



# Guide to Outdoor Composting

## 1.0 PURPOSE

This guideline is intended to provide the framework to encourage greater waste diversion and collection of wet waste (organics) at UGDSB schools. This initiative will encourage schools to advance their overall waste diversion objectives and provide source material to commence on-site composting programs.

## 2.0 BACKGROUND

UGDSB has experienced significant progress in separation and diversion of dry waste materials such as cardboard and plastics, however significant improvement in our overall diversion rate can be achieved by increasing our attention on the area of wet waste. The collection of organic materials could include cafeteria and other food waste as well as collection of grass clippings and leaves from the school yards.

Ontario school boards are regulated by Ministry of Environment Regulation 102/94 "Waste Audits and Waste Reduction Work Plans" and Regulation 103/94 "Industrial, Commercial, and Institutional Source Separation Programs" which encourage waste generators to develop a multiple waste stream and comprehensive approach to reach the Provincial diversion objective.

## 3.0 AVAILABILITY

- 3.1 On-site composting is available to all schools and must be maintained according to these guidelines. A complete composting program should be developed in two phases:
- 3.2 The **first phase** requires an in-school collection program, where food waste is routinely collected and transferred to a central bin designated for organics.
- 3.3 The **second phase** requires installation of outdoor composting bins and a strategy for the school to manage the collection and processing of the compost.
- 3.4 Submission of the "*Request for Approval: Alterations, Improvements to Board Buildings/Sites*" form is required in the early planning stages, prior to installation of an outdoor compost bin. (See 5.0 "Getting Started" below for details.)
- 3.5 For schools opting for curbside collection, refer to the "*Guide to Curbside Organics Collection*" for details.

## 4.0 CONSIDERATIONS FOR AN ON-SITE COMPOSTING PROGRAM

- 4.0 It should be emphasized that wet-waste collection and composting cannot operate independently as proper composting requires balancing of various streams of material (and surplus) to work successfully. At the school level, this would involve collection and management of food waste, grass clippings, leaves, wood/sawdust waste and possibly other inputs.
- 4.1 School initiatives for composting should be developed through an environmental committee approach to ensure ownership and continuity of the program. This requires a supportive principal, teachers, head caretaker, as well as a lead teacher and dedicated team of students each year to maintain a sustainable system.

- 4.2 Composting programs are expected to run without tasks being done by custodial staff, unless custodians volunteer to assist. It remains important to get 'buy-in' from custodians and teaching staff; have clearly defined roles and responsibilities, to ensure questions or concerns are properly dealt with.
- 4.3 Outline and assign tasks: Lead teacher and student team are to develop a procedure agreed to by the key players including principal and head caretaker; the procedure will outline who is responsible for each component of the program, including:
- Emptying and washing classroom collection containers (daily or weekly, as required) and at what time(s)
  - Maintaining the outside composter
  - Summer maintenance of the outside composter
  - Distribution of the compost material
  - Promotion and education of students and staff regarding acceptable materials for collection
  - Respond to problems that may arise such as odours, fruit flies, bees or vermin

## 5.0 GETTING STARTED

You may wish to begin by running a small-scale pilot program in the cafeteria and kitchen areas (for secondary schools), or a limited number of classrooms (for elementary schools), to iron out the wrinkles before going school-wide. This allows volumes generated and bin sizes to be carefully phased in, and responsibilities of the various aspects to be determined on site.

- 5.0 Contact Operations' Environmental Co-ordinator (519 822-4420 ext. 849) if you need further support when starting a composting program and, prior to program expansion, for program review and approval.
- 5.1 Complete the "*Request for Approval: Alterations, Improvements, to Board Buildings/Sites*" form and submit to the Operations Department for approval of location (only) of outdoor composter where applicable. This request should include a written plan for management of the process. (Form is available on First Class - Board Forms.)
- 5.2 Obtain containers or buckets to use as classroom collection containers. The local municipal or regional office may have approved, lidded pails. Also, the Operations Dept. can purchase organics collection wheeled carts from commercial sources for bulk collection.
- 5.3 Local assistance: Elementary schools may be able to negotiate assistance with the nearest Secondary Schools to secure input material (such as wood waste) to assist in balancing their source materials and consume as much organics as possible. Also, assistance could be requested in the construction of simple composter units. These aspects strictly operate at the school level as Operations is not able to directly support the on-site labour aspects.
- 5.4 Advertise: make or print colourful posters to advertise the program, make announcements that the program is coming or expanding.

## 6.0 THE FUNDAMENTALS

- 6.0 Acceptable products for compost programs: All food waste and food stained paper, including fruit and vegetable scraps, tea bags, coffee grounds (with filter), meat, bones and dairy. Grass clippings, leaves and sawdust to be added as layering material.
- 6.1 Location of composter: The composter should be located somewhere convenient for use and near a water source, but placed out of the way enough that odours or insects won't disturb people.
- 6.2 Summer maintenance of the outdoor composter: The outdoor composter can be stirred often or not. The more it is stirred, the more quickly it will decompose. If new items are not being added to the heap, it will likely manage adequately with some neglect. Never leave food or odorous materials exposed to the air. Keep high carbon materials on the top such as dried leaves, mulch, or straw.
- 6.3 Ongoing maintenance of the outdoor composter: Ensure a good mix of materials going in and know how often to turn it. If not properly maintained, odours and vermin could become a problem, which could require termination of the program.
- 6.4 The nutrients are provided by the organic materials added to the composter. Decomposers require a combination of nutrients, so be sure to add a variety of materials and not too much of one thing.
- 6.5 Use a safe mixing tool that is slender and pointy (not a shovel). Pitchforks, if used, are not to be maintained on-site or used by students.
- 6.6 Preventing odours and vermin: This is important to success. It is one of the most common concerns and problems with composters, yet easy to avoid with proper management. The key is: never leave food waste exposed. It is that simple. It only takes a brief period of neglect to attract flies and get them established, so ongoing diligence is required.
- 6.7 **It is essential to cover the food in the composter to decrease odour, fruit flies and bees. Keep a layering material on hand beside the composter with which to cover the food layers.** Layering material may include: dried leaves, other dried plant material, a bit of soil, dried straw, wood shavings or finished compost. Have a small tool handy (e.g. – shovel) to scoop in the material. **Toss in the food waste and cover with layering material.**
- 6.8 Microorganisms, insects, and other tiny creatures (or "decomposers"), set up a mini ecosystem inside a fully functional composter. To survive, they need water, oxygen and nutrients.
- 6.9 The mixing of the materials provides the oxygen. This is why the more frequently it is stirred, the quicker it will compost.
- 6.10 Water addition may be necessary. The heap should be as moist as a wet sponge, but not sloppy wet. If dry dusty pockets are present, wet them to avoid dormancy of the decomposers which would result in little activity. Large spray bottles may be more effective than a hose to avoid overwatering.

## 7.0 PROGRAM OPERATION AND FOLLOW-UP

- 7.1 Obtain feedback from participants: conduct a brief survey of teaching and custodial staff as the pilot and full program is running; if staff describe problems, learn how to correct these and share this information with participants.
- 7.2 Celebrate and provide lots of feedback to students and staff. Once it is going, be sure to advertise the program and spread the word about its success! Track how much food your program is diverting from the landfill; quantify it in a way that makes it tangible for participants (e.g. – by weight, number of buckets, by volume; by week/month/year) and share this with the school. You may also like to take photos and post them on a bulletin board, make announcements, give prizes to top classes, reward the student Eco team, have a spirit assembly, etc.
- 7.3 Using the finished product (on-site composting): The material in a composter shrinks by volume significantly if it is done well - from 50% to 80% depending on what goes in. Compost is a soil amendment (fertilizer). Spread the finished compost in gardens. Finished compost can also be spread on grass or ground cover in a thickness not more than 1 centimetre; this is called top dressing and it will add nutrients to the soil and help retain moisture.
- 7.4 If you are experiencing any difficulty in the running or sustainability of the outdoor composting program, then please contact Operations' Environmental Co-ordinator to discuss the continuation of the program.

## 8.0 FOR MORE INFORMATION

- UGDSB *Guide to Curbside Organics Collection*
- For composting resources, go to the Composting Council of Canada website: <http://www.compost.org>
- Guelph Organic Waste Processing Facility: <http://guelph.ca/living/garbage-and-recycling/owpf/>
- Waste Diversion Ontario <http://www.wdo.ca/>
- Also check your local municipality's website for tips and information on how to get a composter:
  - **Dufferin:** <http://www.dufferincounty.on.ca>
  - **Wellington:** <http://www.county.wellington.on.ca>
  - **Guelph:** <http://guelph.ca/living>