of the following solid waste types: Compost – food, Compost – paper, Recyclable, Landfill.

Repeat the data collection method used in Step 2 to record the weight and volume estimates for each bag, and record the totals for each type of waste in the table provided.

Weigh and record the volume of the full bucket of liquid. Subtract the weight of the empty bucket from the weight of the full bucket (recorded at the beginning) to find the weight of the liquids.

Once you have collected all your data please make sure you clean up – return your materials and put your waste in the right bins for recycling or composting!

### Step 5: Results and Recommendations

Compile data from all teams and discuss results and recommendations with your students. What ideas do they have for reducing food waste? Share your data with DGS. Your answers will help inform the design of the program for your school and all of DCPS.