

UNIVERSITY OF WISCONSIN - MADISON

ZERO WASTE ATLAS CAMPUS ASSESSMENT 2021



Post-Landfill Action Network

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INTRODUCTION

In Spring 2021, UW-Madison's Office of Sustainability hired the [Post-Landfill Action Network](#) (PLAN) to support UW-Madison interns, William Awve '21, Max McMeeken '21, Eloise Petruska '21, Cassie Sanford '21, and Alec Schmelzer '24, to conduct a holistic assessment of the University's waste management system. Although the University does not currently have a strategic plan for zero waste, the following report is intended to identify concrete steps that UW-Madison can take to shift towards holistic zero waste systems.

UW-Madison's student interns used PLAN's [Atlas Zero Waste Assessment](#) - a project designed to help campuses assess and streamline campus systems for materials management - to collect the information used to inform this report. This report offers a snapshot of existing programs, services and infrastructure, illustrates ideal material flows throughout a campus, and proposes recommendations to fill the gaps identified during the assessment. While this Atlas assessment provides numerous suggestions based on its assessment of the capacity of existing campus systems and best practices from other campuses, campus stakeholders must ultimately decide on the exact path the University takes to achieve zero waste. [Numerous resources](#) are available to UGA as a PLAN member campus to guide it in making these decisions.

Note: This report is currently being produced during the COVID-19 Pandemic when most colleges switched to virtual learning. All systems were assessed as they were pre-COVID-19. Concerns and questions about Reuse Programs and the COVID-19 pandemic are addressed in [this fact sheet](#).

Terms used in this report can be found in the [Atlas Glossary of Terms](#).

This report was prepared for UW-Madison by the Post-Landfill Action Network, a non-profit zero waste advising organization based in Dover, New Hampshire. Any views, thoughts, or opinions expressed in the text belong solely to the Post-Landfill Action Network and do not reflect the views of UW-Madison.

ASSESSMENT PROCESS

The student interns were trained by PLAN's Atlas team on the findings and theories that originally informed PLAN's Atlas Zero Waste Program, and on the interview process central to the assessment. They used PLAN's Atlas Stage 1 Campus Programs Checklist to complete in-depth interviews with 28 representatives from various campus departments, documenting and gathering data through a series of yes/no questions on the current infrastructure, policies, and communication channels related to the University's waste mitigation and management. A complete list of the interviewed representatives can be found in the Acknowledgements section of this report.

Following data collection, the interns scored the campus checklist - points are awarded in accordance with [the zero waste hierarchy](#), with **3 points** awarded for source reduction initiatives, **2 points** for reuse initiatives, and **1 point** for recycling/compost initiatives. The campus was awarded an overall score, scores for the two major systems of campus materials management described in the following section, and specific programmatic scores, which are all collectively used to guide this report.

METHODOLOGY - MATERIAL MANAGEMENT SCOPES

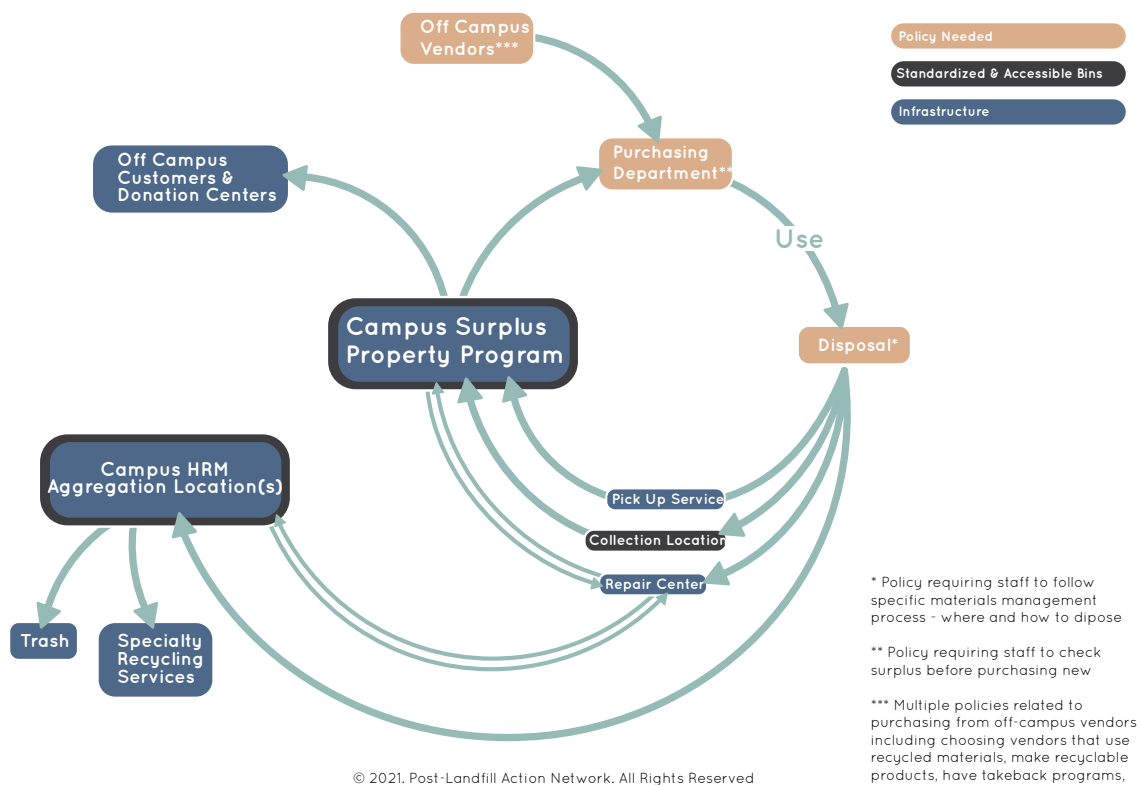
SCOPE 1 HARD GOODS Surplus Property and Hard-to-Recycle Materials Materials the campus has direct control over	SCOPE 2 SOFT GOODS Food and Single-Use Materials Materials the campus purchases, but has limited control over which bin the material is placed in
Electronics Furniture Office Supplies Lab / Art Equipment Vehicles / Tires / Oil Chemicals / EH&S Facilities / C&D	Food Waste Food Packaging Disposable Dishware Disposable To-Go Ware Compostable Dishware Compostable To-Go Ware Reusable Dishware Reusable To-Go Ware

[The Zero Waste Atlas project](#) is unique in that it does not simply measure waste outputs, but instead looks holistically at the entire campus materials management system from purchase to use to collection to disposal.

In **Scope 1 - “Hard Goods”**: We assess the materials management system for all materials the campus has direct control over - namely, items that the campus purchases, manages, uses, and maintains ownership over, and is ultimately fully responsible for the method in which they are discarded. Below is an **example** of how a campus would manage materials in an ideal version of this system. You can also chart the path of this item through the idealized system map provided below.

A faculty member wants to **purchase** a file cabinet. First, per **campus policy**, they check the **campus surplus property program** and other local reuse facilities before buying a new item. When reuse isn't an option, the faculty member **purchases** the file cabinet following the campus's procurement policies. Years later, when the file cabinet is being discarded - the staff member contacts the **surplus property program** to schedule a **pick-up**, and the item is picked up for free. The item is **catalogued**, listed for sale on the **University's online surplus sale site**, and possibly also on sale at a **surplus storefront**. If the item goes unsold for weeks or months, the item is **donated to the community** or sent to the **campus aggregation point for hard-to-recycle materials** - where it is stripped into parts. In this case, the file cabinet parts would go to **industrial metal recycling**.

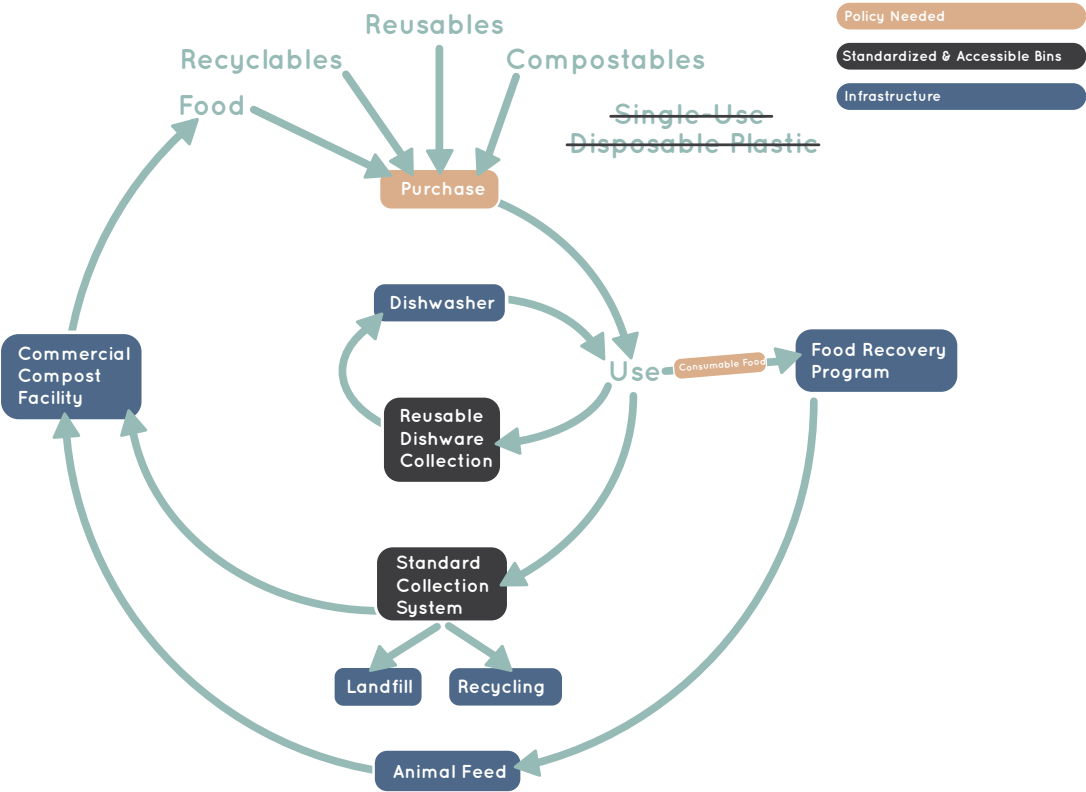
Scope 1 - An Example of Material Flow Options Through an Idealized Version of a Hard Goods System Map



In **Scope 2 - “Soft Goods”**: We assess the materials management system for all materials that the campus purchases, but ultimately wind up in the hands of individual users, leading to limited control over which bin the material is placed in. Below is an **example** of how a campus would manage materials in an ideal version of this system. You can also chart the path of this item through the idealized example of a system map provided below:

A student purchases a coffee from a coffee vendor on campus that is required to comply with the **campus procurement policy**. The student can either get the coffee in a **reusable to-go mug** or in a **compostable cup**. The student walks across campus with their coffee, and when finished, discards their coffee container in the **standardized collection bin** for either compostable materials or reusable dishware, available in every building on campus. If compostable, the material is collected and transported to an **industrial composting facility** (either on or off campus). If reusable, the dishes are taken to a **campus dishwasher** to be washed and re-distributed back to campus food vendors.

Scope 2 - An Example of Material Flow Options Through an Idealized Version of a Soft Goods System Map



The Zero Waste Atlas project is designed to streamline campus material management systems, as illustrated by the example scenarios for Scope 1: “Hard Goods” and Scope 2: “Soft Goods.” Not addressed in this systemic analysis is a proverbial “Scope 3”, which would account for all items brought to campus (ie, not purchased by the campus) by individual consumers (faculty, staff, students, visitors, etc). We do not include these items in this assessment because the campus has no control over the purchasing of these items, and the ultimate management and disposal of these items falls under the parameters of Scopes 1 and 2. Therefore, effectively-designed Scope 1 & 2 systems will ultimately be capable of capturing Scope 3 materials. Below is an ideal version of how a Scope 3 material would be captured in this system.

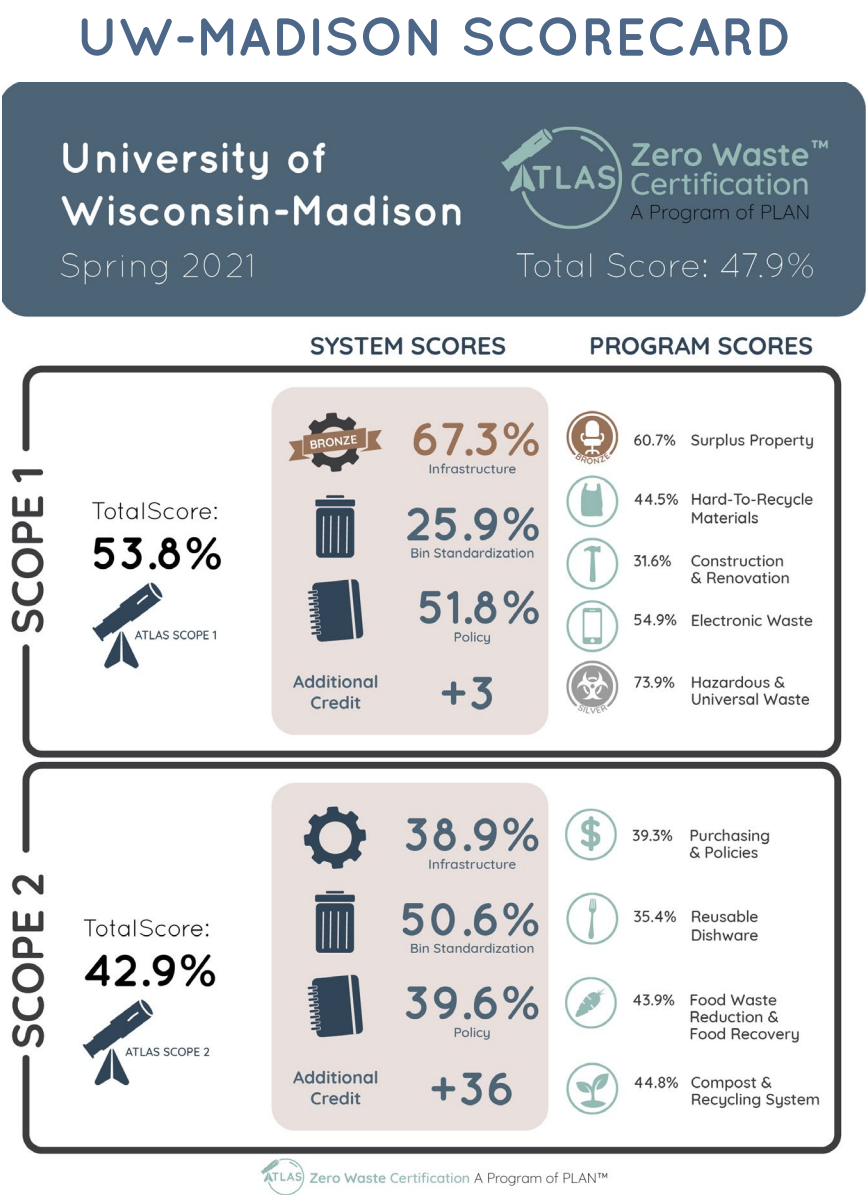
A student living in a residence hall on campus discovers that their lamp is broken. They bring the lamp to the **campus repair center** (a facility assessed in **Scope 1**), where an attempt to repair the lamp is made. If the lamp cannot be repaired - the lamp is placed in a **standardized electronic waste recycling bin** which can be found in most buildings on campus.

PROGRAM SCORING

In addition to the Hard Goods and Soft Goods Material Scopes, and the Additional Programs groupings, all of the questions in the Campus Programs Checklist were also categorized by specific program, as seen in the included Program Scoresheet, such as reusable to-go ware or residential hall initiatives. Program recommendations will be included in the same sections that assess Hard Goods Infrastructure and Soft Goods Infrastructure; note that these programs are generally smaller-scale projects versus campus-wide infrastructure projects. These scores preface the assessment and recommendations in each section and are summarized in the scoresheet included in the following pages. The scores preceded by a “+” at the top of each section indicate “Additional Programs,” meaning that they are added as unweighted extra credit to the Hard Goods and Soft Goods scores.

In some sections, findings are presented in the form of tables and can be interpreted as follows:

yes	full points awarded, i.e. 100% adoption across all facilities
half yes	half points awarded, i.e. facilities are still in the process of adoption
no	no points awarded, i.e. facilities have not adopted this practice and are not in the process of adopting it
n/a	question is not asked or is not applicable to this facility
+0	no extra points awarded - this is an additional credit question
+number	extra points awarded - this is an additional credit question



PROGRAM SCORESHEET

	Points Earned	Points Possible		Points Earned	Points Possible
Scope 1: Surplus Property & Hard-to-Recycle Materials (HRM)				472	883
Surplus Property	127.5	210	Construction & Renovation	18	57
Surplus Program Policies & Communication	47.5	75	Construction & Renovation Policies	18	57
Surplus Program & Managed Materials	51.5	81			
Reuse & Repair of Departmental Surplus Items	15	19	Electronic Waste	141	257
Reuse & Sharing of Student Items	13.5	35	Policy Requiring Staff to Send E-Waste to Surplus/Recycling	22.5	26
			Procurement Policies for Purchase, Takeback & Recycling	6	27
Hard to Recycle Materials	120.5	271	Electronics Repair & Recycling	95	111
HRM from Specialized Facilities	102	180	E-Waste Collection Infrastructure	17.5	93
HRM Aggregation & Collection Point Accessibility	18.5	91			
			Hazardous Materials	65	88
			Hazardous Waste Collection & Management	65	88
Scope 2: Compost, Food, and Plastics				472	1167.5
Purchasing & Policies	200.5	510	Reusable Dining and To-Go Ware	83.25	235.5
Adherence to Campus Procurement Policies	69	176	Accessibility Policy	7	9
Policies That Favor Bulk Products Over Single-Use	64.5	178	Reusable Dining Ware at Sit-Down Eateries	39.25	94.5
Institutionalization of Zero Waste Goals & Plans	18	51	Reusable To-Go Ware Program	19	87
Paper Reduction & Reuse Initiatives	49	105	Hydration Station Availability	15	20
			BYO Program	1	12
Compost/Recycling & Bin System	141.25	315	Collection Locations for To-Go Ware	2	13
Composting Program	23.5	47			
Compostable Dining Ware & Disposables	6.5	96	Food Waste Reduction & Food Recovery	47	107
Bin Standardization	70.25	128	Food Recovery Program	16.5	46
Recycling	41	44	Food Waste Reduction Initiatives & Education	30.5	61
Additional Credit	39	140.5			
Additional Credit - Surplus Sharing Initiatives	2	6			
Additional Credit - Hard-to-Recycle Material	0	2.5			
Additional Credit - Hard Goods Reuse	1	5			
Additional Credit - Reusable Dishware, To-Go Ware, BYO	5.5	33			
Additional Credit - Food Recovery & Waste Minimization	2	13			
Additional Credit - Compost	0	7.5			
Additional Credit - Education	26	44			
Additional Credit - Soft Goods Policies	2	10			
Additional Credit - Liquid Collection	0.5	19.5			

PLAN's Zero Waste Atlas project has found so far that the average campus score is between 40-50%. As we expand this project to more campuses, we will continue to update [national scoring averages and standings](#) for how campuses compare with each other. Larger versions of the Scorecard (previous page) and the Program Scoresheet are [linked](#). A detailed breakdown of the campus' points can be found in the Campus Programs Checklist.

SUMMARY RECOMMENDATIONS

We recommend that the University form a **Zero Waste Task Force** or similar working group that liaises with the [Sustainability Advisory Council](#) to review this report. Following that review, we recommend working collaboratively with all stakeholders to discuss and build a strategic vision to address system-wide solutions, and create a comprehensive “**Zero Waste Roadmap**” for the University. The established vision may update existing goals and outline new goals that require advanced long-term strategic planning and establishment of new campus infrastructure and systems, as well as policies and standard operating procedures that may differ from the way materials are currently managed. They may also require looking into organizational restructuring to relocate and redefine program management and responsibilities, which should be coupled with ample research to make decisions around management and costs. The Task Force should aim to develop a timeline to achieve measurable progress towards the following recommendations.

SCOPE 1

- Establish a policy requiring faculty and staff to check surplus property options before purchasing new items.
- Expand campus’ capacity to more efficiently collect, manage, and reallocate hard-to-recycle materials (HRM) across campus departments and facilities.
- Increase opportunities for students and staff to share, reuse, and repair surplus items and hard-to-recycle materials year-round, such as through the establishment of a free or thrift store.
- Establish and communicate sustainable procurement policies to guide departments with purchasing electronics and other hard goods.

SCOPE 2

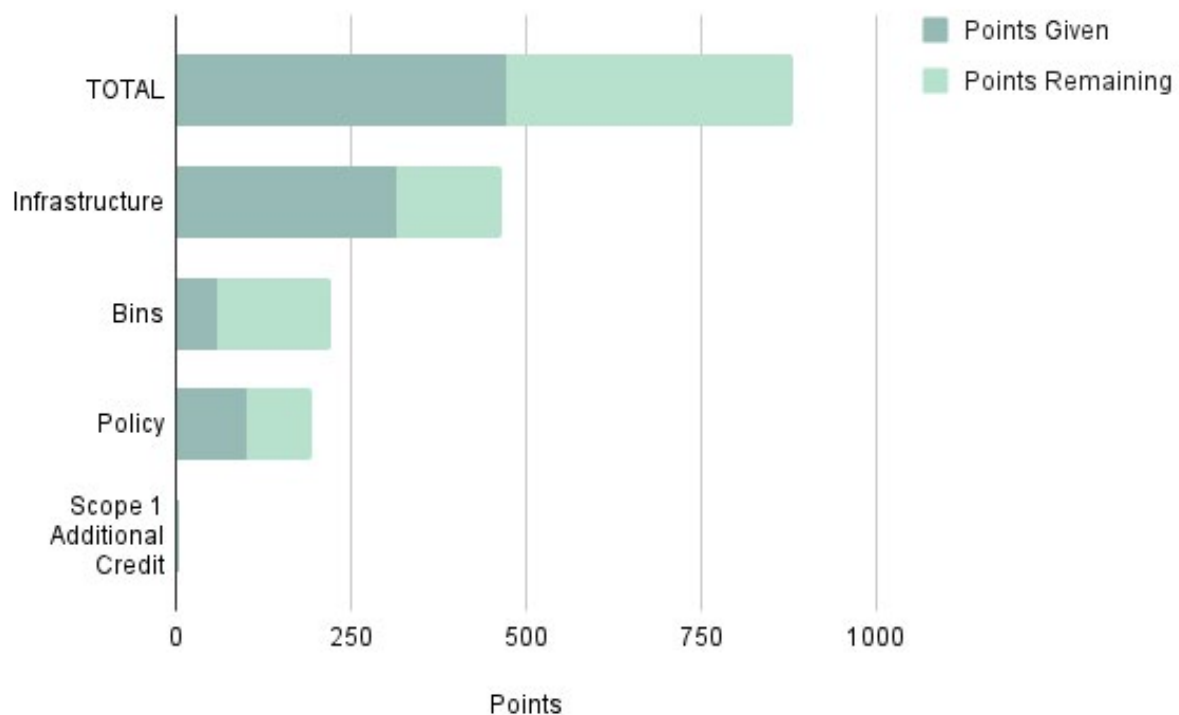
- Explore options to limit disposable dining ware usage, such as by offering reusable dining ware to all food service facilities on campus, expanding the OZZI reusable to-go container program and/or developing a bring-your-own-container program that is universally accepted at all facilities.
- Pledge to limit single-use plastic and non-essential packaged items by signing the [Break Free From Plastic Campus Pledge](#), as well as establishing systems for bulk service and bulk purchasing.
- Establish and better communicate sustainable procurement policies that apply to all departments and vendors on-campus
- Expand the food recovery program to all dining facilities
- Establish campus-wide event guidelines for soft goods material management and goals and guidelines for zero waste events
- Identify a compost facility that UW Madison can work with to receive compostable disposable products.
- Establish a series of bin standardization guidelines and implement campus-wide bin standards at all facilities across campus.
- Expand compost collection to all areas of campus in conjunction with campus-wide bin standards.

SCOPE 1 - HARD GOODS: SURPLUS & HARD-TO-RECYCLE MATERIALS (HRM)

MAP OUT INTERDEPARTMENTAL MATERIAL FLOW

An important first step to better understand connections, increase communication, and identify gaps in surplus and HRM management on UW-Madison's campus is creating a material flow map. This should outline the movement of materials throughout the stages of purchasing, use, collection and disposal between various departments on campus. This should also outline stakeholders that interact with this process, and the logistics and infrastructure necessary throughout each stage. A simplified example of a relatively perfect system map is provided in the Methodology section - note that stakeholders are not identified in this diagram because the distribution of responsibility varies between campuses.

HARD GOODS: ASSESSMENT & RECOMMENDATIONS



HARD GOODS INFRASTRUCTURE & PROGRAMS

I. Surplus: Expand Capacity (Infrastructure and Staffing) for Campus-Wide Management of Surplus Property and Material Donation

This section measures the campus's capacity in terms of infrastructure, services, and staff to fully capture surplus property from all departments and locations on campus, with the intended purpose of

making those items available for reuse on-campus or donation off-campus, as well as non-electronic repair initiatives like textiles and furniture. The following table assesses whether the campus collects and manages the following surplus materials for reuse in any campus-wide capacity.

51.5 / 81

Surplus Program & Managed Materials

15 / 19

Reuse & Repair of Departmental Surplus Items

+ 2

Additional Credit - Surplus

TABLE 1: CAMPUS SURPLUS PROPERTY COLLECTION

Table 1: Campus Surplus Property Collection	
Surplus Property	Collected by Campus for Reuse
Furniture	Yes
Electronics (laptops, lab and medical, refrigerators, air conditioners, appliances, handheld devices, wires and cables)	Yes
Mixed media (CD's, DVD's, etc.)	No
Textiles (clothing, uniforms, etc.)	Yes
Reusable building fixtures (i.e lighting, HVAC systems, plumbing fixtures, doors, etc.)	Yes
Construction & demolition material (brick, stone, tiles, wood, shingles, etc.)	Yes
Misc. household goods (dishware, decorations, school supplies, sporting equipment, etc.)	Yes
Campus vehicles	Yes
Books	Yes
Paint & art supplies	No
Lab equipment*	Yes
Medical supplies (e.g. crutches)*	Yes
Bikes & bike parts	Yes

**can be collected for internal reuse by specific campus department*

Successes

As required by state statute, all campus-owned materials must be sent to UW-Madison's campus-wide surplus property program, called Surplus with a Purpose (SWAP), as well as some building fixtures from contracted construction projects, which are sent to ReStore in the city of Madison. As seen in Table 1, SWAP has the capacity to collect and manage 11 of the 13 assessed materials for reuse. Purchasing Services has policy language stating the requirement to use SWAP, and 27 of the 28 stakeholders interviewed for this assessment indicated that they follow this policy and send materials to the surplus property system for reuse. Inventory is tracked via the request forms that must be submitted before SWAP receives materials and is listed online for campus staff. SWAP encourages on-campus reuse of items through the [Surplus Exchange Program](#) and by offering free item pick-ups (subsidized through MDS). SWAP is able to completely fund its operations through generated revenue.

A few other reuse and repair opportunities are available to the campus community. For example, there is a cap/gown rental program for graduating students, and some research labs are developing a shared resources website to avoid doubling up on equipment. The campus also provides a few different resources for electronics repair - DoIT runs a Repair Shop to troubleshoot software issues on student-owned electronics, and AIMS handles campus-owned electronics.

Finally, UW-Madison's Transportation Services runs a free, long-term bike rental program called the [Red Bike Program](#). These bikes are serviced for free during the summer by Budget Bicycle Center, and there are self-service repair stations available throughout campus to users of this program, as well as personally-owned bikes. Abandoned bikes are delivered to the SWAP program and listed for sale. The city of Madison also runs a bike sharing program called [BCycle](#), which is available at a reduced cost to UW students and staff.

Challenges

Because the SWAP facility is located 10 miles off campus in Verona, the distance poses a barrier to students who wish to purchase items from the SWAP Store (see recommendations in Thrift/Free Store), and SWAP does not provide free delivery for items. Students cannot drop off personal items via SWAP and so must find other channels for donating unwanted but still usable items throughout the year.

Recommendations

We recommend that the UW-Madison consider expanding a few aspects of its surplus property program to encourage more effective use by staff members. Some possibilities include:

- Establishing a policy to check surplus property inventory before purchasing new items for a department
- Exploring ways to make transportation of surplus property from the SWAP facility free or more convenient for staff and students
- Expanding capacity of the program and facility to effectively capture all materials available for reuse on campus including art supplies, paint, mixed media, and other small items.
- Joining the University Surplus Property Association to gain access to a community of resources and advising to improve program efficiency and address strategic questions while addressing efforts to expand the program.¹

Additional Credit

Surplus Reuse & Sharing Among Individual Departments: UW-Madison earned a few additional credit points for internal reuse and sharing of materials within a few campus departments. Some campus labs have community space with shared equipment to a limited extent, and sheet music/scripts may be rented depending on the material selected. More campus departments could consider campus and community partners with which to share equipment in the future.

¹The [University Surplus Property Association](#) is a small nonprofit association of college campus surplus facility managers and operators that share resources and best practices via a listserv and annual conference. Annual membership is \$50 for the first staff member, and \$25 per additional staff member at each institution.

TABLE 2: CAMPUS AGGREGATION OF HRM

Table 2: Campus Aggregation of HRM	
Hard-to-Recycle Materials (HRM)	Collected at a Campus Aggregation Point
Lab plastics	Yes
Lab glass	Yes
Plastic film & bags, bubble wrap, plastic wrap, air packages for recycling	Half yes
Styrofoam & packing peanuts	Yes
Rigid plastics (e.g. tubes, pots, pesticide containers)	Yes
Rubber gloves	No
Scrap metal	Yes
Wood and/or sawdust	Half yes
Concrete	Yes
Brick	Yes
Drywall	No
Roof shingles	No
Porcelain (e.g. sinks, toilets, tubs, etc.)	Half yes
Textiles	No
Carpet	Half yes
Mattresses	No
Plastic signage	No
Wood pallets	Yes
Cooking oil	Half yes
HRM for Terracycle	Half yes
Electronic Recycling	
Laptops/computers	Yes
Lab & medical electronic equipment	Yes
Freon-containing equipment (refrigerators, A/C)	Yes
Microwaves	Yes
Household appliances (fans, vacuums, anything w/cord or battery)	Yes
Handheld electronics	Yes
Wires and cables	Yes
Mixed media (CD's and DVD's)	Yes
Batteries	Yes
Lightbulbs	Yes
Ink & toner cartridges	Yes
Mercury-containing equipment (thermometers, fluorescent bulbs, etc.)	Yes
Hazardous/Regulated Waste	
Tires	Yes
Paints and oil-based supplies	Yes
Lab chemicals or radiological waste	Yes
Waste oil	Yes
Pesticides	Yes
Fertilizer	Yes
Propane and propane tanks	Yes
Custodial chemicals	Yes
Sharps	Yes

II. HRM: Expand Capacity of Campus Wide Management of Hard-to-Recycle Materials (HRM)

This section measures the campus capacity in terms of infrastructure, services, and staff to fully capture Hard-to-Recycle Materials (HRM) from all departments and locations on

102 / 180

HRM from Specialized Facilities

65 / 88

Hazardous Waste Management

95 / 111

Electronics Repair Services

+ 0

Additional Credit - HRM

campus with the intended purpose of aggregating those items for economical recycling of them through industrial facilities. HRM's exist in different pockets and departments of campus, and are more efficient and cost-effective to manage at campus-scale via a campus-wide system. The following table assesses whether the campus collects and manages the following hard-to-recycle materials for reuse or recycling in any campus-wide capacity.

Assessment

At the campus-wide level, UW-Madison has the capacity to effectively capture and aggregate 35 of the 41 items assessed in this report. Several different departments, including Waste & Recycling, SWAP, and UW Fleet, coordinate the collection and management of hard-to-recycle materials.

- **Plastics, Films, and Styrofoam:** Lab plastics and other rigid plastics from specific facilities such as agricultural centers are autoclaved and collected in traditional recycling; thus there is no separate aggregation point for these materials. Depending on the size, plastic film and bags are accepted in the traditional recycling stream.
- **Construction and Renovation Materials:** Material from major capital construction and renovation projects are managed separately by contractors with a guideline to recycle 50% of materials; most projects take this as a standard and recycle 75% of material. Concrete generated by these projects is ground up for reuse, and scrap metal is hauled by a specific contractor. In general, capital projects are encouraged but not required to recycle or reuse construction materials and send reusable building fixtures and materials to SWAP.

- **Textiles, Plastic Signage, and Terracycle Programs:** There are no known aggregation points on campus for textile collection, except during [Sustainability Move-Out](#) at the end of the year. Other hard-to-recycle materials such as carpet and mattresses are also not collected, aside from past carpet collection at move-out. Plastic signage is not collected for recycling or reuse except for in Athletics, where signage is reused each year and auctioned at the end of use. The campus does not consistently participate in Terracycle programs (which does not negatively impact the campus' score).
- **Electronics Recycling and Universal Waste:** Electronic waste, including laptops, computers, lab/medical electronic equipment, handheld electronics, wires and cables, and CDs/DVDs, are managed by SWAP. Collection locations for e-waste recycling are mapped [here](#). Universal waste, such as microwaves, household appliances, batteries, lightbulbs, and printer cartridges, is managed by Waste and Recycling with support from EHS.
- **Regulated and Hazardous Wastes:** All assessed regulated and hazardous wastes are collected and recycled or disposed of properly by EHS and UW Fleet, but individual campus departments less consistent in following specific disposal procedures.

Recommendations

We recommend that the University explore options for improving hard-to-recycle material collection systems on campus, including:

- Mapping out material flow across campus for items that are not currently collected, identifying where items are already aggregated throughout different facilities, where aggregation points could be established across campus, and establishing which positions would be responsible for managing these aggregation spaces and collecting these materials.
- Strengthening communication on how to request pick-up of hazardous materials for proper disposal among individual campus departments and exploring ways of reducing the production of hazardous materials overall, such as by establishing a chemical sharing program.
- Increasing accessibility of hard-to-recycle material and e-waste collection beyond just staff members by establishing year-round collection points in residence halls and other high-traffic areas for HRM such as clothing.

- Continuing to align strategic planning with SWAP, such as doubling up efforts on identifying further aggregation and storage space and as a way to serve the program when items sent for reuse ultimately have to be broken down into material parts and recycled.

III. Programs: Thrift Store & Residential Halls

This section assesses programs that are often student-facing and can function either as part of campus-wide infrastructure assessed above or via separate programs that feed into or share components of larger campus-wide efforts.

13.5 / 35

Reuse & Sharing of Student Items

+ 1

Additional Credit - Hard Goods Reuse

Assessment & Recommendations

Thrift/Free Store:

The UW-Madison does not have a centralized reuse space on campus such as a free or thrift store. We recommend establishing a dedicated on-campus space to swap student-owned items that is available to all campus community members. This free or thrift store should have clearly labeled collection bins outside the space should regularly encourage students to swap from the store through social media, the Office of Sustainability publications, and other campus partnerships. As the store continues to establish itself, it could consider working with a repair shop to fix slightly broken items, as well as collecting items from the residence halls' move-out program or free spaces.

Res Hall Reuse & Sharing:

UW-Madison's residence halls encourage the sharing of some commonly purchased but difficult to dispose of appliances by offering microwaves in some residence halls; however, the majority of students bring their own. The residence halls also offer mini-fridges for individual dorm rooms and communal vacuums.

At the end of each year, UW-Madison’s residence halls run a donations-focused move-out program. Standardized collection sites are not available at every dormitory, but collection carts and bins are reused and labeled with standardized signage each year. Food and toiletries are donated to community organizations and any other items left over at the end of the year are donated to local thrift stores.

Additional Credit

Programs: UW-Madison earned one additional credit point for offering communal vacuums in the residence halls.

HARD GOODS POLICY

I. Establish Hard Goods Policies

This section assesses the campus-wide procurement policies, communication strategies, and requirements for handling and disposal of all hard goods.

47.5 / 75	Surplus Program Policies & Communication
22.5 / 26	Policy Requiring Staff to Send E-Waste to Surplus/Recycling
6 / 27	Procurement Policies for Purchase, Take-Back & Recycling
18 / 57	Construction & Renovation Policies

Surplus: Assessment & Recommendations

As mentioned previously, 27 of the 28 campus stakeholders interviewed for this assessment responded that they and their staff are required to send materials to SWAP, but only 13 encourage their staff to check SWAP before purchasing new items. There is also very little policy language guiding purchasing of electronics and other hard goods. In general, it seems that many departments on campus do not have the resources/guidelines to understand their options for recycling and reusing certain items.

We recommend the campus consider establishing policies that:

- Ensure that all staff are required to check SWAP before buying new items.
- Ensure that all staff know and understand how SWAP works, how to access it, and how to schedule pick-up/drop-off services if applicable.
- State the campus' expectations for keeping items in use rather than purchasing new items.
- State procurement preferences and incentives for purchasing new products that come with take-back, warranty, or repair programs for items such as furniture, appliances, technical equipment, etc.
- Encourage same-type campus departments to practice centralized purchasing for bulk purchase options of commonly procured materials.

Electronics: Assessment & Recommendations

Most interviewed stakeholders know to send broken campus-owned electronics for recycling, but each department disposes of electronics through different avenues - some go through EHS and some go through their department's IT division, while others go through AIMS (which sends broken electronics to SWAP) or drop off electronics at collection sites located in or near their respective facilities. The University does not currently have a set of procurement policies for electronics that prioritize environmental sustainability, but has sourced refillable printer cartridges in the past and generally keeps computers in usage until the warranty is up (usually 5 years). To increase best practices around electronics materials management, UW-Madison should establish and communicate policies for electronics purchase, use, and disposal. We recommend standardizing and documenting the electronics recycling process and ensuring that all staff are well-informed of these expectations. UW-Madison should also establish sustainable procurement policies with language prioritizing:

- EPEAT Products certified Bronze, Silver, or Gold
- Leased equipment
- Companies with take back programs
- Repairable products
- Refillable ink cartridges over disposable
- Keeping current electronics in use over purchasing new
- Partnering with an electronic waste recycler certified under the [e-Stewards](#) and/or the [Responsible Recycling \(R2\)](#) standard

Construction and Demolition: Assessment & Recommendations

The UW-Madison has few policies in place regarding best practices around sustainable materials management for construction and demolition projects. There is a guideline, but not a requirement, to recycle 50% of materials from construction projects. Most projects meet the 75% recycling goal set by the Division of Facilities for development, but this weight-based metric may be skewed because of the heavy weight of concrete. While it is not an official policy, contractors sometimes attempt to incorporate the deconstructed materials into the new design to honor/memorialize prior building history.

Similarly, there is no written requirement for contractors or projects to send surplus property or electronics to SWAP, but this is the general practice. There is also a standardized pallet of colors for campus buildings, so paint is often reused; however, this is not a requirement. Finally, there is language in the technical standards requiring new buildings to install hydration stations.

For the most part, identified policy gaps should be focused on large, contracted projects. Facility Planning & Delivery has stated that they are open to incorporating standards recommended by the recently formed campus-wide Zero Waste Team, which is led by the Office of Sustainability. While the campus does practice some methods of sustainable materials management for construction and demolition projects, we recommend that the campus institutionalize these practices by establishing policies that:

- Prioritize rehabilitating existing buildings over building new.
- Prioritize deconstruction over demolition in order to better salvage and reuse materials.
- Require contractors to use the campus surplus property (for sending salvaged materials and for furnishing new buildings) and electronic waste recycling programs where practical.
- Require all in-house construction and renovation projects to recycle or repurpose C&D materials and building fixtures within reason.

- Require contractors and in-house teams to send non-reusable materials from construction and renovation projects for specialized recycling, using the campus' existing collection systems for hard-to-recycle materials where applicable.
- Prioritize nylon carpet squares over other material, as nylon is the only currently recyclable carpet material on the market.

HARD GOODS BIN & SIGNAGE STANDARDIZATION

This section assesses UW-Madison's capacity to provide clear, standardized, and accessible drop-off locations and collection bins for all surplus and hard-to-recycle materials across campus. Ideally, all students and staff on campus would know where they should bring items for discard.

5 / 105

Aggregation Facility & Clear Collection Points

2.5 / 107

E-Waste Collection Points

Assessment & Recommendations

The UW-Madison collects most campus-owned reusable materials and electronics from faculty and staff through SWAP. Aside from a few opportunities during move-out, students have minimal access to collection points for reusable materials. However, students are able to bring in broken electronics to DoIT, which accepts printers, monitors, and hard drives for students. There are also a few residence halls where electronic waste, universal waste, and household appliances can be dropped off for recycling, such as at the swap shop in Tripp Hall, and at donation locations at Ogg and Holt during move-out.

The Residence Halls have collection locations for plastic film and bags but not for other commonly generated HRMs such as styrofoam and clothing. Campus-wide, hard-to-recycle material management appears very decentralized. While Waste & Recycling collects and recycles most HRMs generated in their own facilities, specific facilities are inconsistent in separately managing their hard-to-recycle materials, and there are very few clear and standardized bin or collection locations available for these materials generated within specific facilities.²

We recommend that UW-Madison:

- Establish a standardization guide for hard-to-recycle material collection locations that provides clear standards for bin styles, shapes, colors, and signage designs.
- Develop a process for designating year-round collection locations, distributing bins, or establishing pick-up processes to collect the materials assessed in this section across campus. This process should include a plan for the logistics of collection and management of any materials that have not already been established, and a strategy to communicate these programs to campus users.

² Photo documentation of standardized hard-to-recycle material collection systems from different campuses can be found [here](#).

SCOPE 2 - SOFT GOODS: FOOD, PLASTIC & COMPOST

MAP OUT INTERDEPARTMENTAL MATERIAL FLOW

Sustainable materials management for Scope 2 materials can be an extremely complex puzzle on campus that involves many different facilities. First and foremost, our goal is material reduction - what are the strategies the campus can take to effectively eliminate disposable materials from campus? This means looking at all possible opportunities to switch to reusable dishware and reusable to-go containers.

For all disposable products that are left on campus, we want to think about what steps we can take to effectively reduce contaminated streams by establishing a system that is standardized across campus, is simple to navigate, and reduces confusion. This means that **all disposable products should be switched to compostable wherever possible, all “recyclable” products should be free of food contamination, and all other single-use disposable products should be eliminated wherever possible.**

In both the reusable and compostable systems, campus-wide procurement policies could be enacted to ensure all events and food service outlets are in compliance, and campus-wide standards for collection bins should be considered in all facilities across campus to ensure the highest rate of successful material management.

An important first step to better understand this intricate system, identify gaps, and decrease the risk of contaminated streams is creating a material flow map for reusables and compostables. This outlines the movement of materials between departments and identifies stakeholders throughout the stages of purchasing, use, collection and logistics, and disposal. A simplified example of a system map for both reusable and compostable material streams can be found in the Methodology section.

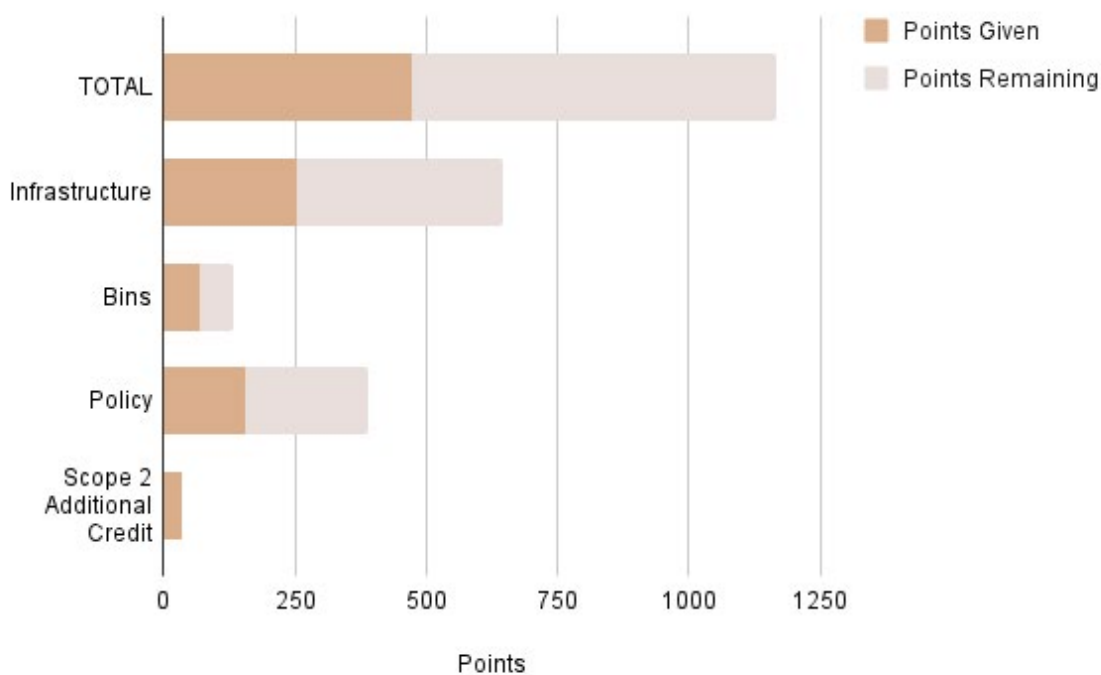
CAMPUS DINING FACILITIES & FOOD-SERVICE VENDORS

For the purposes of this report, we divided dining facilities and campus vendors into assessment categories based on management and the style of food service (dine-in vs. to-go).

Campus Dining Halls	"Unlimited" buffet style service in an enclosed setting	<ul style="list-style-type: none"> - Carson's Market - Four Lakes Market - Gordon Avenue Market - Liz's Market - Rheta's Market - Kohl Center & Camp Randall (Athletics)
Restaurants	Enclosed locations with sit-down service	<ul style="list-style-type: none"> - Union South restaurants (7) - Memorial Union restaurants* - Steenbock's on Orchard* - The University Club*
Casual Sit-Down Eateries	Locations that have seating but are not fully enclosed locations, with both dine-in and to-go options.	<ul style="list-style-type: none"> - Babcock Dairy - Starbucks - The Bean & Creamery
Grab & Go	Locations that primarily serve food for take-out. May have some seating but most food is to-go.	<ul style="list-style-type: none"> - Union Grab & Go Eateries - Badger Markets*
Convenience Stores	Primarily pre-packaged food	<ul style="list-style-type: none"> - Flamingo Run Convenience Stores
Athletics	Concessions stands within Athletics Facilities; also includes tailgates and traveling athletes	<ul style="list-style-type: none"> - Concession stands in competition venues
Events	Food served outside of the above locations	<ul style="list-style-type: none"> - Union Catering

**Facilities were not assessed due to closures during COVID-19 or other extenuating circumstances. Some information was collected from Badger Markets that is included in the assessment tables, but this location did not contribute to the total points earned.*

SOFT GOODS: ASSESSMENT & RECOMMENDATIONS



SOFT GOODS INFRASTRUCTURE & PROGRAMS

I. Expand Reusable Dishware, To-Go Ware, and Access to Reusables

This section assesses the campus infrastructure and systems in place to eliminate disposables, namely increasing the availability of reusable dining ware and encouraging reusable container use. In this section, we look at the prevalence of reusable dishware and reusable to-go containers, the availability of campus dishwashers in various facilities, the availability of

hydration stations on campus, and the prevalence of discounts for users who bring their own containers. All recommendations made regarding reusable dishware and bulk bin programs may require further consideration in light of the ongoing COVID-19 pandemic.³

39.25 / 94.5

Reusable Dining Ware at Sit-Down Eateries

19 / 87

Reusable To-Go Container Program

15 / 20

Hydration Stations Availability

1 / 12

Bring-Your-Own Program

+ 5.5

Additional Credit - Reusable Dishware, To-Go Ware, BYO

³ Refer to PLAN's [Reusables and Sanitation Toolkit](#) for guidance and best practices regarding reusable to-go ware and bulk bin programs during the COVID-19 pandemic.

TABLE 3: REUSABLE DINING WARE INFRASTRUCTURE

Table 3: Reusable Dining Ware Infrastructure										
	Campus Dining Halls	Athletics Dining Halls	Union South Restaurants	Casual Sit-Down: Babcock Dairy	Casual Sit-Down: Starbucks	Casual Sit-Down: The Bean & Creamery	Grab & Go: Unions	Fleming Run Convenience Stores	Athletics	Events
Dishwasher	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Reusable Dishes										
Plates	Yes	No	Half Yes	No	No	No	+0	n/a	n/a	Half Yes
Bowls	Yes	No	No	No	No	No	+0	n/a	n/a	No
Utensils	Yes	No	No	No	No	No	+0	n/a	n/a	Half Yes
Mugs/cups	Yes	Half Yes	Yes	No	No	No	+0	n/a	n/a	Half Yes
Straws*	+0	+0	+0.5	+0	+0	+0	+0.5	n/a	n/a	n/a
Napkins*	+0	+0	+0	+0	+0	+0	n/a	n/a	n/a	Half Yes
Reusable To-Go Ware										
Clamshell	No	No	No	No	No	No	No	No	0	0
Soup	No	No	No	No	No	No	No	No	0	0
Utensils	Yes	No	No	No	No	No	No	No	0	0
Mugs/cups	Yes	No	Yes	Yes	No	No	No	No	+0.25	No
Containers for bulk items*	n/a	n/a	n/a	+0	+0	+0	+0	+0	+0	+0
Customers Allowed to BYO Containers	No	No	No	No	Half Yes	Half Yes	No	No	No	No
Bring Your Own Discount										
Containers*	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0
Mugs/cups*	+0.5	+0	n/a	+0.25	+0.5	+0.5	No	+0	+0	+0
Bags*	n/a	n/a	+0	+0	+0.5	+0.5	No	+0	No	+0
Utensils*	n/a	n/a	n/a	+0	+0	+0	No	+0	+0	+0
Bulk bins*	n/a	n/a	n/a	+0	+0	+0	No	+0	+0	+0

*Additional Credit question

Assessment & Recommendations

Reusable Dishes: All dining locations on campus except for the Grab & Go locations and vendors in Athletics facilities have access to an industrial dishwasher capable of washing all dining ware collected at the location. However, only the campus' dining halls provide exclusively reusable dishes with no disposable options. Some reusables are available in the Athletics Dining Halls and the Union South Restaurants, and events have the option to choose reusables or disposables through catering.

In general, we recommend UW-Madison consider transitioning to reusable dining ware as much as possible, especially in locations with already existing dishwashing capacity.

To do this, we recommend exploring options to:

- Consider establishing a reusable dishware program for students to choose “for here” rather than “to go” options at places like the Athletics Dining Halls, Union South Restaurants, Babcock Dairy, Starbucks, The Bean & Creamery, Convenience Stores and Athletics Vendors.
- Consider installing or expanding dishwashing capacity at the Grab & Go facilities, Athletics Vendors, or on-campus dining partners that serve those facilities.
- Consider expanding and publicizing affordable reusable dishware options through on-campus catering and student-run events to eliminate disposable alternatives.

Reusable To-Go Ware: UW-Madison offers a reusable to-go container in the Campus Dining Halls through OZZI - a partner that provides branded containers and public collection machines. The program is called “[Ticket to Take Out](#)”. Every student gets a free token that they can exchange for a reusable clamshell container at the Dining Hall. Students can then return the used container to the OZZI machines which provide a token in exchange to repeat the process. Replacement tokens cost \$4, and staff and community members can also buy into this program to use these containers.

We recommend that UW Madison consider significantly expanding this program as a service to all dining facilities on campus where food is served. This recommendation carries extra weight in this report because UW Madison does not currently have a facility that can process compostable disposable foodware. For UW Madison to achieve zero waste, the campus will need to decide between significantly expanding reusable to-go containers across campus, or significantly increasing the campus’s capacity to process compostable disposables (more information about this outlined in the compost section below).

OZZI is a common system for container collection that a lot of campuses use, but campus-wide expansion of these collection stations can be expensive.

We recommend UW Madison explore all options for container collection expansion. Campuses have a wide variety of implementation strategies for reusable to-go ware initiatives, from barcoding containers to track their use and return, to either fining students for not returning them or identifying other creative methods to incentivize returns. Since many campuses struggle with container retention, it is worth exploring successful methodologies from other campuses for expansion/implementation.⁴

We recommend that the UW-Madison explore options to:

- Establish a reusable to-go ware program that is universally accepted at all dining locations across campus.
- Expand this program beyond the traditional clamshell container, to include reusable containers for soup/salads, beverages, and utensils.

Hydration Stations: Hydration stations allow students to refill reusable water bottles rather than buying beverages in disposable containers. The UW-Madison has installed hydration stations in most existing buildings on campus; dining facilities have locations where students can refill water bottles, or dining facilities are located in buildings that have hydration stations in the main lobby. UW Madison does not have portable water bottle refill stations for large outdoor events, and we recommend exploring a process to establish those

Bring-Your-Own Container: Students are not allowed to bring their own reusable containers into most dining facilities on campus. The only location where these are allowed are at Starbucks and The Bean and Creamery students can bring their own mugs, but not containers. UW-Madison could consider formalizing a BYO program as a campus-wide policy, and expanding it to allow students to bring their own containers to all dining locations, Athletics, and on-campus events.

Bulk Snack Bins: UW-Madison does not offer snacks in bulk at the dining facilities on campus. We recommend UW-Madison explore options for installing bulk snack bins in Grab & Go's, Convenience Stores, Athletics concessions, and at Events, along with expanding reusable to-go container options for bulk products in order

⁴ Case studies of successful to-go ware programs can be found in PLAN's [Program Case Library](#).

to cut down on the number of pre-packaged snacks in non-recyclable, non-compostable packaging. This could be a great project for a student group and a Grab & Go location to pilot, with the intention of later expanding the program to be universal wherever applicable.⁵

Additional Credit

UW-Madison earned a few additional points by offering BYO discounts for reusable to-go mugs and reusable mugs, as seen in Table 3. UW-Madison could consider offering more bring-your-own discounts for customers that bring their own dishware or bags to various dining facilities and retail locations, as well as offering reusable to-go containers at Athletics concessions and campus events. Finally, expanding bulk bin options around campus and accompanying reusable container options for those products would also earn UW-Madison more additional credit points.

⁵ Included are examples of successful, student-initiated programs at the University of California, Berkeley - they have run successful bulk snack bin programs in one of their dining-operated [convenience stores](#) and at another [on-campus cafe](#).

II. Expand Capacity for Food Recovery and Food Waste Minimization to All Food-Service Facilities on Campus

This section assesses the campus's capacity to recover food, as well as reduce overall food waste via internal audits and external educational efforts.

16.5 / 46
Food Recovery Program

30.5 / 61
Food Waste Reduction Initiatives & Education

+ 2
Additional Credit - Food Recovery & Waste Minimization

TABLE 4: FOOD RECOVERY & FOOD WASTE REDUCTION PROGRAMS

Table 4: Food Recovery & Food Waste Reduction Programs										
	Campus Dining Halls	Athletics Dining Halls	Union South Restaurants	Casual Sit-Down: Babcock Dairy	Casual Sit-Down: Starbucks	Casual Sit-Down: The Bean & Creamery	Grab & Go: Unions	Flamingo Run Convenience Stores	Athletics	Events
Food Recovery Program	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	No
Food Waste Reduction										
Run audits	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Purchase gleaned	No	No	No	No	No	No	No	Yes	n/a	n/a
Food waste education	Half Yes	No	No	No	No	No	No	No	No	n/a
Trayless dining	No	Yes	n/a	No	n/a	Yes	n/a	n/a	n/a	n/a

Assessment & Recommendations

Food Recovery Programs

UW Madison has a Food Recovery program called the [Frozen Meals Program](#). All food at participating dining facilities that is leftover is tracked in C-Board so that Dining knows exactly how much of each thing is / is not sold. Through this program they know what food is safe to repackage. Items deemed safe to eat like leftover prepared food, salads, fruit, etc are packaged by two student employees and brought to locations around Madison to address food insecurity. This program works in partnership with [The Crossing Campus Ministry](#) to identify local partners like Porchlight, Safehaven, etc.

There is also an on-campus food pantry called the [Open Seat Pantry](#) that receives donations from Frozen Meals as well as student organizations. While non-perishable food items are collected during move out, there aren't any permanent donation bins in residence halls.

As seen in Table 4, the Food Recovery Program does not operate at all facilities on campus. We recommend the UW-Madison explore opportunities to expand these programs to recover as much safe to eat food as possible, and establish collection points for non-perishable foods in the campus residence halls.

Food Waste Reduction Programs

All assessed dining facilities at UW-Madison regularly run audits on food purchasing to examine food consumption habits and reduce food waste, except for the Babcock Dairy. With the exception of the Flamingo Run Convenience Stores, no other dining facilities on campus reported purchasing gleaned food items for use in food preparation. Food waste education efforts are minimal in the Dining Halls, and non-existent in all other locations. The Athletics Dining Halls and The Bean and Creamery have gone trayless, but the main campus dining halls and the Babcock Dairy have not.

We recommend that UW-Madison explore opportunities to:

- Purchase gleaned foods as often as possible.⁶
- Expand food waste education programming to regularly educate customers on the problems with food waste and the strategies to reduce it.
- Expand food purchasing audits to the Babcock Dairy.

⁶ The Food Recovery Network has a [Guide to Gleaning](#). Bon Appetit Management Company (BAMCO) also has great resources to explore through their [Imperfectly Delicious Produce](#) and [online recipes](#).

III. Expand Capacity of Compost Program and Eliminate All Single-Use Disposable Plastics

This section assesses the prevalence of compostable products at all food-service vendors on campus, the availability of compost collection and management at those same facilities, and the risk of contamination

in the compost stream from the distribution of non-compostable disposables. This assessment looks at each location as a holistic system, with the goal of reducing the risk of contamination in compost and recycling streams as much as possible. Full points are given to an assessment category only when it has full (100%) adoption; half points are awarded when a facility is still in the process of transitioning to fully compostable products. The existence of compostable products is only eligible for points when they are collected for composting at a facility that can process compostable products.

23.5 / 47

Composting Program

6.5 / 96

Compostable Dining Ware & Disposables

+ 0

Additional Credit - Compost

TABLE 5: COMPOSTABLE MATERIALS

Table 5: Compostable Materials										
	Campus Dining Halls	Athletics Dining Halls	Union South Restaurants	Casual Sit-Down: Babcock Dairy	Casual Sit-Down: Starbucks	Casual Sit-Down: The Bean & Creamery	Grab & Go: Unions	Flamingo Run Convenience Stores	Athletics	Events
Compostable Ware										
Plates/bowls	N/A	No	No	No	No	No	No	No	No	No
Hot bowls	N/A	No	No	No	No	No	No	No	No	No
Utensils	No	No	No	No	No	No	No	No	No	No
Cups/mugs	No	No	No	No	No	No	No	No	No	No
Straws	No	No	No	No	No	No	No	No	No	No
Napkins	Yes	No	No	No	No	No	No	No	No	No
To-go ware	No	No	No	No	No	No	No	No	No	No
Miscellaneous packaged food items (e.g. sushi boxes)	No	No	No	No	No	No	No	No	No	No
Single-use creamers, condiments, butters, etc.	No	No	No	No	No	No	No	No	No	No
Containers for bulk items	n/a	n/a	n/a	No	No	No	No	No	No	No
Recyclable/compostable gloves/aprons/hairnets*	+0	+0	+0	+0	+0	+0	+0	+0	+0	n/a
Compost Program										
Food waste as feedstock for agriculture*	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0
Back-of-house collection	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Front-of-house collection	Yes	No	No	No	No	No	No	Yes	No	No

Assessment & Recommendations

Composting Program

Note: On July 30, 2021, after this assessment was completed, UW-Madison was forced to suspend this program because the biodigester referenced below is no longer accepting food waste as it is being converted to a renewable natural gas production facility. Many of our recommendations for UW Madison going forward remain the same, as outlined below.

UW-Madison sent food waste to the [Gundersen Envision](#) biodigester in Middleton, Wisconsin. More information about this program can be found [here](#). Collection bins for food waste were available in residence halls, campus dining halls, and the Flamingo Run Convenience Stores. Most dining facilities on campus had back-of-house compost collection except for the Babcock Dairy and the Grab & Go Unions. The biodigester could not accept compostable disposable products. This may limit the campus' capacity to effectively establish public-facing compost collection bins due to the risk of contamination from disposable products, especially those labeled as compostable. Yard debris is composted on-site in the Lakeshore Nature Preserve.

We recommend UW-Madison explore options for a compost facility that can accept food, organics, and compostable disposable products with the goal of establishing a campus-wide composting program with accessible compost bins and collection across campus (see more info in bins section below).

Compostable Dining Ware & Disposables

While some locations on campus reported the presence of a mix of compostable products on non-compostable disposable products, points were not awarded for the presence of these items because they are not composted. Compostable napkins were granted points in the facilities that have them because the biodigester could accept those.

During this assessment, many stakeholders expressed confusion over whether or not the products they use are compostable or whether or not the products used on campus can be put in the compost bin. Unclear guidelines and education around materials management may lead to contaminated compost being sent to the biodigester.

We recommend that when UW-Madison establishes a solution for composting compostable products, they also explore options to pass campus-wide procurement policies that standardize disposable products by switching to compostables in all locations on campus.

Alternatively, UW-Madison can consider eliminating all single-use disposables where possible and converting to a reusable to-go ware system to reduce the overall need for expensive compostable dining ware that is often challenging for composting facilities to process.

Additional Credit

Compostables: No additional credit was rewarded in this section. Additional credit in this section is awarded when specific disposable products, such as gloves, hairnets, and aprons, are compostable or recyclable, or for innovative practices such as using reusable liner bags for waste bins and collecting coffee grounds for on-campus landscaping.

IV. Other Programs & Initiatives

This section mainly covers paper-reduction and diversion-based programs and practices.

41 / 44

Recycling & Reuse of Recyclables

49 / 105

Paper Reduction & Reuse Initiatives

TABLE 6: PAPER RECEIPT ELIMINATION

	Campus Dining Halls	Athletics Dining Halls	Union South Restaurants	Casual Sit-Down: Babcock Dairy	Casual Sit-Down: Starbucks	Casual Sit-Down: The Bean & Creamery	Grab & Go: Unions	Flamingo Run Convenience Stores	Athletics
Transitioned from paper receipts to electronic	yes	No	No	No	Half Yes	Half Yes	No	Yes	No
Can turn off paper receipts	yes	No	Yes	No	Yes	Yes	Yes	Yes	No

Paper Reduction

UW-Madison has the capacity to turn off paper receipts at all locations except for Athletics, the Babcock Dairy and the Athletics Dining Halls. Of the facilities that can turn them off, only the Flamingo Run Convenience Stores and the Dining Halls have systematically eliminated them.

Across campus, most printers are set up with a print-release function but printers aren't set up to automatically print double sided. E-signatures are not required to disincentivize printing items to sign them, and professors aren't required to post course packets online.

Various other initiatives exist across campus departments. For example, the School of Music reported that they are in the process of transitioning to paperless programming and some but not all events on campus are paperless; however, it is not a requirement. Additionally, the gym distributes reusable sweat towels and equipment wipe down towels and the post office has a program to allow students and staff to unsubscribe from junk mail and the library has an e-preferred buying model. There isn't a formal program on campus to reuse cardboard for shipping, but some facilities reported internal reuse include The Bean & Creamery, Starbucks, Babcock Dairy and Flamingo Run Convenience Stores.

UW-Madison could further explore programs and policies that reduce paper, such as:

- Encouraging the reduction of paper receipts as a standard practice, whether by turning off paper receipts at each location for customers who do not want them, or transitioning completely to electronic receipts.
- Further limiting paper programming for marketing purposes, orientation, events, and performances.
- Implementing print-release systems for self-service printers to reduce accidental print jobs and setting them to print double sided as the standard.
- Requiring all professors to post course packets and other class materials online and only providing printed versions upon request.
- Establishing campus-wide systems for redistribution of reusable cardboard boxes and shipping materials.

Campus Recycling & Reuse of Recyclables

The campus's hauler, Pelliteri, accepts all typical recyclables in single-stream recycling. Cardboard boxes are seldom reused as noted in the previous section, but are recycled by all facilities. Single-serve pre-packaged beverages come in recyclable containers in all locations. UW Madison lost points for not conducting regular waste and contamination audits, because trash and recycling can liner bags are not recyclable, compostable or reusable, and because disposable hot coffee cups at locations like Starbucks are not recyclable, compostable, or reusable.

CAMPUS-WIDE SOFT GOODS POLICIES AND ZERO WASTE EVENTS/POLICIES

I. Establish Soft Goods Policies

In this section we assess the existence of a variety of procurement policies related to soft goods management including the types of products

purchased, requirements or standard operating procedures for staff to use those policies, and the existence of zero waste guidelines.

69 / 176

Adherence to Campus Procurement Policies

64.5 / 178

Policies that Favor Bulk Products Over Single-Use

+ 2

Additional Credit - Scope 2: Soft Goods Policies

TABLE 7: PROCUREMENT POLICIES

Table 7: Procurement Policies										
	Campus Dining Halls	Athletics Dining Halls	Union South Restaurants	Casual Sit-Down: Babcock Dairy	Casual Sit-Down: Starbucks	Casual Sit-Down: The Bean & Creamery	Grab & Go: Unions	Flamingo Run Convenience Stores	Athletics	Events
Procurement Policies										
Vendor required to comply with campus procurement policies	Yes	Half yes	Yes	No	Yes	Yes	Yes	Yes	Half Yes	Yes
Reusable gloves/aprons/hairnets	Yes	N/A	Yes	Half Yes	Yes	Yes	Yes	No	Yes	n/a
Eliminated plastic bags	n/a	n/a	No	Half Yes	No	No	No	No	No	n/a
Eliminated sales of bottled water	n/a	n/a	No	No	No	No	No	Half Yes	No	No
Bulk Procurement										
Eliminated unnecessarily wrapped single-serve items	No	Half Yes	No	No	No	No	No	No	No	Half Yes
Snacks and sides in bulk	n/a	n/a	No	No	No	No	No	No	No	Yes
Beverages in bulk dispensers	Yes	Yes	Yes	Half yes	No	No	Yes	No	Half yes	Half Yes
Eliminated K-Cups and plastic-wrapped tea bags	Yes	Yes	Yes	n/a	Yes	Yes	No	Yes	No	No
Bulk dispense creamers, condiments, butters, jellies	No	Half Yes	No	No	No	No	Half Yes	No	No	Yes

Assessment & Recommendations

UW-Madison does not have a set of campus-wide procurement policies governing sustainable purchasing. 11 of the 28 reported that they did follow sustainable procurement guidelines, although it's unclear which guidelines they were referring to and the rest indicated that they weren't aware of any guidelines. There aren't any policies that prioritize environmentally friendly janitorial/cleaning products, although some sustainable procurement practices are followed like purchasing bulk concentrates. Dining has some sustainable purchasing guidelines but they do not apply to all campus vendors.

Points were awarded for sustainable purchasing behaviors, which are significantly mixed across campus as seen in Table 7.

General Sustainable Procurement Policies

We recommend that the University establish clear campus-wide procurement policies and guidelines that apply to all campus departments, contracted franchises, and vendors that state preferences for:

- Reusable, repairable, and refillable products over single-use products as much as possible
- Packaging made from compostable materials or post-consumer recycled content (in conjunction with the rollout of campus wide compost collection that can process compostable products)
- Products and dining ware made from compostable materials or post-consumer recycled content (in conjunction with the rollout of campus wide compost collection that can process compostable products)
- Paper made from post-consumer recycled, agricultural residue, or FSC or SFI-certified content
- Prioritizing environmentally friendly cleaning/janitorial products including UL ECOLOGO or other certified green products
- A restriction on disposable swag, in favor of products that are durable, reusable, etc.⁷
- A restriction/guideline on plastic shopping bags and plastic water bottles
- Companies that have take-back programs

⁷ We define “swag” as a free giveaway that is distributed at events or by organizations to their members. Check out [PLAN Swag Hierarchy](#) for more information.

Policies that Prefer Bulk Purchase over Single-Use Products

Dining does not have a policy that requires dining facilities on campus to purchase items in bulk, nor is there a preference to distribute food, condiments or other common individually packaged items in bulk without packaging. As seen in Table 7, some facilities have eliminated some items but the campus does not have universal adoption of any of these initiatives.

To reduce disposable packaging and the life cycle impacts of shipping multiple orders, UW-Madison should explore enacting policies that require all staff to purchase in bulk where practical and implement more centralized purchasing practices between similar facilities to consolidate shipments. UW-Madison could also explore purchasing policies that apply to all food-service facilities, contracted franchises, and vendors that:

- Favor bulk items over unnecessarily wrapped single-serve items (napkins, oyster crackers, individually wrapped fresh baked goods, mints, toothpicks, etc.)
- Favor snacks and side dishes in bulk rather than individually packaged
- Favor beverages in bulk dispensers rather than individually packaged (soda, juice, milk, coffee, K-cups, etc.)
- Favor bulk dispensers for all sauces, condiments, creamers, salt, pepper, butter, peanut butter, and jellies rather than individually wrapped products⁸

Additional Credit

Additional credits are awarded for special policies on campus. In this case, UW-Madison was awarded extra credit points for programs in the University Childcare Center that prioritize zero waste activities and crafts that make useful and valued end products.

⁸ For a more comprehensive list of single-use products that we suggest phasing out, refer to PLAN's [Break Free From Plastic campus pledge](#).

II. Zero Waste Events Guides, Plans, and Policies

UW Madison does not have an established zero waste goal, roadmap or guide to achieving zero waste on campus. There isn't a process at UW Madison for zero waste events or athletics, and there isn't a session to educate students about zero waste during first-year orientation. There is a zero waste committee at UW Madison working on these issues, and there are also active student groups. Also, there is a student green fee that is used to fund sustainability initiatives on campus.

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Institutionalizing Zero Waste Goals & Plans

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Additional Credit - Education

We recommend that UW Madison work to establish a campus-wide **zero waste strategic vision**. To accomplish this, we recommend continuing the zero waste committee and fully establishing a **zero waste task force** made up of many of the stakeholders interviewed in this report who would be tasked with analyzing this report and UW-Madison's strategic goals, identifying gaps, and developing idealized versions of the system flow charts detailed in the Methodology section. The projects identified in the system flow charts may require establishing new campus infrastructure and systems, as well as policies and standard operating procedures that may differ from the way materials are currently managed at the UW-Madison.

For this process to be successful, it is important to **work collaboratively with all stakeholders** to build a vision for how these new initiatives will be communicated and managed in the future, which may also require looking into organizational restructuring to relocate and redefine program management and responsibilities. After completing the visioning process, we recommend going through the process of "[backcasting](#)" to identify what resources would be required to achieve these goals, and what decisions around management and costs need to be made in order for these initiatives to be operationalized.

This backcasting would lay the groundwork for a strategic plan. From there, we recommend UW-Madison develop timelines and goals and identify the campus capacity for investing in the various initiatives detailed in the plan. As these initiatives advance, we recommend UW-Madison consider establishing specific guidelines for campus departments on how to host zero waste events, practice sustainable procurement, and institutionalize other elements of the campus-wide strategic plan in their daily operations.

We recommend the University develop a campus-wide guide for zero waste events that could include procedures for transporting recycling and compost bins to and from the event, ensuring there is proper bin signage at events, and creating a volunteer waste monitoring program to educate users on how to use the standardized bin and signage set-up at outdoor and sporting events. We recommend that event procurement follow existing and recommended sustainable purchasing policies and event waste collection follow campus bin standardization guidelines, such as by aligning mobile/temporary outdoor standardized collection stations with indoor collection stations (i.e. color, signage, order of arrangement) to limit confusion.

Finally, we recommend building out curriculum to familiarize students with opportunities to reduce waste and reuse, share, and repair items; properly utilize the standardized collection stations; and appropriately dispose of hard-to-recycle materials. While education is extremely important in contributing to culture change, infrastructure change ultimately provides the greatest impetus for behavior change, so any educational campaigns must be coupled with the implementation of systems and programs to support long-lasting change.⁹

⁹ See PLAN's blog post on why [Infrastructure Change Must Precede Behavior Change](#), which shares takeaways from other behavioral psychology experts.

Additional Credit

UW-Madison received a number of additional credits in this section. Points were awarded for staff who regularly communicate with custodial services in their buildings, and for communication with the campus' waste hauler prioritizing cost savings and reducing waste and contamination rates. The campus earned additional credits for the engagement of students around waste reduction through speakers, residence hall competitions, compost competitions, waste audits, etc. Finally, points were earned for the Bernie's Place Childcare Facility using recycled and upcycled materials in arts and crafts projects.

Additional points could have been achieved by establishing a more formalized program for "bin goalies" or "trash talkers" at Athletics events and other outdoor events - where individuals are placed near waste collection stations to help people sort their waste appropriately.

III. Accessibility Policy

We assess plastic straw accessibility in the policy section because it is imperative that straws are still available for those who need straws

7 / 9 Accessibility Policy

for accessibility reasons. Plastic straws are available at all campus eateries except for Athletics Dining Halls and Grab & Go Unions. We recommend UW-Madison add language on the importance of continuing to stock plastic straws for accessibility reasons to their sustainable purchasing policies.¹¹

TABLE 8: ACCESSIBILITY OF PLASTIC STRAWS

	Campus Dining Halls	Athletics Dining Halls	Union South Restaurants	Casual Sit-Down: Babcock Dairy	Casual Sit-Down: Starbucks	Casual Sit-Down: The Bean & Creamery	Grab & Go: Unions	Flamingo Run Convenience Stores	Athletics	Events
Plastic straws still accessible	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No

¹⁰ [Carleton College](#) incentivizes students to work as "trash talkers" by reimbursing their student organization or sports team for their time.

¹¹ [Sample language can be found in PLAN's Break Free From Plastic Campus Pledge.](#)

SOFT GOODS BIN & SIGNAGE STANDARDIZATION

I. Standardize Collection Systems, 3-Bin Systems, Eliminate Unpaired Bins, and Establish Liquid Collection

In this section we assess the existence of standardized collection stations (including compost collection) in all areas of campus, as well as ensuring that no standalone or “unpaired”

bins exist on campus. We also recommend exploring the benefits of establishing additional collection bins for liquids and to-go ware.

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Bin Standardization

2 / 13

Collection Locations for To-Go Ware

+ 0.5

Additional Credit - Liquid Collection

Assessment

There are no campus-wide standards for bin and signage design guidelines, although [standard signage](#) is available on the sustainability website. While all recycling bins on campus are blue, the style, color and size are all mixed. Some stakeholders reported that without set standards, individual facilities often purchase different bins. Few locations across campus have compost collection bins. 15 of the 28 stakeholders interviewed for this assessment reported that in some locations bins are standing alone without a pair and a few reported that recycling is missing altogether.

Recommendations

Bin Standardization

As previously mentioned, infrastructure change is a prerequisite to achieving systemic behavior changes - to see universal adoption of sustainable material management behaviors, infrastructure has to be clear, consistent, and uniformly accessible in all locations. Standardized collection stations greatly increase diversion rates, decrease contamination rates, and are the first foundational step to setting up education and communication initiatives that have high likelihoods of success. Clearly communicated standards for bins and signage will ensure uniformity across campus and decrease confusion and resulting contamination of waste streams.

We recommend creating a formal resource for campus-wide standardization for all types of bins and signage. These standards could be developed and clearly communicated by Facilities and the Office of Sustainability in a style guide that outlines what type and color of bin should be used across campus for each waste stream, as well as specific signage that outlines what can be disposed of in each stream. This guide could also specify where bins are located, the types of bins that are used in different facilities and for on-campus events and Athletics, and guidelines like eliminating “standalone” or “unpaired” bins around campus and ensuring that landfill, recycling, compost, and liquids (where applicable) streams are always found side-by-side, in the same order.¹²

Expanding Compost

Expansion (and re-establishment) of UW-Madison’s compost program beyond collection in dining locations and a few other areas of campus should occur in tandem with the identification of a compost facility that can accept compostable products and a decision to go full-scale compostable for disposable dining ware to eliminate contamination. While adding a composting stream to most buildings could take advantage of existing custodial workflows, labor and infrastructure may need to be reviewed if the University decides to expand collection. As compost collection expands across campus, large compost bins could be placed next to small landfill bins in bathrooms and other areas with high volumes of paper towel waste, marked with highly specific signage.

¹² This example from the [University of Michigan](#) designates the difference between certain styles of bins, where they should be placed, and who pays for them.

Additional Credit

Liquids Collection: To make compost collection more efficient and disposal less expensive, liquids could be collected separately from the rest of the organics stream to reduce the weight of the compost. As can be seen in the University of Southern Maine's case study shared as a footnote, separating liquid collection is a more efficient and cost effective method of material management because it reduces the weight of the compost, reduces the cost of managing spills and clean-up, and reduces the labor costs in the aforementioned efforts.¹³

Expand To-Go Ware Program Collection Locations

UW-Madison has a reusable to-go ware program that is available in the Dining Halls only. Collection points are available outside the dining halls. As mentioned above in the reusable to-go ware section, we recommend that the University expand the existing program to all food service locations, in addition to expanding the number of collection points.¹⁴

TABLE 9: REUSABLE TO-GO WARE COLLECTION

	Campus Dining Halls	Athletics Dining Halls	Union South Restaurants	Casual Sit-Down: Babcock Dairy	Casual Sit-Down: Starbucks	Casual Sit-Down: The Bean & Creamery	Grab & Go: Unions	Flamingo Run Convenience Stores	Athletics	Events	Res Halls	Library	Admin Offices & Classrooms
To-go ware collection	Yes	No	No	No	No	No	No	No	No	No	No	No	No

¹³ See page 18 in University of Southern Maine's [Waste Minimization & Recycling Overview](#).

¹⁴ Check out our [Reusable Dishware on Campus During COVID-19](#) article on reusable to-go ware container programs during COVID.

CONCLUSION

The recommendations outlined above are just the beginning in a multi-stage zero waste planning process. We have provided recommendations based on best practices from campuses across the country, but the next step in zero waste planning is to identify the feasibility of these recommendations at the University and to strategize with PLAN's Atlas team to vision and develop a Zero Waste Task Force and subsequent Zero Waste Roadmap specific to UW-Madison. We encourage the campus to develop a goal that incorporates quantitative measurements like diversion, reduction, and recycling, as well as qualitative goals to develop campus-wide service models for sustainable materials management and program areas such as engagement and education. For UW-Madison to achieve zero waste, there will need to be financial support behind campus-wide infrastructure changes and administrative support for campus-level policies. The University should also utilize this report as a wayfinding tool to benchmark and track progress on remaining opportunities for waste reduction.

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