Waste and Recycling Bin Standardization

University of Michigan

General Guidelines

Amended July 25, 2022

Purpose:

This document provides general guidelines to implement and maintain a building waste collection & separation program per the standard of the University of Michigan. These guidelines support the University's sustainability goal of reducing the amount of waste sent to landfills by 40% from FY 2006 levels by FY 2025.

Overview:

- Provide consistent bins, lids, signage, and color for each waste stream
- Create a centrally located paired waste system
- Strategically place bins to streamline infrastructure and service

Obtaining Bins

In order to obtain bins for your space, please contact the Facilities Service Center at 647-2059 with all requests. Please include the number of bins, style, and description of where the bins will be placed. Due to Fire Safety concerns, all requests must be vetted and may be denied if the proposed locations do not meet the standards described in this document.

Costs

General Fund: No cost for standard bins or delivery if placed according to these guidelines. Bin styles or placement outside of established standards may be subject to customer pay. Large requests (10+ sets) may require advanced notice, as bins are typically purchased in bulk on an annual basis based on anticipated needs.

Auxiliary: Customer pays for bins and delivery. Facilities Services Center can provide cost estimates.

Bin Guidelines:

Waste Streams

All waste bins at the University are designated for one of the following purposes:

- Landfill: for items not acceptable for recycling, composting or other handling.
- Recycling: for items accepted by the appropriate recycling facility.
    - “Recycling mixed” shall be used on campus.
    - “Recycling mixed - non-confidential paper” shall be used in Michigan Medicine spaces

- Compost: for items accepted by the appropriate composting facility.

Colors

- Landfill bins shall feature a black lid, with labels and signs also utilizing a black background.
- Recycling bins shall feature a blue lid, with labels and signs also utilizing a blue background.
- Compost bins shall feature a brown lid, with labels and signs also utilizing a brown background.

Placement

- All landfill bins should be paired with a recycle and/or compost bin.
- All paired/grouped bins should be attached to one another, where possible.
- Recycle bins can stand alone in areas that produce primarily recycling (e.g. copy rooms, near printers, etc.).

Openings: See Designer and Basic Bin Standards

Signage

1. Eye-level signage shall be attached to every bin with a corresponding stream (See Figure A - Recycling, Landfill, Compost signs).
2. Signs are 8.5” X11” decals that shall be updated as necessary as the acceptability of items into various streams change.
3. When it is not possible to attach the sign directly to the bin, the sign should be located on the wall at eye level above the bin.

Figure A -Recycling, Landfill, Compost Signs



Labeling

1. Existing bins shall have new standard labeling applied over the existing labeling. Special sizes are to be ordered as necessary.
2. New and existing basic bins shall have labeling on the lids (See Figure B- Labels).

Figure B - Labels



Bin Standards

Designer Standard

1. Bins
    a. Spectrum Cube by Busch Systems
    b. http://www.buschsystems.com/recycling-waste-bin-products/spectrum-series/ (Figure C).
        i. Exterior material: 18 gauge steel, powder-coated
        ii. Rigid plastic liners
        iii. Finish color: Grey
        iv. Capacity: 24 Gallons
        v. Dimensions: 15.75” X 15.75” X 30.375”
        vi. Weight: 32.35 lbs
        vii. For Landfill:
            1. Item # 101727 Spectrum Body Cube, 24 Gallon, Grey
            2. Item # 101728 Spectrum Lid cube, full opening option, Black
        viii. For Recycling:
            1. Item # 101727 Spectrum Body Cube, 24 Gallon, Grey
            2. Item # 101729 Spectrum Lid cube, Mixed opening, Blue
        ix. For Compost:
            1. Item # 101727 Spectrum Body Cube, 24 Gallon, Grey
            2. Item # 101728 Spectrum Lid cube, full opening option, Brown
2. Signs
    a. Item #15261 Spectrum Cube Sign Frame V2 - Silver 15” X 8.5”
    b. Retrofitted metal bins will use standard sign mounted on an acrylic sign holder with magnets that will adhere to the back of the Spectrum bin
    c. Signs shall be provided by the Office of Campus Sustainability. Note that large orders may be delayed due to required order lead times.

Figure C - Spectrum bins with magnetic signs



Basic Standard

1. Bins
    a. Waste Watcher interior bins by Busch Systems (Figure D).
        i. Capacity: 23 gallons
        ii. Material: High-density polyethylene
        iii. Finish color: neutral
        iv. Bins will be secured to one another and flexible in the configuration and number of bins.
        v. Size
            1. Single bin, with attached sign and lid: 42” high x 11.5” wide x 21” deep (height to top of bin = 30”)
            2. Joined pair of bins with attached signs and lids: 42” high x 23” wide x 21” deep (height to top of bins = 30”)
        vi. For Landfill:
            1. Item # 102752 Waste Watcher DRILLED FOR THE OLD CONNECTORS - Blank pre-drilled on 2 sides and 1 end, executive grey
            2. Item # 103796 LID FOR WASTE WATCHER - RECTANGLE OPENING, BLACK
        vii. For Recycling:
            1. Item # 102752 Waste Watcher DRILLED FOR THE OLD CONNECTORS - Blank pre-drilled on 2 sides and 1 end, executive grey
            2. Item # 103784 LID FOR WASTE WATCHER - SLOT W/CIRCLE (MIXED), ROYAL BLUE
        viii. For Compost:
            1. Item # 102752 Waste Watcher DRILLED FOR THE OLD CONNECTORS - Blank pre-drilled on 2 sides and 1 end, executive grey
            2. Lids are custom-ordered, minimum 200 pieces. Item #103796 lid for Waste Watcher - rectangle opening, brown.
        ix. Connector:
            1. Item # 103422 CONNECTOR KIT FOR WASTE WATCHER SERIES W/HARDWARE, EXECUTIVE GREY



Figure D - Waste Watcher bins with lids and attached signs (right)

2. Signs
    a. For Landfill:
        i. Item # 199974 WW Sign Frame - black
        ii. Item # 103805 Clip-in Frame for Waste Watcher, black. (replacement signs for bins placed before FY2027)
        iii. Printed 8.5” x 11” Landfill sign (available on recycle.umich.edu)
    b. For Recycle:
        i. Item # 199973 WW Sign Frame - Royal Blue
        ii. Item # 103803 Clip-in Frame for Waste Watcher, royal blue (replacement signs for bins placed before FY2027)
        iii. Printed 8.5” x 11” Mixed Recycling sign (available on recycle.umich.edu)
    c. For Compost:
        i. Item #201673 - WW Sign Frame - Brown

ii. Item # 103805 Waste Watcher Clip-In Frame, brown (replacement signs for bins placed before FY2027)
iii. Printed 8.5” x 11” Compost sign (available on recycle.umich.edu)

3. Labels
    a. Located on lid

XL Bins (for placement in areas with significant waste accumulation)

1. Bins
    a. Waste Watcher interior bins by Busch Systems (Figure D).
    b. Capacity: 32 gallons
    c. Material: High-density polyethylene
    d. Finish color: neutral
    e. Bins shall be secured to one another and flexible in the configuration and number of bins.
    f. Size:
        i. Single bin, with attached sign and lid: 32” high x 15.5” wide x 21” deep (bin height = 30”)
        ii. Joined pair of bins, with attached signs and lids: 32” high x 31” wide x 21” deep (bin height = 30”)
    g. For Landfill:
        i. Item # 103861 XL Waste Watcher DRILLED FOR THE OLD CONNECTORS - Blank pre-drilled on 2 sides and 1 end, executive grey
        ii. Item # 103893 LID FOR WASTE WATCHER - RECTANGLE OPENING, BLACK
    h. For Recycling:
        i. Item # 103861 XL Waste Watcher DRILLED FOR THE OLD CONNECTORS - Blank pre-drilled on 2 sides and 1 end, executive grey
        ii. Item # 103883 LID FOR WASTE WATCHER - SLOT W/CIRCLE (MIXED), ROYAL BLUE
    i. For Compost:
        i. Item # 103861 Waste Watcher DRILLED FOR THE OLD CONNECTORS - Blank pre-drilled on 2 sides and 1 end, executive grey
        ii. Lids are custom-ordered, minimum 200 pieces.
        Item # 103893 lid for Waste Watcher - rectangle opening, brown.
        Item # WWLOLIFTSOL-24 Waste Watcher Lift Lid - Solid Opening- Brown
    j. Connector:
        i. Item # 103422 CONNECTOR KIT FOR WASTE WATCHER SERIES W/HARDWARE, EXEC. GREY
2. Signs
    a. For Landfill:
        i. Item # 199974 WW Sign Frame - black
        ii. Item # 103805 Clip-in Frame for Waste Watcher, black (replacement signs for bins placed before FY2027)
        iii. Printed 8.5” x 11” Landfill sign (available on recycle.umich.edu)
    b. For Recycle:
        i. Item # 199973 WW Sign Frame - Royal Blue
        ii. Item # 103803 Clip-in Frame for Waste Watcher, royal blue (replacement signs for bins placed before FY2027)
        iii. Printed 8.5” x 11” Mixed Recycling sign (available on recycle.umich.edu)

c. For Compost:
    i. Item #201673 - WW Sign Frame - Brown
    ii. Item # 103805 Clip-in Frame for Waste Watcher, brown(replacement signs for bins placed before FY2027)
    iii. Printed 8.5” x 11” Compost sign (available on recycle.umich.edu)
d. Labels
    i. Located on lid

Existing bins

1. Slim Jims (Rubbermaid)
    a. Paired landfill and recycling. Composting may be added to the pair where applicable.
    b. Lids (Figure E)
        i. Blue - recycle
        ii. Black - landfill
    c. Sign holder shall be attached to either the side or the end of the bin depending on the orientation.

Figure E - New lids for existing Rubbermaid bins



2. Other
    a. Paired landfill and recycling. Composting may be added to the pair where applicable.
    b. If possible, bins shall be connected. When not connected, bins shall be placed next to one another.
    c. Sign holder attached to the bin.
    d. Labeling on bin will be placed over old labeling.

Mobile waste stations

1. Mobile system of the landfill, recycle and compost bins designed to facilitate maximum diversion from landfill from catered and special events.
2. Consist of 3 designer standard bins with signage and labeling as well as a cart.
3. Buildings with high use of public events should have access to stations during events.

Placement Guidelines:

All fire codes, standards and guidelines for the University of Michigan must be met. Facility managers should work with the University's Office of Campus Sustainability for guidance on placement.

1. Lobby and entryways
    a. At least 1 set of paired landfill and recycle bins in visible locations near entry.
    b. Primary and highly used entries to buildings should utilize designer bin standard.
    c. At secondary entrances, retrofitted or basic bins should be used.
    d. Compost bins may be placed with Office of Campus Sustainability approval if food waste is commonly generated in the area. There must be monitoring to avoid contamination, and the bin will have a closed lid.
2. Hallways
    a. All landfill bins must be paired with a recycle bin.
    b. Remove single landfill bins.
    c. Location of the hallway will determine the style of bins.
        i. Hallways located near large public event areas should use designer standards.
        ii. All other hallways must use basic standard or retrofitted existing bins.
3. Auditoriums
    a. Paired landfill and recycle bins must be placed outside of auditoriums.
    b. At least one pair should be outside the auditorium.
    c. Signage should be posted in auditoriums educating users to bring recyclables and trash to the hallway and dispose of in the correct bin.
    d. Mobile waste stations or event boxes should be used for catered events, as necessary.
4. Classrooms
    a. Remove all bins from classrooms.
    b. Paired landfill and recycling bins shall be placed in centralized locations in the corridors outside of classrooms.
    c. Signage should be posted educating users to bring recyclables and trash to the hallway and disposed of in the correct bin.
    d. Bins may be placed in the classroom when there is not enough room outside the classroom.
    e. Mobile waste stations or event boxes should be brought in for catered events.
5. Conference/Seminar Rooms/ Graduate Student Suites/Study rooms/Hoteling spaces
    a. Remove all bins from rooms and place standard set in hallways.
    b. Mobile waste stations should be brought in for catered events.
    c. Signage should be posted educating users to bring recyclables and trash to the hallway and dispose of waste in the correct bin.
    d. If the building's facility manager deems the room high-use and requests that bins are placed inside, an exception may be made.
    e. Compost bins may be placed provided the room is used primarily for zero waste events and users have completed a training on what materials can be placed into the bin.
6. Office Suites
    a. At least one pair of basic recycle and landfill bins should be present in each suite.
    b. Signage and labeling guidelines apply.

c. Remove all single landfill bins.

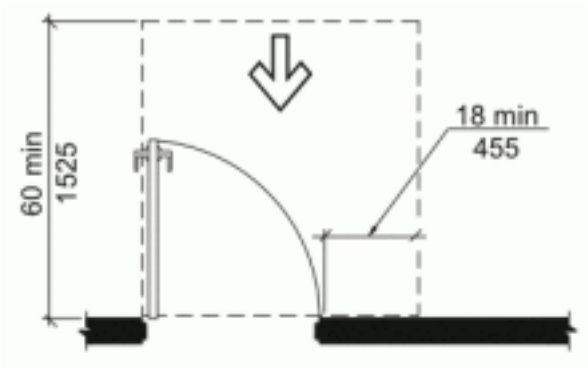
7. Copy and mailrooms
    a. Recycling bins should be placed by all printers and copy machines
    b. Signage and labeling guidelines apply.
8. Break rooms, kitchenettes, lounges
    a. All must have a pair of landfill and recycle bins.
    b. All Compost bins can be placed provided the kitchen stocks only reusable or certified compostable service ware and have completed training on what materials can be placed into the bin.
    c. Non-standard bins are allowed in these areas if space constraints are present (e.g. under counters).
    d. If bins can not fit in the room, bins should be located in a visible location outside the room.
    e. Signage and labeling guidelines apply.
9. Laboratories - Wet
    a. Existing metal landfill bins should be placed at the end of each lab bench and retrofitted with a Laboratory Landfill label. New landfill bins purchased for lab space must meet all OSHA requirements.
    b. No recycle bins shall be in labs except for side saddles at individual desks.
    c. One pair of recycle and landfill bins should be located at the doors to laboratories from hallways if the required space is available. When space is not available, a stand-alone recycle bin is allowed.
10. Computer Labs
    a. Recycle bins should be located near printers with paired bins located in the hallway by the entrance to the lab.
    b. Signage and labeling guidelines apply. Additional recycle bins may be added without landfill bins near printers and copiers.
11. Other Lab or Clinical Spaces
    a. Must meet OSHA requirements.
    b. Existing bins should be retrofitted with standard signage and labeling.
    c. Paired bins may be placed in central areas such as entries and highly utilized spaces.
12. Residential Halls
    a. Dining Halls - only landfill and compost bins. Recycling can be placed with Office of Campus Sustainability approval
    b. Hall waste closets - compost bins may be placed in residence hall waste closets if accompanied by approved signage and education and visual audits are conducted to address contamination.
13. Studio Spaces
    a. Paired bins may be provided on a case-by-case basis, depending on the needs of the space.
14. Restrooms/Locker Rooms
    a. Standard 23-gallon bin labeled “Landfill”
    b. 32-gallon XL bins can be used in heavy-trafficked bathrooms

Guidance for meeting ADA and fire code requirements:

• Bins are to be placed as required to maintain 44" clear width (36" minimum) within public and private corridors

and egress pathways leading to and within rooms of public gathering such as (but not limited to) classrooms, auditoriums, meeting rooms, dining areas, locker rooms, workout spaces, etc.

- Bins are to be placed as required to maintain a 60" diameter turning circle at the end of circulation paths with dead ends, within smaller accessible rooms, between two doors in sequence (like a vestibule), or at corridor change in direction.
- Bins are to be placed as required to maintain an accessible maneuvering space at doors. This area applies to both sides of the door and is bounded by a rectangle that starts at the door hinge side of the framed opening, then extends to 5'-0" in parallel to the face of the door leaf and 18" beyond the latch (door handle) side of the framed opening, perpendicular to the door opening. See figure below



(Clear area defined by dashed line and applies to both sides of door)

- Bins are to be placed as required to maintain an accessible clear space at drinking fountains of 30" wide centered on the drinking fountain and extending to 48" from the face of the wall the fountain is mounted on.
- Bins are to be placed as required to maintain an accessible clear space for wheelchair side access of 30" minimum depth and full length or 48" minimum length (whichever is greater) at equipment or appliances to be accessed by side reach in areas accessed by employees and/or the public, such as (but not limited to) printers, copiers, kitchenette appliances etc. Clear space is to be provided to also maintain access to any side compartments or access points when present.
- If bins are placed within restrooms, in addition to following the clear width and turning circle requirements above, it is recommended for them to be placed below surface-mounted appurtenances such as paper towel dispensers to avoid protrusion.

- Bins should never be placed in locations that impede egress.
- Bins should not be placed within ramps and stairs or their related landings.
- Bins should not be placed beneath signage that includes braille for clear access to braille.