



This program is a partnership of:

# IMPLEMENTING BIN INFRASTRUCTURE STANDARDS

WEDNESDAY NOVEMBER 16TH 2022



# Agenda

0:00 -20:00 University of Michigan case study presentation

20:00 - 60:00 Breakout group discussions

- *Main Room - Q&A for U of Michigan + General discussion*
- *Room 2 - Implementing stage: Administrative process to develop standards*
- *Room 3 - Institutionalizing stage: Enforcing standards*

60:00 - 90:00 Focus Group - Share input on:

- Indoor organics bin
- Liquid drain bin

# Participate

- Share thoughts through chat
- Mute yourself when not talking
- Turn camera on during discussion

## Recycling Infrastructure Guidelines for UBC Buildings

Updated March 17, 2017



city planning

of mind

THE UNIVERSITY OF BRITISH COLUMBIA

# University of Michigan Waste Bin Standardization



Anya Dale  
Manager  
Waste Reduction & Engagement  
[anyadale@umich.edu](mailto:anyadale@umich.edu)

# Adhoc Bins & Signage

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# Gathering Data to Make the Case

**Two-Building Comparative Waste Sort - verified importance of consistent signage.**

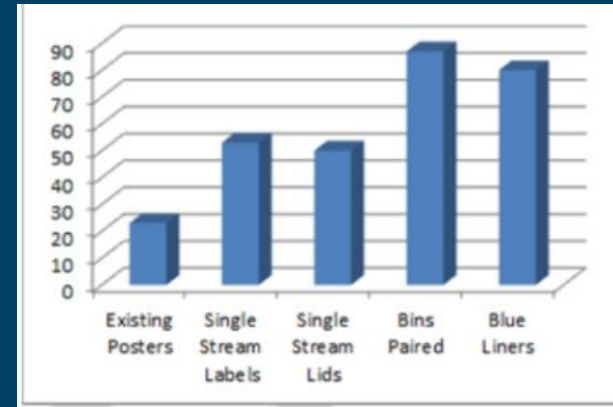
**30-Building Waste Bin Audit and Facility Manager Interviews:**

- Noted prevalence of Single Stream Labels or Lids
- Paired bins get separated
- Posters found in only 20% of buildings
- Also noted about of waste that could be composted IF program were in place

**Feedback on barriers to providing signage:**

1. Aesthetics / visual clutter
2. Location / placement of posters
3. Permanence / durability concerns
4. Would prefer posters to be placed directly onto the bin
5. Lack of knowledge of and/or ease of access to posters
6. Concerns about damaging wall
7. Difficulty of getting approval for postings

**Consistency of Resources  
(% of Buildings)**





# Bin Standardization

## Waste Reduction Committee Findings and Recommendations

- >\$1M for bins in 300+ buildings
- Signage:
  - near eye-level
  - simple messaging
  - avoiding negatives (though could be on supplemental signage)
- Lids:
  - restrictive, color coded
- Placement:
  - paired
  - centralized in priority locations
  - removed from classrooms



# Best Practices - Make it Simple for people to follow the standards and replace/repair bins as needed

Early stakeholder engagement:

Architecture, Engineering & Construction team

Building & custodial staff

Departmental staff

Easy to find signage standards

Easy to find bin and placement standards

Clarity around terminology

## Standard Bin Components

### Basic Bins

The default bin across campus.

#### Bin (1)

Busch Systems Waste Watcher, predrilled for connector.



#### Sign Holder (2)

Plastic piece that attaches to the back of the bin.

#### Plastic Film (3)

Thin plastic film protects each paper sign.

#### Lid (4)

Plastic lid that comes with a sticker label.

#### Connector (5)

The piece that holds two bins together.

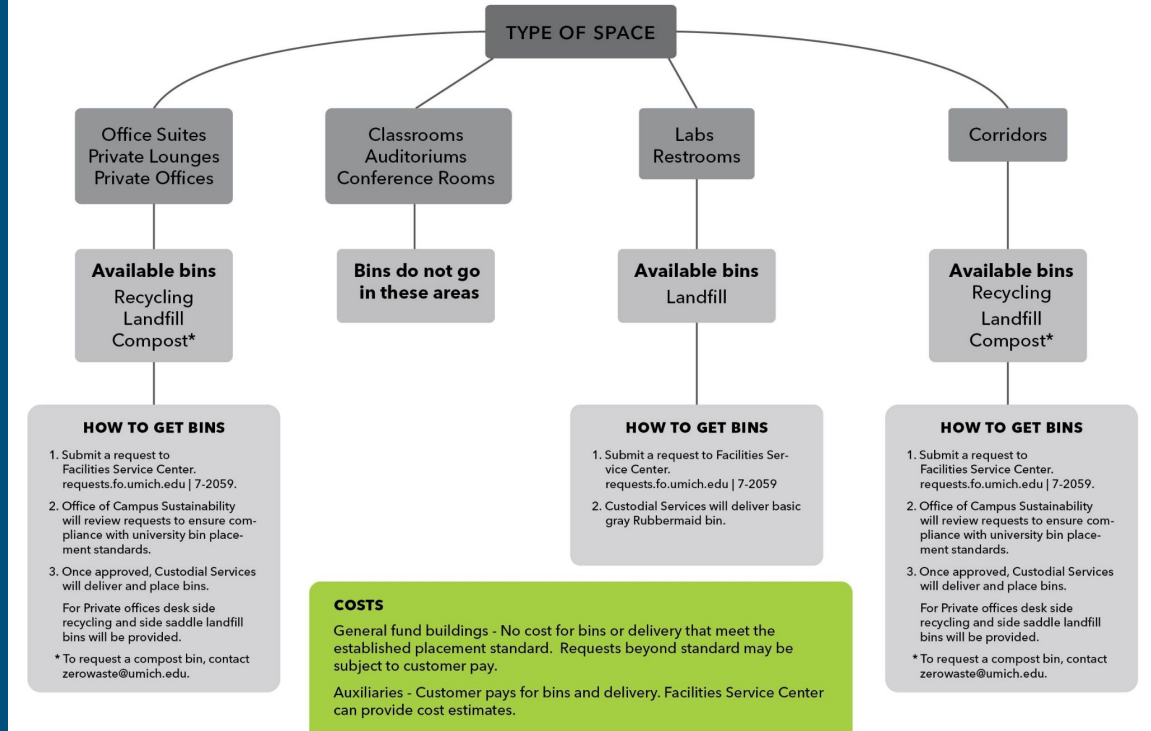




# Making Standardization/Bin Request Info Clear

- Bin placement guide flowchart
- Link to bin standards (which bins, where?)
- Bin Request Form - goes to OCS staff person dedicated to upholding standards

## WHICH BINS GO WHERE? A GUIDE TO BIN PLACEMENT AT U-M



# Location Matters

Balancing accessibility w/ need for control/intentionality

Different spaces = different challenges:

- Visual Audits and Waste Audits show:
- Entryways, atriums and outdoor bins tend to have the highest contamination rates.
- Staff areas such as kitchens, lounges and offices tend to have the least contamination.
- Commonly misplaced items: coffee cups (sometimes compostable, never recyclable!), paper towels (NOT recyclable), and food packaging items.
- In lab spaces nearly  $\frac{1}{3}$  of landfill waste was ice packs.



# The Challenges of Public Areas

- Balancing flexibility w/ the need to maintain standards
- Dealing with challenging spaces / design (ex. built-ins)
- Dealing with especially high traffic/volume areas
- Or areas with little control of materials (ex. Packaged items in cafes, etc.)
- Some locations DO call for different signage (supplemental signage standards)
- AND, signage can only do so much....





# Piloting Tricky Locations



- Adopt a Compost Bin program
- Class project piloting/ evaluating contamination in outdoor bins
- Student Focus Groups
  - balancing accessibility w/ reduced contamination = easy to find bins that are just a little tucked away
  - importance of the “why” message

# Maintaining the Established Standards

- 0.5 FTE to manage bin programs
- Bin needs eval for all new / renovated spaces
- Funneling bin requests through central position for eval/approval
- Easy Access to approved signage
  - printable online
  - packets and quick-references guides for custodial and facilities staff
- Ongoing building / program evaluations
  - Waste sorts and audits....





# Fine-tuning: increasing diversion and reducing contamination

- Annual Waste Sorts:
  - Pulled representative samples alongside custodial team
- Ongoing Visual Bin Audits:
  - Visually inspect 3,000+ waste bins across campus.
  - Office staff & interns
  - Reported on Google Spreadsheet
  - Also gave us opportunities to fix bins & signage
- Results inform pilots (infrastructure or educational material tweeking)





# Utilizing Feedback Mechanisms

- Fine-tuning bin placement and signage based on feedback mechanisms
- More location-specific data = more helpful!
- Engaging boots-on-the ground champions



## Know where to throw


Your effort supports U-M's waste reduction goal:  
Reduce landfill waste by 40% by 2025

Congrats, your recycling looks great!

With a few changes, you'll be on your way to excellent recycling.

### COMMENTS

Date \_\_\_\_\_

 **VIDEO**  
Scan code to learn more about what belongs in each bin on campus!

**M** | FACILITIES & OPERATIONS  
OFFICE OF CAMPUS SUSTAINABILITY  
UNIVERSITY OF MICHIGAN



## Supporting Education & Awareness

- Bin signage standard
- Where to Throw (WTT) website and search tool
- Video + recorded training
- “Live” WTT trainings
- Piloting QR codes on bins
- Engaging people on the ground (Green Teams!) for more immediate feedback

Want to talk more?

Anya Dale

[anyadale@umich.edu](mailto:anyadale@umich.edu)

University of Michigan

# Main Room: General

- Q&A with Anya Dale
- What design features & specs to choose
- Where to locate bins; Mapping placement
- Rolling out new bins - Strategies for delivering new bins / replacing old ones
- Any other aspects of bin infrastructure standards

***\*\*Stay in this room\*\****

# Room #2: Implementation Stage

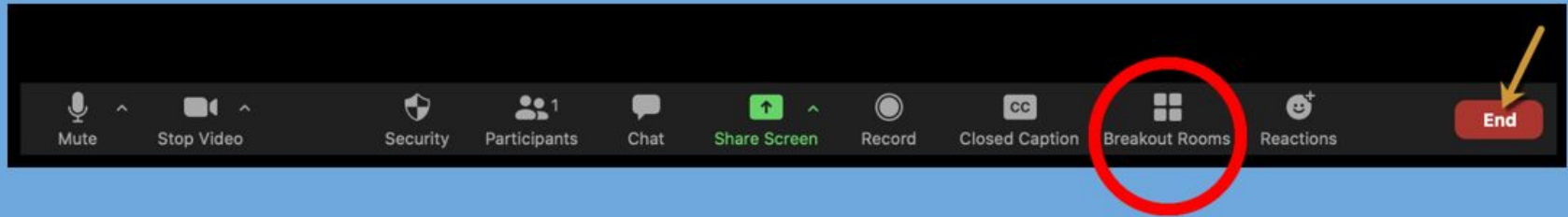
- Define objectives:
  - How formal / official should they be?
  - What should standards cover? (Bin styles; Placement; Signage / branding; operational procedures)
  - ?
- Administrative steps
- Who are the key stakeholders to involve?
- How to avoid process being hijacked. (Ex: architects & aesthetics)
  - Strategic compromise?

# Room #3: Institutionalizing Stage

- Which units oversees and manages the bin standards?
- Which units reviews building plans?
- Which units purchases bins?
- Which units places, uses, and monitors the bins? Indoor/ Outdoor/ Enclosures
- What tools, protocols, or documents would be helpful?
- Will the bin standards need to be updated and how?

# Select Room Now

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- If you have trouble, leave note in the chat and someone will help you.
- Turn on Cameras in breakout room.



# Notes: Main Room - General Topics

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# Notes: Main Room - General Topics

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## Notes: Room 2 - Implementation Stage

- [aspen.coty@csun.edu](mailto:aspen.coty@csun.edu) CSUN 3 bin system - outside and inside, food waste everywhere
- Julie only compost where food is generated, outdoor bins only put compost bins in outdoor gathering, cost,
- Mary Ann - Santa Cruz county, test run one floor, fourth floor sorting trash on this floor, no custodian coming to each desk or office, 4 locations in each break room 3 streams, 3 stream in hallway, people don't want to travel too far, change bag every few days because bin seals, got rid of office bins, adding compost bins to all breakrooms, more people will recycle in break rooms hopefully,
- Juli - removal of desk side bin - compels people to use centralized bins, closed vs open lid, don't want to get bad rap for compost so do daily, data gathering is important, baselines and reasons why, Anya studies how standardized bins help whole diversion rate- this helps cost, budgeting,
- Mary Ann - work with custodians they see it, once we talked to them and educated them the fear went away
- Julie - most problems are localized ( beer in recycling example)
- Rebecca Community college near UofM, in facilities department came 5 years with lot's of momentum, hallway/public bins, paper, plastic, trash, issues hit when phase out of classrooms, keeping momentum with changing admin, bigger sust issues and think that recycling/waste is good to go, don't have sustainability office or department,
- Michael - leveraging green teams, recycling is tangible way to associate people with sustainability
- Rebecca - have students for sustainability so might be able to leverage them
- Michael - trying to get to implementation phase, in process of standardize bins/liners, Q's: local recycling hauler doesn't accept bags- anyone else face this? Safety, cleanliness is issue, Q's: single sort vs. split redeemable recycling in Main, separating out redeemables, no bags? Recycling center not school itself,
- Juli - colored coded liners to make Custodians' lives easier, Virginia schools have to remove bags,
- Rebecca - larger campuses are issues with bags, hand sort and separate redeemables 10 cents each, student activities office give out to sports teams for bottle drive, only possible because small bigger couldn't keep up
- Brian - Christopher Newport University, eliminate plastics policies, compostables in dining halls, executive order 17-recycling aspect, clearly visible signage, proposal process right now, address issues?
- Julie - no go for no bags because of health and safety for workers
- Brian - here in Virginia glass will be separate stream
- Julie - implementation, consider how things are collected, placement, bags, bins, where material will go will all play into bin standards, partners and green teams knowing to reach out to partners and stakeholders, include all stakeholder feedback,

# Notes: Room 2 - Implementation Stage

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# Notes: Room 3 - Institutionalizing Stage

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- Custodial company – dedicated sustainability manager. Separate company (partnership) Working with the custodial team – what can you source, provide feedback.
- Facilities will set the standards. Ex. buying standard liners, not purchasing oversize bags, updating TBC's.
- Student(s) worker (RGIS) – created a survey for students to use an app on their phone to do a visual audit throughout the year
- Expectations are the custodial will manage it but it has been very inconsistent.
- Encouraging the custodial team to develop the proper training and expectations
- Challenge with managing custodial standards

# Notes: Room 3 - Institutionalizing Stage

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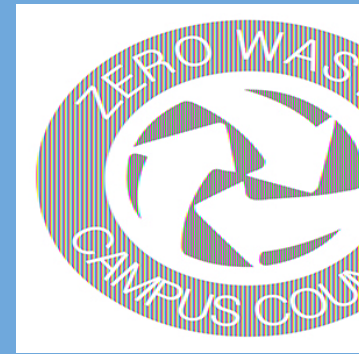
*Closing slides - full group*



# Get Involved w/ ZWCC

## Monthly “Meet Up, Waste Down”

- Networking event with hot topics and breakout rooms to discuss your real experiences in the field.
- Occurs the last Tuesday of the month.  
No meetings in November and December 2022.



Sign up for Slack channel:

[https://join.slack.com/t/zwcampuscouncil/shared\\_invite/zt-1igovm33l-yn01iojek9VN4Wh04aXNeQ](https://join.slack.com/t/zwcampuscouncil/shared_invite/zt-1igovm33l-yn01iojek9VN4Wh04aXNeQ)

Contact: [zerowastecampuscouncil@crra.com](mailto:zerowastecampuscouncil@crra.com);  
<https://www.crra.com/zwcc-technical-council>

Attend [California Resource Recovery Association \(CRRA\)](#) annual conference August 13-16, 2023, Burlingame, CA (just south of San Francisco) for zero waste campus sessions and tours.

# Share Resources

U of Michigan waste bin standards	<a href="https://ocs.umich.edu/programs/waste-reduction/waste-bins/">https://ocs.umich.edu/programs/waste-reduction/waste-bins/</a>
Blog about implementing campus bin standards	<a href="https://www.buschsystems.com/blog/news/creating-uniform-standards-for-trash-and-recycling-bins/">https://www.buschsystems.com/blog/news/creating-uniform-standards-for-trash-and-recycling-bins/</a>
Univ. of British Columbia Infrastructure Guidelines	<a href="https://tinyurl.com/yn2z7v2d">https://tinyurl.com/yn2z7v2d</a>
UCLA Bin & Signage guidelines	<a href="https://tinyurl.com/48xm8vz6">https://tinyurl.com/48xm8vz6</a>
UCLA planning docs related to centralized collections	<a href="https://tinyurl.com/2cb7922h">https://tinyurl.com/2cb7922h</a>
Univ. of Washington design guidelines	<a href="https://facilities.uw.edu/files/media/uwf-ds-bsd-design-guide.pdf">https://facilities.uw.edu/files/media/uwf-ds-bsd-design-guide.pdf</a>
UNC Chapel Hill Infrastructure Guidelines	<a href="https://facilities.unc.edu/wp-content/uploads/sites/256/2021/08/a-25-waste-management-and-recycling.pdf">https://facilities.unc.edu/wp-content/uploads/sites/256/2021/08/a-25-waste-management-and-recycling.pdf</a>
UMB's Self-Service Waste Site + Signage (bottom of page)	<a href="https://www.umaryland.edu/evs/self-service-waste/">https://www.umaryland.edu/evs/self-service-waste/</a>

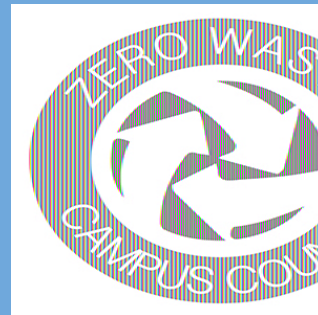




# Upcoming Programs

January & April

*What topics would you like to see?*

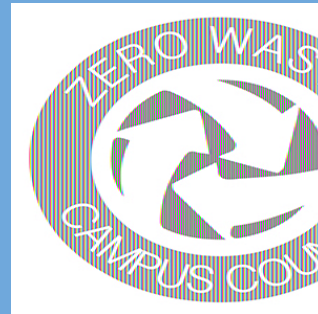


# Give Us Feedback

Look for email with survey following webinar:

How can we make discussion / info exchange  
more productive?

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# Share Contact Info to Network

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Name	Institution	Title	Email
Jacy Bolden	SCS Engineers/Consultants	Project Director	jbolden@scsengineers.com



Stick Around For Focus Group!

