Indoor/Outdoor Waste Bin Standards for Dalhousie University

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Table of Contents

Overall Guidelines	2
1. Offices	4
2. Residence Rooms/Suites	5
3. Hallways	6
4. Lunchrooms/Student Lounges/Small Kitchenettes (in Offices or Residences)	7
5. Meeting Rooms	8
6. Classrooms	9
7. Auditoriums	. 10
8. Residence Recycling Rooms	. 11
9. Commercial Kitchens (Back of House Kitchen Area)	. 13
10. Dining Rooms/Residence Dining Area/Halls (Front of House Dining Areas)	. 13
11. Washrooms	. 14
12. Laboratories	. 15
13. Outdoor Bins	. 16
Appendix A: 8.5" x 11" Dalhousie Guide to Waste Management On-Campus (Double-Sided)	. 17
Appendix B: 11" x 17" Dalhousie Guide to Waste Management On-Campus One-Sided Poster	. 17
Appendix C: Pack it Up, Pack it Out Sign	. 18
Appendix D: Organics Sign	. 18
Appendix E: Washroom Paper Towel Bin Sticker	. 19
Appendix F: Washroom Paper Towel Bin Signage	. 19
Appendix G: Appendage to Dalhousie Waste Guide: Empty Hazardous Material Container Recycling	
Procedures	. 20

Purpose: This document provides non-hazardous solid waste bin standards for spaces at Dalhousie University. These standards have been developed to help Dalhousie achieve its goal of diverting 70% of campus solid waste from the landfill by 2020. The implementation of these standards will also result in the removal of unnecessary solitary garbage bins present on campus. In addition to providing general guidelines for waste bin and labelling standards, unique standards have been provided to meet the needs of specific types of spaces located on campus (e.g. offices and auditoriums).

Overall Guidelines

1. Signage: Each bin should display three types of signage

- a. Each bin must display the stream name near the opening of the bin (Figure 1). These stickers are provided by Halifax and Colchester waste educators.
- b. A descriptive label listing the acceptable materials to discard in each stream must be displayed on the front of the bin (Figure 1). These stickers are provided by Halifax and Colchester County waste educators.
- c. Bins must be accompanied by eye-level signage indicating the acceptable types of waste materials to discard in each stream. The signage should be placed above the bin, providing the user with information about sorting waste materials. The signage fits inside the flip-up bin attachment (if available); alternatively, the signage should be fastened to the wall at all four corners with industrial Velcro (Figure 1). The signs are available from Dalhousie custodial supervisors.

2. Colour Coding

- a. Signage is colour coded to visually represent the waste stream: Paper (gray); Recyclables (blue); Organics (green); Garbage (black). In certain locations, like residence recycling rooms, a separate stream may be provided for Refundables (blue, but a different shade from Recyclables).
- b. When possible, bins should have coloured tops. The following colours are recommended:

Paper – Gray

Recyclables - Blue

Organics – Green

Garbage – Black

Refundables – Blue

3. Openings and Order

a. When possible, each bin should have specific openings for different waste streams. The following are recommended (Figure 1):

Paper – Slit openings

Recyclables – Round or square opening. Bin top should be large enough or swing open to accommodate materials like plastics film, milk cartons, as well as cans and bottles.

Organics – Round or square openings. Bin top should be large enough or swing open to accommodate materials without causing extra cleaning.

Garbage – Flap or square openings

Refundables - Round opening

- b. Each four-bin system should be in the order of PROG. P (Paper); R (Recyclables); O (Organics); G (Garbage) (Figure 1). If a Refundables bin is provided, it should be placed between Recyclables and Organics.
- c. It is recommended that the 11" x 17" Dalhousie Guide to Waste Management On-Campus One-Sided Poster be printed (from the link provided) and presented next to the eye-level stream signage; however, displaying the guide is optional.



^{**} Print the 11"x 17" Dalhousie Guide to Waste Management On-Campus One-Sided Poster from the link provided above.

Figure 1: Design guidelines to be implemented across Dalhousie campuses

Summary:

- Bin style and labelling should meet all guidelines listed above.
- Specific bin strategies should be used for the spaces listed in this document.
- The use of solitary garbage bins should be minimized.
- Bins are not provided for classrooms or meeting rooms with limited catering; instead, the *Pack it Up, Pack it Out* sign should be displayed.
- The same type of bins and configurations should be purchased for all new spaces to ensure consistency. Retrofit existing bins as much as possible to meet the standards.
- An 8.5" x 11" Dalhousie Guide to Waste Management On-Campus (Double-Sided) should be provided in each residence and office recycling bin. An 11" x 17" Dalhousie Guide to Waste Management On-Campus One-Sided Poster may be displayed on the wall above waste bins (next to eye-level signage)

1. Offices.

- 1. Remove all single garbage cans.
- 2. Replace garbage cans with a Recyclables bin with a small black side saddle bin for garbage (Figure 2) or add the small black side saddle bin for garbage to an existing recycling bin.
- 3. Bin description:
 - Dimensions for the Recyclables bin are 14.5"L x 11"W x 7"H and 5"L x 8"W x 6.5"H for the side saddle.
 - The standard stamping for the Recyclables bin is the Dalhousie University logo on one side and 'Rethink Waste: Reduce, Reuse, Recycle: www.dal.ca' on the other side.
- 4. An 8.5" x 11" Dalhousie Guide to Waste Management On-Campus (Double-Sided) should be placed inside the bin to inform the office/resident suite occupant of the appropriate use of the bin.
- 5. Once the system is implemented, clear communication regarding the role of the office occupant and custodial staff is necessary. It must be clearly communicated that custodial staff is not responsible for emptying the Recyclables or side saddle garbage bins.
- 6. The user is responsible for emptying the Recyclables bin and black side saddle contents into the four-bin sorting station in the hallway.
- 7. The user must bring all food waste to the four-bin sorting station in the hallway daily. This is to prevent organic materials from remaining in office spaces for longer than one day.



Figure 2: Bin design standard for offices and residence suites

2. Residence Rooms/Suites

- 1. Keep or add single small garbage bin. No bags shall be provided or used in these bins as it can contaminate the hallway bins.
- 2. Keep or add recycling bins. Dimensions for the Recyclables bin are 14.5"L x 11"W x 7"H
 - The standard stamping for the Recyclables bin is the Dalhousie University logo on one side and 'Rethink Waste: Reduce, Reuse, Recycle: www.dal.ca' on the other side.
 - An 8.5" x 11" Dalhousie Guide to Waste Management On-Campus (Double-Sided) (or modified residence version) should be placed inside the bin, on the back door, or in the room to inform the resident or suite occupant of the appropriate use of the bins.
- 3. For organics, paper based compost bags maybe provided to support the transport of organics to the hallway bins. Residence suites with kitchenette areas should have organics bins.
- 4. Students are responsible for emptying all their waste streams (paper, organics, recyclables, and garbage) into the four-bin sorting station in the hallway. There maybe five streams in residence as refundables are often separated from other recyclables for the deposit. For summer clients, custodians will empty streams at the time of room change over.
- 5. Once the system is implemented, clear communication regarding the role of the resident or suite occupant and custodial staff is necessary.

3. Hallways

- 1. Remove all single garbage bins.
- 2. All hallways must have at least one bin for Paper, Recyclables, Organics and Garbage (PROG) (Figure 3).
- 3. These bins must be placed in PROG order.
- 4. Bin Description:
 - Provide four 23 gallon bins (dimensions: 20"L x 11"W x 30"H) in **low-traffic** areas, or four 32 gallon bins (dimensions: 20.31"L x 15.63"W x 30"H) in **high-traffic** areas unless otherwise instructed by Facilities Management staff.
 - The bins should have flip-up attachments for placing signage at eye-level as shown below or wall signage. Flip-up attachments are recommended in areas where bins will be moved frequently.
- 5. A separate Refundables stream may be provided (and placed between the Recyclables and Organics bins) if students manage its collection and the revenue is contributed to a student society or used for student activities. Otherwise, refundables and other recyclables should be collected together in the Recyclables bin.
- 6. If the current bins cannot be repurposed, the bins should be replaced with new bins, which have all of the recommended features.



Figure 3: Bin design standard for hallways

4. Lunchrooms/Student Lounges/Small Kitchenettes (in Offices or Residences)

- 1. Remove all single garbage bins.
- 2. **No more than** one Garbage bin and **at least one** Paper, Recyclables and Organics bin must be provided within this space (Figure 4).
- 3. Bin description:
 - Provide 16 gallon bins (dimensions: X"L x X"W x X"H) unless otherwise instructed by Facilities Management staff.
- 4. If space is constrained, at least one Organics bin must be provided in this space; however, Paper and Recyclables bins may be placed in the hallway.
- 5. If the hallway already has a four-bin system, Paper and Recyclables bins are not necessary.
- 6. Place organics sticker (Figure 5.) on paper towel dispensers in kitchen and kitchenette areas.



Figure 4: An example of bin design standards for lunchrooms/student lounges/small kitchenettes



Figure 5: Sticker for kitchen Paper Towel dispenser

5. Meeting Rooms

- 1. Remove all single garbage bins.
- 2. For meeting rooms with regular catering, bins for Paper, Recycling, Organics and Garbage maybe provided (Figure 6) or roll in PROG bins can be provided as part of booking/catering request or catering staff will be responsible for source separating materials to the hallway bins.
- 3. Bins must be placed in PROG order.
- 4. Bin description:
 - Provide three 10 gallon bins for Paper, Recyclables and Garbage (dimensions: X"L x X"W x X"H) and one 16 gallon bin for Organics (dimensions: X"L x X"W x X"H).
- 5. For meeting rooms that are **not catered**, all single garbage bins must be removed and the *Pack it Up, Pack it Out* sign must be displayed to direct users to the nearest four-bin sorting station (Figure 7); the hallway four-bin sorting station must be located near the meeting room.



Figure 6: Bin standards for meeting rooms with catering



Figure 7: Sign to display in meeting rooms without catering

6. Classrooms

- 1. Remove all single garbage bins.
- 2. For classrooms with regular catering, bins for Paper, Recycling, Organics and Garbage maybe provided (Figure 7) or roll in PROG bins can be provided as part of booking/catering request or catering staff will be responsible for source separating materials to the hallway bins.
- 3. Bins must be placed in PROG order.
- 4. Bin description:
 - Provide three 10 gallon bins for Paper, Recyclables and Garbage (dimensions: X"L x X"W x X"H) and one 16 gallon bin for Organics (dimensions: X"L x X"W x X"H). For space constrained locations, Garbage and Paper bins can be placed outside the classroom.
- 5. For classrooms that are **not catered**, all single garbage bins must be removed and the *Pack it Up*, *Pack it Out* sign must be displayed to direct users to the nearest four-bin sorting station (Figure 8).
- 6. Depending on waste volume and trends, custodial staff may wish to place a four-bin system inside a classroom that is not catered.



Figure 7: Bin standard for meeting rooms with catering



Figure 8: Sign to display in classrooms without catering

7. Auditoriums

- 1. Remove all single garbage bins.
- 2. Bins for Paper, Recyclables, Organics and Garbage must be provided (Figure 9).
- 3. These bins can be placed together (in PROG order) or separately depending on the space of the location. If placed separately, single garbage bins should be avoided.
- 4. Bin description:
 - Provide four 23 gallon bins (dimensions: 20"L x 11"W x 30"H) unless otherwise instructed by Facilities Management staff.



Figure 9: An example of bin design standard for auditoriums

8. Residence Recycling Rooms

- 1. Remove all single garbage bins.
- 2. Bins for Paper, Recyclables, Organics and Garbage must be provided.
- 3. Bins must be placed in PROG order.
- 4. Bin description:
 - Provide four 32 gallon bins (dimensions: 20.31"L x 15.63"W x 30"H) unless otherwise instructed by Facilities Management staff. For smaller residences 23 gallon may be fine.
 - Bins should have a flip-up attachment for placing signage information at eye-level or wall signage (Figure 10).
- 5. An additional bin for Refundables may be provided (Figure 10).
- 6. Broken glass signage may be placed above a cardboard box to collect broken glass (Figure 11).
- 7. Cardboard can be collected in the recycling room on the floor next to the bins.
- 8. If an Organics bin is provided in a publically available space on the floor as opposed to within the recycling room due to limited space, the approved signage directing the user to this location must be provided (Figure 12).
- 9. Student suites must meet the requirements of the Office/Residence Suites standards (see Design 2 on page 5). For suite style rooms consideration should be made for also providing organics containers (3-7 gallons depending on volume).
- 10. Hallways should meet Hallway standards (see Design 3 on page 6), if space permits.
- 11. Residence kitchenettes and lounge areas must meet Student Lounge/Small Kitchenette standards (see Design 4 on page 7).



Figure 10: Bin design standard for residence recycling room (including an optional Refundables bin)



Figure 11: Signage to be placed above cardboard box to collect broken glass



Figure 12: Organics sign

9. Commercial Kitchens (Back of House Kitchen Area)

- 1. Single garbage bins must be removed.
- 2. Organics bins must be provided at all work stations.
- 3. Recyclables and or Paper bins must be provided at work stations that generate large amounts of food wrap or bread/bun bags and or boxboard.
- 4. Bin description:
 - Food Services provides standardized Organics bins for work stations in the kitchens that they service.
 - Provide 16 gallon Garbage bins (dimensions: X"L x X"W x X"H) to accompany Organics bins as needed.
 - Provide 16 gallon bins (dimensions: X"L x X"W x X"H) for Recyclables at stations that generate large amounts of food wrap or bread/bun bags.
 - A central Recyclables cart must be provided to collect large cans and containers.
- 5. As bins are often moved around within the kitchen area, a descriptive bin sticker and signage must be displayed directly on each bin.

10. Dining Rooms/Residence Dining Area/Halls (Front of House Dining Areas)

- 1. Minimize single garbage bins.
- 2. Bins for Organics and Garbage (if necessary) must be placed in the dining room.
- 3. Bins should be placed near the location where students deposit their plates and utensils.
- 4. Bin description:
 - Provide a 32 gallon bin (dimensions: 20.31"L x 15.63"W x 30"H) for Organics and a 10 gallon bin (dimensions: X"L x X"W x X"H) for Garbage in the location where students scrape their plates.
 - Provide a 10 gallon bin (dimensions: X"L x X"W x X"H) for Garbage at serving stations (this bin will be used primarily to collect non-recyclable peanut butter packets and plastic knives used to spread peanut butter).
 - Bin lids are not required as students must be able to easily scrape their plates into the bins.
- 5. Signage must be provided above each bin and a descriptive sticker must be displayed on the front of each bin.

11. Washrooms

- 1. Halifax does not allow composting of washroom paper towel; therefore, in washrooms located on Halifax campuses, provide a Garbage bin in the public space of the washroom.
- 2. Colchester County allows composting of uncontaminated washroom paper towel; therefore, provide Organics and Garbage bins in washrooms located on the Bible Hill campus.
- 3. Bin description
 - **HALIFAX**: Provide a 32 gallon (dimensions: 20.31"L x 15.63"W x 30"H) Garbage bin unless otherwise instructed by Facilities Management staff.
 - Colchester County: Provide a 32 gallon (dimensions: 20.31"L x 15.63"W x 30"H) Organics bin with the Washroom Paper Towel Bin Sticker (Figure 15) adhered to the front of the bin and the Washroom Paper Towel Bin Signage (Figure 16) displayed at eye-level on the wall above the bin. Provide the Organics bin near paper towel dispensers. Provide a 10 gallon (dimensions: X"L x X"W x X"H) Garbage bin further away from the paper towel dispensers.



Figure 13: Washroom Paper Towel Bin Sticker



Figure 14: Washroom Paper Towel Bin Signage

12. Laboratories

Dalhousie University has specific protocol for the collection of hazardous waste. The appropriate bins must be provided within the lab as required by the Dalhousie Environmental Health and Safety Office. This standard relates to solid waste in the laboratory environment.

- 1. Labs are varied across campus in terms of the size and materials used. If paper, organics, recyclables are generated in the lab than this material should be source separated.
- 2. Bin Description
 - The size and style of the bins used in the laboratory setting is flexible based on space and volume. To reduce the financial burden, re-purposed bins from campus will be provided to labs along with signage and lab specific bin stickers.
- 3. If the material generated in the lab is of a consistent volume, four bins will be provided for paper, organics, recyclables and garbage. Custodians will collect all streams for recycling, composting, and waste disposal. Lab staff can also access small bins considered 'transport bins' if there is more volume of recyclables like glass bottles than regular weekly collection. Once full, each bin is used to transport material to a nearby four-bin hallway set where it should be emptied into the appropriate waste stream for collection by custodial staff. For glass bottles, gently place bottle in the bag from the transfer bin. There maybe a large volume of paper towel used to dry hands with clean water. If this is the case, the organics bin may be up-sized to handle this volume.
- 4. Lab-specific bin signage should be adhered to the front of the bin to identify each stream. The signage provides details regarding the types of materials that can be placed in each stream and specifically addresses the types of waste generated in the lab setting.
- 5. The 11" x 17" Dalhousie Guide to Waste Management On-Campus One-Sided Poster and Empty Hazardous Material Container Recycling Procedures should be displayed at eye-level in the lab to educate lab users on recycling processes for each stream.



Figure 15: Example of bins in the laboratory

13. Outdoor Bins

- 1. Remove all single garbage bins, unless justification for an exception is made. Consider the need for extra PROG sets based on volume.
- 2. All outdoor bin sets should have at least one bin for Paper, Recyclables, Organics and Garbage (PROG). If there is no space for four bins locate the fourth bin as close as possible.
- 3. These bins must be placed in the PROG order.
- 4. Each bin should have if possible:
 - a sticker displaying the name of the Stream Paper, Recyclables, Organics and Garbage on the top part of the bin (figure 16) and:
 - a detailed sticker of what materials go on the middle part of the bin (figure 17). These stickers are provided by the municipality –Halifax and Colchester (AC campus).

Some bins have advertising on them and there may not be space for a detailed sticker or space for a top sticker. Bins must have at least a top set of correct stickers or a bottom set. The preferred standard would be both sets of stickers. Consideration should be made to upgrading bins sets in order to meet these standards.

Figure 16. Example of stickers and stickers names that should be used.

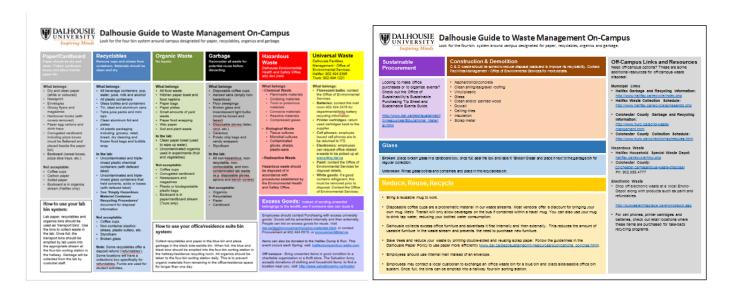


Figure 17. Detailed middle bin stickers.

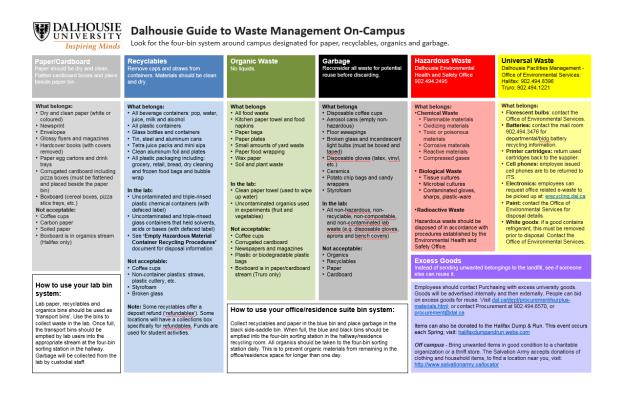


Appendix A: 8.5" x 11" Dalhousie Guide to Waste Management On-Campus (Double-Sided)

Available at: http://www.dal.ca/dept/sustainability/resources/Reports and Policies.html



Appendix B: 11" x 17" Dalhousie Guide to Waste Management On-Campus One-Sided Poster



Available at: http://www.dal.ca/dept/sustainability/resources/Reports and Policies.html

Appendix C: Pack it Up, Pack it Out Sign



Appendix D: Organics Sign



Appendix E: Washroom Paper Towel Bin Sticker



Appendix F: Washroom Paper Towel Bin Signage



Appendix G: Appendage to Dalhousie Waste Guide: Empty Hazardous Material Container Recycling **Procedures**

EMPTY HAZARDOUS MATERIAL CONTAINER RECYCLING PROCEDURES

Most plastic containers and glass containers (that held solvents, acids or bases) are recyclable. It is very important to appropriately dispose of empty hazardous material containers to avoid concerns as to whether there are still any hazards present. These containers must be empty and dry, with no chemical residue. If the rinse (water or other suitable solvent) used to clean a container is hazardous, it must be collected as hazardous waste and disposed of accordingly.

NOTE: If residue remains in the container after triple-rinsing (by means of rinsing with a suitable solvent, inverting, shaking and/or scraping) and the residue is hazardous, it must be disposed of as hazardous waste. It cannot be recycled. Bear in mind that these containers will ultimately be hand sorted by recycling employees.

PLASTIC CHEMICAL CONTAINERS

Triple-rinse and recycle all uncontaminated plastic chemical containers (with defaced labels)

- Remove, clean and discard lid.
- Triple-rinse container with water, or suitable solvent.
- · If rinse is hazardous, it must be collected as hazardous waste and discarded
- It in the is necessary to the control of the c
- label off) and write 'Rinsed Bottle' on it.
 Place clean and dry plastic in recyclables bin.

Not acceptable:

Hard plastic (e.g. lids or trays)

GLASS CHEMICAL CONTAINERS

Triple-rinse and recycle uncontaminated glass chemical containers that held solvents, acids or bases (with defaced labels)

- Remove, clean and discard lid.
 Iriple-rinse container with a suitable solvent.
 If rinse is hazardous, it must be collected as hazardous waste and discarded accordingly.
 Deface the label (use a pen to mark an 'X' through the original contents, or rip the label off) and write 'Rinsed Bottle' on it.

 Pleas clean and dry class container in recyclables bin.

Not acceptable:

- Lab glassware (e.g. beakers, test tubes)
 Broken glass

Broken Glass:

Place all uncontaminated broken glass in a sturdy, puncture-resistant container (e.g. cardboard box). Once full, seal the container and label it 'Broken Glass' and place for disposal along with normal building garbage.

Contact the Dalhousie Environmental Services for Recycling and Disposal Options. Contact the Dalhousie Environmental Health and Safety Office for information on hazardous waste.