2022 Strategic Vision for Institutional Zero Waste
University of Wisconsin Madison

Introduction: In Spring, 2022, the University of Wisconsin-Madison Office of Sustainability hired three Zero Waste Project Assistants (Rachel Schumacher, Olivia Grose, Emily Johnson) to work with the Post-Landfill Action Network as Zero Waste Atlas Fellows. As Fellows, Rachel, Olivia, and Emily utilized PLAN's Atlas Stage 1 process to perform a comprehensive assessment of UW-Madison's campus-wide policies, infrastructure, and logistical capacity to establish a materials management system that achieves zero waste. The final Atlas Stage 1 Report and Score Sheet for UW-Madison can be found here. More information about how the scores in this assessment were developed can be found in the Appendix alongside the Scoresheets. The final campus scores are represented in the Appendix.

During the 2022-2023 academic year, UW-Madison began the Atlas Stage 2 Strategic Visioning process. Strategic visioning sessions with over 20 key campus stakeholders were co-facilitated by PLAN staff and the fellows. The goal of these sessions was to map out a multi-year vision to establish the infrastructure, policies, and standardization systems necessary to achieve a zero waste campus, and reach a Zero Waste Atlas Score above 90%. This Strategic Vision for Institutional Zero Waste at UW-Madison is a summary of the opportunities discussed at these sessions and articulates the strategy for meeting the recommendations outlined in the strategic plan.

Methodology:

This vision serves as the proposed guideline for how the campus plans to manage materials through the following two Materials Management Scopes. These scopes help UW-Madison develop methods for handling materials at a system-wide level.

Scope 1 "Hard Goods" Surplus Property & Hard-to-Recycle Materials (HRM) *Materials the campus has direct control over from purchase to recovery*	Scope 2 "Soft Goods" Food, Packaging, and Daily Consumables *Materials the campus purchases, but individual users control disposal decisions*
Furniture Electronics Office Supplies Equipment (Lab, Art, Gym, etc) Vehicles (including tires & oil) Chemicals & Hazardous Materials Construction & Demo Materials Fixtures (cabinets, doors, etc)	Food Waste & Composting Packaged Goods Disposable Dishes & To-Go Ware vs. Compostable Dishes & To-Go Ware vs. Reusable Dishes & To-Go Ware

Table of Contents

Scope 1 - Surplus Property & Hard-to-Recycle Materials Management System

Goals: Significantly improve and expand the capacity of UW-Madison's surplus property and Hard-to-Recycle Materials (HRM) management systems. The program should:

- **Expand capacity of the surplus property program and facility** to effectively capture all materials available for reuse on campus
- **Make the surplus management process more efficient** by hiring more staff to manage logistics and acquire trucks/ specialized vehicles for moving items more efficiently.
- **Establish a Digital Asset Management System** to manage an online inventory of items available for surplus, streamline the process of pickup and service requests, and improve the efficiency of surplus property management.
- **Create improved procurement policies** to incentivize staff and students to use the surplus system for disposal and check surplus inventory before purchasing new items.
- **Establish a student-run Free/Thrift Store** that would be open to students and the public to facilitate student reuse efforts on campus.
- **Educate the campus community about this process**

A. Physical Infrastructure - Central Surplus and Aggregation Facility:

SWAP (Surplus with a Purpose) is UW-Madison's surplus program. The program is limited in its capacity to effectively capture and reuse all surplus materials on campus. Surplus materials are stored at its off-campus facility located at 1061 Thousand Oaks Trail,

> Full completion of goals in **Sections 1A, 1B, 1C and 1F** would result in:
> **127.5** additional points
> **14.44%** increase in Scope 1 Score
> **6.22%** increase in Total Atlas Zero Waste Score

Verona, WI. The location is located over 10 miles (20 minute drive) from the main campus. The current facility's area is approximately 25,000 square feet. For UW-Madison to effectively capture all surplus materials on campus, it should identify an additional location and/or explore options of expanding the current location. If we decide to construct additions to the current location, this location would continue to serve as the central aggregation point for the management, handling and redistribution of surplus property and proper disposal of HRM materials. Moreover, UW-Madison should consider expanding the staffing capacity of the campus surplus property program and the accessibility of this program for both staff and students. SWAP is an auxiliary service of UW-Madison, therefore many of the recommendations below would require increased revenue to offset the costs associated with them. Financial support is addressed in Section 1F below.

During the stakeholder engagement sessions, many improvement suggestions were brought up. We need better communication between SWAP and campus departments so both groups are aware of what items are needed and available. A digital inventory system would help improve communication and program efficiency (addressed in Section 1Be

below). More staffing is needed to transport items in a safe and timely manner. More staffing would also be needed to operate the digital inventory system.

In total, stakeholders named a need for an additional 20,000 square feet of space for storage, aggregation, and the programmatic expansions outlined in this section.

a. Multiple campus departments and students could benefit financially from increasing the accessibility and use of this facility - both by furthering the revenue stream to the SWAP program via increased sales of used goods as well as allowing departments access to an increased volume of used items (rather than having to purchase new items). During the stakeholder engagement process, it was identified numerous times that the current facility is not widely accessible to students and staff on campus. Moreover, the current facility is not large enough to handle the volume of materials that the campus needs to process. A few examples include: reuse of demolition materials for small-scale renovation projects on campus, handling large quantities of items during a renovation or move out, processing materials on a faster timeframe so that surplus items requested for pickup are moved quicker, sharing of office supplies and smaller household items, etc.
Here are photo examples of facilities like this at MSU and CSU Fort Collins. More examples can be found in this folder.

b. Faculty and Staff often wait multiple weeks for items to be picked up by Material Distribution Services (MDS), and just as long for items to be dropped off. Processing materials in a faster timeframe so that surplus items requested for pickup are moved quicker and increasing dock efficiency at the surplus facility and the distribution center could be strategies to increase participation in this program. To do this, the University could consider hiring more staff members to increase the efficiency of this program. As well as better communication between SWAP and MDS.

c. Implementation of infrastructure across campus to effectively manage HRM for collection. Currently there is limited space available in most buildings. When designing and renovating new buildings, the campus must plan for extra space for materials management in loading docks. A great example of a well-designed loading dock on campus is Microbial Sciences on 1550 Linden Dr, which has about 931 square feet of space. Things to consider in an ideal loading dock include:
    i. Sizing of the dumpsters needed for the size of the building, then accommodate space for that buildings loading dock
    ii. Waste streams collected and how many dumpsters needed
    iii. Turning radius
    iv. Space for deliveries
    v. Space for custodial supplies
    vi. Any dock lifts needed or dock height if raised
    vii. Size of trucks using the dock and how the vehicles access the dock

d. Consider creating a transfer station/aggregation hub on campus where material would be palletized before transporting to SWAP, creating a warehouse system for SWAP to better manage all the material.

e. A renovated facility would also have space to aggregate HRM materials (like metals, wood, porcelains, textiles, mattresses, electronics, etc.), making them more

economical to properly dispose of. Explore collaboration with FP&M and overlap of HRM material collection in other areas of campus. Also, explore collaboration with EHS for materials they collect for disposal and offer back to departments that use those specific chemicals.

f. During stakeholder engagement, stakeholders with SWAP identified that some items are difficult to find end-users / markets for disposal. Expanded partnerships in the community would help to manage inventory build-up and material flow. Some items that traditionally have been hard to find a buyer for may be easier to manage with more storage and a more streamlined partnership engagement process.

g. The facility would continue to serve as a drop-off/pick-up location for all items listed in the Scope 1 section of the Methodology chart on Page 1.

h. Materials that move through the facility would continue to be assessed for their highest value: first for institutional reuse on campus, second for reuse with another state agency, third to internal auction, fourth for possible donation options for reuse off campus, and finally for de-construction into hard-to-recycle material recovery.

    i. Within the facility, there would be various opportunities to creatively extend the life of materials. These opportunities could incorporate a wide range of campus departments, from student employment opportunities to academic explorations and pursuits. These opportunities include furniture, bicycle, or electronics repairs, business proposals to use discarded materials in new product development, and mixed media art projects.

    ii. Explore options to contract with a local refurbishment company to repair / refurbish broken furniture.

    iii. Within the facility, the UW-Madison would develop a hacker/repair space. This space would operate through a partnership with Helen C. White - College Library and would help students develop practical mechanical and repair skills along with building creative projects similar to the [Waste Reclamation and Upcycling Assistant](#) at Michigan State University. More information about MSU's program can be found [here](#).

B. Physical Infrastructure - Storefront:

During stakeholder engagement sessions, many stakeholders identified that the current Storefront is not easily accessible to campus users, especially students. We suggest that the UW-Madison explore **making online inventory more user-friendly, raising awareness of the storefront within the campus community, and finding an on campus location that could serve as an extension of the Surplus Storefront.** Moreover, our stakeholders would find it helpful to have an on-campus transfer station that would serve as a pick-up service that would transfer items to SWAP.

An accessible storefront would provide a number of opportunities and benefits to the UW-Madison community, including:

a. **Increased customers to the Storefront.** The opportunity for campus staff, students and community members to access or purchase reused items rather than buying new.

     i.   Offer tours of the storefront and warehouse to staff, students and community members, as well as virtual tours.

b. **Appropriate lighting.** Adding appropriate lighting to the storefront for better visualization of the products by adding lights or windows.

c. **Revenue.** Increased accessibility and foot-traffic to the SWAP Facility could result in additional revenue for the college's materials management system via increased sales and partnerships in the community for off-loading more items.

d. **Drop-Off Location for Common Items.** Explore capacity of this facility to also serve as a drop-off and distribution center for a campus food pantry of non-perishable donated food products.

e. **Combine with Digital Infrastructure:** Explore the process of improving a digital system for centralized purchasing and the management of assets at all stages of their lifecycle. Ensure alignment with current systems

     i.   UW-Madison currently has a [SWAP Auction website](#) for selling items to the public, as well as an [internal electronic sharing system](#). However, this system could be improved so staff are more readily aware of and can take advantage of items available and needed before they are taken to SWAP.

     ii.   **Explore establishing a digital asset management system** to assist faculty in understanding the extent of resources on campus and engage with other departments to better manage, use, and share their materials and skills. The university could explore programs such as [ReCoup](#) (a component of AssetWorks - a program UW Madison already uses for purchased assets) or [Rheaply](#) that specialize in digital asset management and creating a digital marketplace for campus users. Both of these tech solutions provide all-in-one software systems for purchased assets, inventory management, and end-of-life surplus recovery. Explore opportunities to establish a State-wide system for all State of Wisconsin Facilities to utilize one shared software solution for this service.

     iii.   Through the establishment of a UW-Madison specific reuse website, the university could give students a clearer idea of the campus inventory and encourage students to trade their items independently. This could look like a [Freecycle](#) website or even updating the current [surplus website](#) to make it more user-friendly and student-inclusive, rather than just for UW-Madison Departments.

     iv.   This system could allow the campus to purchase common items in bulk and distribute them to various departments, therefore cutting down on excess or unnecessary purchases. Explore the need for stockroom expansion.

     v.   This system could also allow the campus to keep reusable items in use longer by ensuring that used items are distributed prior to new items being purchased. This would be in addition to the physical surplus system, as a method of digitizing the process of material flow and managing inventory.

     vi.   SWAP on MyUW page: Could add a SWAP tile to the MyUW page so students can go directly to the SWAP website.

C. Staffing - Surplus and HRM Management:

In order to expand and improve UW-Madison's SWAP and HRM process, stakeholders suggested adding 10-15 positions (2-3 full time managers and 8-12 student worker/part-time positions). These personnel would work either at SWAP or the proposed free/thrift store on-campus. Student personnel working at SWAP could be certified by UW Madison fleet to drive campus vehicles out to the SWAP facility, picked up on campus by SWAP staff, work remotely on the digital side of the SWAP facility,

a. Twelve more staff would be hired specifically at the SWAP facility. These members would help in transporting surplus items from campus to the Verona facility.
    i. 4-5 people to expand accepting different types of furniture
    ii. 1-2 people managers for increase in material procurement
        1. Includes handling communications between campus stakeholders about items for sale and scheduling for pick ups
    iii. 4-5 part-time employees to transport material in specialized trucks
b. At least two extra personnel would be hired to repair furniture on campus. They would work in an added carpenter shop or paint booth at SWAP. These positions would be available to students as part-time employees. Additionally, there could be opportunities for professors as hands-on learning activities either from UW-Madison or surrounding tech schools.

D. Physical Infrastructure - Free/Thrift Store:

Explore opportunities to identify a permanent location for a Campus Free Store/Thrift Store. Ideally, this would be in a spacious, open layout location that would provide central accessibility to students and the larger community. This store would be run by student employees and managed by a UW-Madison employee.

> Full completion of goals in **Sections 1C & 1H** would result in:
> **21.5** additional points
> **2.43%** increase in Scope 1 Score
> **1.05%** increase in Total Atlas Zero Waste Score

a. The Free Store would be an independent facility in a central location on campus, and would work in collaboration and partnership with SWAP as a location to process donations that can't be handled through the Free Store. The Free Store as a central location on campus will make these reuse systems attainable and accessible services to empower community reuse. Details of funding, location, staffing, operational details, etc. will need to be discussed with stakeholders.
b. The Free Store will serve as a central drop-off location for students on campus.
c. In the future, we would like to expand the capacity of move-out programs to divert as much waste as possible from the landfill, with materials collected during move-out being used to stock the Free Store. Explore establishing a pop-up free store for move-in weekend that has higher capacity for the larger volume of collected materials.

d. The Store could also provide an opportunity to stock common household items that many in the UW-Madison community often purchase online (e.g. toiletries, office supplies, etc) in order to significantly cut down on items shipped to campus in single-use packaging.

E. Physical Infrastructure - Standardized Bins and Signage:

Establish a campus-wide standardization system for collection bins and signage. Multiple examples of this can be found in PLAN's Program Case Library within the Member Hub. Here is an example of bins and signage. Explore collaborations with the City of Madison on this project.

> Full completion of goals in **Section 1E** would result in:
> **171** additional points
> **19.37%** increase in Scope 1 Score
> **8.34%** increase in Total Atlas Zero Waste Score

a. Standardization of collection bins and signage is a key component of a successful program in that it allows all campus staff, students, and visitors to clearly understand the expectations that UW-Madison has around properly handling and disposing of all material types.
   i. Standardization would include color and shape coding for bins, and universal signage for all collection and drop-off locations for items that are being donated to the campus surplus property program or disposed of via the HRM management system.
   ii. Standardization would also include clear outreach and communication strategies to train all staff, faculty, and students on how to use these new systems and what opportunities exist to extend the life of products like repair and maintenance programs, etc.
b. Stakeholders mentioned we need buy-in from the city of madison in order to use the city owned streets on campus for things like dumpsters.
c. Establish centralized disposal and recycling stations for better convenience so that these collection points are accessible to all who need them in the buildings that HRM's are commonly found (for example: e-waste collection in the library, plastic film collection by the mailroom, and nitrile glove collection in lab buildings).
d. Establish a few "sharing shelves" as donation collection systems in residence halls. These are locations where students would be able to regularly drop off or pick up small items, like office supplies, electronics, and household wares. Shelves can be purged or cleaned out monthly, quarterly, or semesterly as needed by Sustainability interns or work-study students, and items can be brought to the Free/Thrift Store (Section 1D) as a central management point for these materials.
e. Allocate staff members or student employees at high traffic disposal areas and E-waste stations to help direct which bins the items go in, which will prevent contamination issues.
   i. Include instruction signage for e-waste towers to further prevent contamination with instructions on where they can take e-waste items that are not accepted in our e-waste towers.

f. Be aware of space needed in buildings and establish requirements so we are not replacing loading docks with office spaces or storage spaces. We must make sure we have enough disposal space to allocate for the offices and classrooms in each building. Also, keep exterior spaces open and available for dumpsters and other required disposal and compost bins. Establish permanent spaces for dumpsters for each building.

g. Continue research into vendors that collect and recycle Hard-to-Recycle Materials. Maintain back-up options if a vendor contract falls through in order to avoid having to discontinue established collection programs. so that the program doesn't have to be discontinued.

F. Digital Infrastructure and Procurement Fees:

Explore the process of establishing a digital system for centralized purchasing and the management of assets at all stages of their lifecycle.

a. Establish policies that require all departments check surplus inventory before buying something new and ensure that all departments know how to send items to surplus and hard-to-recycle material collection for proper disposal.

b. Incentivize departments to purchase furniture and equipment from SWAP.

c. Explore vendors that produce products that are made from recycled materials, easily repairable, and/or have buy-back programs.

d. Require departments to purchase from manufacturers that have their products made from recycled materials and easily repairable.

e. If possible, implement a system that keeps record of capital assets and explore attaching a small fee to all capital asset purchases in order to establish a fund for sustainability efforts on campus.

    i. This system would allow the campus to purchase common items in bulk and distribute them to various departments, therefore cutting down on excess or unnecessary purchases. Explore the need for stockroom expansion.

    ii. The small fee attached to all equipment purchases would allow UW-Madison to set aside funds from the moment an item is purchased to cover the costs of material handling, transportation, off-site recycling, and/or disposal. These fees would be pooled together into a general fund and would be used towards the annual costs of the SWAP facility and staffing. This is a model that has been in place for over 30 years at The University of Kentucky.

f. This system would also allow the campus to keep reusable items in use longer by ensuring that used items are distributed before new items are purchased. This would be in addition to the physical surplus system, as a method of digitizing the process of material flow and managing inventory.

g. Establish an easier to use digital asset management system where people can see what's still available and where it is. Could be in the form of a push notification.

h. Establish a surcharge for e-waste purchases and items turned in to be refurbished

G. Policies:

Create and remodel current policies to incentivize staff and vendors to purchase sustainable products, utilize the campus

Full completion of goals in **Section 1G** would result in:
91 additional points
10.31% increase in Scope 1 Score
4.44% increase in Total Atlas Zero Waste Score

surplus property system, and properly manage HRM items.

    a. UW-Madison should consider establishing policies that:
- i. State procurement policies which encourage staff to look at campus surplus before purchasing new items.
- ii. Encourage same-type campus departments to practice centralized purchasing for bulk purchase options of commonly procured materials.
- iii. Require all new buildings to have either enough space for surplus temp storage/processing and/or a loading dock.

    b. The UW-Madison should also strengthen sustainable procurement policies with language prioritizing:
- i. EPEAT Products certified Bronze, Silver, or Gold
- ii. Leased equipment
- iii. Companies with take-back programs
- iv. Repairable products
- v. Refillable ink cartridges over disposable
- vi. Keeping current electronics in use over purchasing new
- vii. Partnering with an electronic waste recycler certified under the [e-Stewards](#) and/or the [Responsible Recycling (R2)](#) standard

    c. While the campus practices many methods of sustainable materials management for construction and demolition projects, we recommend that the campus institutionalize these practices by establishing written policies that:
- i. Prioritize rehabilitating existing buildings over building new.
- ii. Prioritize deconstruction over demolition in order to better salvage and reuse materials.
- iii. Require contractors to use the campus surplus property (for sending salvaged materials and for furnishing new buildings) and electronic waste recycling programs where practical.
- iv. Require all construction project managers to evaluate materials with the surplus property program during the early stages of planning for a new construction project. This would allow the surplus system enough time to plan logistics for large volumes of materials.
- v. Incentivize the use of existing on-campus materials and/or Surplus materials for construction projects.
- vi. Require all in-house construction and renovation projects to recycle or repurpose construction and demolition materials and building fixtures within reason.
- vii. 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 and contracts for hard-to-recycle materials where applicable.
- viii. Explore incentives for donors to fund sustainable projects.

H. Student Engagement:

Establish a thrift store with the intention to communicate to students about sustainability to build a zero waste culture on campus. Develop better communication strategies for our waste facilities and sustainability-focused organizations.

    a. Promote campus waste facilities tours (SWAP, MDS, Dane County Landfill, West Madison Agricultural Research Station, UW-Housing, Unions, and Pellitteri Waste Systems) for professor's courses and student organizations that have both virtual and in-person options

    b. Improve SWAP's communication platforms to make campus stakeholders more aware of available items

    c. Interns & Fellows: Establish opportunities for student interns and fellows to have a role in the development and maintenance of the projects listed in the Scope 1 Section.

        i. Possible projects include: building the digital management system (either researching existing asset management software products or building spreadsheet models that could be managed internally), researching outlets for material reuse and recovery, studying the materials that frequently flow through the facility to research new innovative solutions, managing work-order requests, etc.

        ii. This could be through the Sustainability Office or funded through the campus's work-study program.

        iii. Explore opportunities for student-led DIY workshops: upcycling, creative reuse, make your own products, etc.

        iv. Explore opportunities for student engagement via social media - like promoting items available at the surplus or Free/Thrift store facilities.

        v. Explore opportunities to implement a zero waste orientation for all first-year students to learn about campus sustainable materials management, understand where materials go, tour facilities, learn how to get involved, etc.

    d. Classes: Opportunities for research classes to participate in zero waste initiatives.

        i. Academic classes could explore a wide variety of integrative uses of these facilities:

        ii. Projects could include material reuse via art projects and upcycling through the Arts department, developing business plan proposals for material recovery via business classes, sociological or anthropological analysis of discarded materials, philosophical analysis of disposability, architectural analysis of commonly discarded items during construction and renovation, technological analysis of electronics and repair opportunities, sustainability life-cycle analysis of common products, etc.

        iii. This could be for academic credit through professors already engaged in these conversations.

        iv. Identify faculty who can come together to support academic research and engagement.

Scope 2 - Compost, Dishware, and Bin Standardization

Goals: Establish Campus-Wide Bin Standards, Universal Reusable To-Go Ware Programs, and Procurement Policies that streamline material flow, reduce confusion, and eliminate as much disposable waste as possible. As part of this:

- **Expand the reusable to-go ware program across campus** to all retail dining facilities, and establish incentives for students and staff to use and return them
- **Explore options to limit disposable dining ware** usage by offering reusable dining ware to all sit-down food service facilities on campus, expand the Ozzi to-go container program, and/or developing a bring-your-own-container program that is universally accepted at all facilities, including third-party vendors, athletics, and events.
- **Establish a series of bin standardization guidelines** and implement campus-wide bin standards at all facilities across campus. Before purchasing new bins, retrofit what we already have.
- **Build or partner with a composting facility** that will accept compostable ware
- **Expand compost system to all dining facilities** across campus that can accept food waste and compostable products

A. Physical Infrastructure - Expand Reusable Dishware and Reusable To-Go Container System:

Expand and improve OZZI, or other reusable dishware program, to all dining facilities and its collection points to be more accessible for participants. Additionally, transition all dining facilities to have reusable dishware if capable with single-use compostable ware option. If not, replace single-use plastics to compostable ware.

> Full completion of goals in **Section 2A** would result in:
> **134.25** additional points
> **11.5%** increase in Scope 1 Score
> **6.55%** increase in Total Atlas Zero Waste Score

a. Explore ways to transition "Ticket to Take-Out" coins to a digital substitute such as an app such as [Topango.io](). Topango is an app that allows users to check out a reusable item for an allotted amount of time by scanning it's barcode.
b. Establish the [R Cup program]() or a similar system at athletics facilities
c. Explore treating reusable to-go containers the same way that library books are treated. One or two to-go containers would be free to all users, and returns would be tracked on the Wiscard. Students would only be able to access additional clean containers once they have returned their used containers for sanitization and reuse.
   i. Create incentives to encourage participants to return their to-go containers and cups
      1. Reward participants for returning multiple items (10 or 20 in a row for example) with either a free meal or a discount. Find a solution for participants to not only use to-go ware containers because of reward.

2. Penalize participants if they don't return their container within two weeks by either charging them $10 to their Wiscard or creating a restriction period of one month to use the program

d. To-go container system would wash all containers at an their individual units and communicate between buildings about exchanges. Used containers would then be dropped off at collection bins distributed around campus (an expansion of the current reusable dish collection bins on campus), and brought to the dishwashing station for sanitization and re-distribution.

i. Or, if this is not possible, explore options for an outside party to wash increased loads of reusable dishware

e. Establish more collection points for to-go containers and cups drop off stations that are more accessible to participants, particularly for students such as outside of dining halls, and close to dishwasher stations

f. Utilize all dishwashing units across campus to clean reusable containers. Increase space at these units for additional storage and drying racks.

g. Explore establishing new policies to apply to future vendor contracts that require corporate chains to follow UW-Madison's reusable to-go ware program. Encourage current corporate chains to change from disposable dining ware to reusable.

h. Set aside additional funding for loss or replacement of reusable to-go ware.

B. Physical Infrastructure - Food Recovery:

The University's current Food Recovery programs include the Food Recovery Network (FRN) and UW Frozen Meals. These organizations are led by students, meaning that there is typically quick turnover of these clubs' members and

> Full completion of goals in **Section 2B** would result in:
> **60** additional points
> **5.14%** increase in Scope 1 Score
> **2.93%** increase in Total Atlas Zero Waste Score

leaders, which makes it hard to sustain these organizations' goals. They currently work out of and serve students at The Crossing, which is an on campus building that wouldn't have the space to store and serve an increase in recovered food.

The University Unions are also participating in food recovery by donating uneaten food from catering events. This food is donated to Community Action Coalition as well as Healthy Foods. Currently the unions have no system in place for tracking the amount and types of foods that are recovered and donated, which makes it more difficult to analyze the progress of this community partnership.

To mitigate these challenges, UW Madison will work towards exploring opportunities to establish paid student positions within these organizations for continued success and duration of their progress. FRN and UW Frozen Meals should also be expanded to be able to recover food from all campus dining halls, Badger Markets, and on campus events. Additionally the Unions should start using a tracking program to better understand how much food is actually recovered and donated.

a. Create additional space and infrastructure where UW Frozen Meals and FRN can freeze and store their recovered food. The University could do this by obtaining

funding to install shared use freezers and microwaves in each residence hall on campus. This would then encourage students to utilize these free campus services more.

b. Expand the current partnership with [Bayview Foundation](#) and other community partners to accept donated foods when it can't be used on campus.

c. Begin tracking what food and how much food is donated from UW catering to the community partners Community Action Coalition and Healthy Food.

d. Work with University Dining to further develop policies for limiting food waste.

e. University Catering services currently prepares 10% more food than what is ordered for events. The University could work with catering to reduce the excess food prepared to 2% in order to limit the food wasted.

C. Physical Infrastructure - Compost Collection:

UW-Madison is currently collecting "back-of-house" compost from select on-campus locations and sending it to the West Agriculture Research Station. This is a [year-long trial run](#) where only a clean stream of food scraps is

Full completion of goals in **Section 2C** would result in:
113 additional points
9.68% increase in Scope 1 Score
5.51% increase in Total Atlas Zero Waste Score

accepted - meaning there is a low tolerance for contaminated compost collection so public-facing compost bins are not being collected for this pilot.

UW-Madison will explore expansion of campus-wide compost collection for public-facing bins in residence halls, academic buildings, athletic facilities, and pop-up collection for major events. To be able to expand collection efforts, UW-Madison will explore a possible partnership with the Dane County Landfill as an option for a large-scale food waste outlet. This partnership would complement Dane County's plan for developing a [Sustainability Campus](#), which includes establishing an organic composting site within the landfill.

a. The University should explore partnering with the Dane County Landfill on advancing their current plans for a larger scale composting program. The city's current plans for this compost is that it can be used to make [nutrient rich soil amendment for local farmlands and gardens.](#)

b. Identify opportunities to purchase and operate an [in-vessel composting facility](#) on UW-Madison property. This facility would both divert organic material from campus while working to enhance on campus research with an academic group. This would be similar to the current work of Princeton University's [S.C.R.A.P Lab](#). Ensure that these types of technical solutions have capacity to handle "front-of-house" compost collection and can process [certified compostable](#) disposable products.

c. Identify a physical location for this composting facility - possibly the [Arboretum](#), [Walnut Street Greenhouse](#), or the UW Housing's [Greenhouse Learning Community](#). Explore [technological and equipment options](#) for how to make this facility efficient and effective at managing the compost process.

d. Fertilizer and compost soil created from this facility would be sold to the public to provide revenue for maintaining the compost facility.

e. Expand staff capacity to manage this facility.
f. Switch all disposable products (that haven't already been switched to reusable) to BPI Certified compostable products for proper disposal in Dining halls, Unions, Badger Markets, Athletic facilities, and pop up locations for major events. Assess all currently purchased compostable products and make recommendations to procurement.
g. Establish a policy to require vendors to utilize only reusable and/or compostable dining ware at their locations. This may not be possible for current vendor contracts that are already in place, but should be established as a requirement for all future RFP processes and applied to the execution of all new vendor contracts. This will continue to ensure that the compost stream is uncontaminated with single-use disposable plastics coming from campus vendors.
h. Increase staff capacity to manage the labor of compost collection across campus.
i. Provide required trainings for students, staff and faculty. Develop marketing and signage that can be updated as needed.
j. Create a composting course where the students would be required to help tend to the compost around campus. Create student composting jobs or internships, as well as research opportunities.

D. Physical Infrastructure - Standardized Bins and Signage:

Currently there are no standard regulations for garbage and recycling bins on campus, which creates confusion on the purposes of each bin. This then leads to staff and students disposing of their items incorrectly, leading to contamination issues within the trash and recycling streams.

Full completion of goals in **Section 2D** would result in:
71.75 additional points
6.15% increase in Scope 1 Score
3.50% increase in Total Atlas Zero Waste Score

To eliminate this confusion and contamination we suggest that the University establishes a campus wide standardization system for collection bins and signage. Explore collaborations with the City of Madison on this project.
a. Standardization of collection bins and signage is a key component of a successful program as it allows all campus staff, students, and visitors to clearly understand the expectations that UW-Madison has around how to properly handle and dispose of different types of materials.
b. This would include standardizing the color, shape, and icons present on bins for commonly collected streams like compost, recycle, and landfill, as well as for unique collection programs like liquid collection and reusable dishware/to-go ware. An example bins standardization guide from Dalhousie University can be found here.
c. Establish more centralized locations where trash and recycling can be collected in office spaces, classrooms, dining facilities, athletics, and residence halls.
d. Departments with office spaces on campus could also establish a mini bin system where each office room would have its own bin. The user would then empty their bin in the centralized location. This would make the stream collection system more efficient and it wouldn't require additional staff.

e. Bin standards would be outlined in procurement policies so that bins across all departments on campus are identical in color, shape, and signage.
    i. These policies would also urge departments to retrofit their old bins to fit the new set standards.
f. There should be guidance provided on standardization for back-of-house systems management and the length of time for collection to mitigate smells and pests.
g. After procurement policies are established and as materials across campus are streamlined, establish a plan to roll out new signage. The plan would provide details on bins in classrooms, offices, event spaces, and all other campus locations. An example roll-out process from University of Michigan can be found here.

E. Staffing - Dishwashing and Compost Collection
Increased capacity for reusable to-go containers and compost collection will likely require additional staffing needs.
a. Explore whether dishwashing staffing capacity would need to be expanded within Campus Dining, or whether this would need to be contracted out.
b. Explore how streamlined workflows and efficiency management could free up staff capacity to increase collection streams for items like composting and dish collection. For example, switching to a mini bin system in offices and classrooms would result in significantly less time needed for staff to collect small bins from hundreds of locations. This would also reduce the cost of bag liners for all of those locations.

F. Procurement Policy - Environmentally Preferable Purchasing:
Currently, the University follows a few procurement policies that are department specific, but there's no set policies that are campus wide. For example most janitorial/cleaning products are purchased in bulk which saves money and resources.

Full completion of goals in **Section 2F & 2G** would result in:
316.5 additional points
27.11% increase in Scope 1 Score
15.44% increase in Total Atlas Zero Waste Score

Even with this one department's policies, the University should establish policies that apply to all food service facilities, campus departments, and vendors that state preferences for:
a. Packaging and products made from compostable or post consumer recycled materials
b. A restriction on plastic bags and polystyrene materials.
c. Continued purchasing of bulk communal cleaning supplies in residence halls that can be shared between students when needed.
d. Bulk purchasing and the elimination of individually wrapped single-serve items (napkins, oyster crackers, ketchup, mustard, toothpicks, etc.)
e. Prioritize installing water bottle refill stations throughout campus to eliminate the need for plastic water bottles.
f. Plastic Reduction Pledge: Sign PLAN's Break Free From Plastics Campus Pledge- A Presidential commitment to many of the long-term goals outlined in this document.

g. A restriction on disposable merchandise (SWAG) in favor of products that are durable and reusable, similar to the [University of Massachusetts Lowell](#).

G. Events Infrastructure and Policies:

The University's Office of Sustainability has a team of student interns that lead the [Green Events](#) program. This program helps event hosts reduce the environmental impacts of their events by looking at venue, decor, communications, transportation, food, and waste. Since May of 2020, this team has been at a halt due to the Covid pandemic and lack of on campus events happening.

We recommend that the University establishes event policies and infrastructure logistics for [zero waste events](#). This would include events that are held both inside University owned buildings as well as outside on campus premises.

The University should:

a. Establish a process for how events of varying sizes, budgets, and purposes can access reusable dishware/to-go ware.
b. Establish zero waste guidelines for bringing vendors and caterers to campus.
   i. Explore reusable or compostable alternatives to single-use plastic silverware and dining ware.
   ii. Ensure that the same zero waste requirements that apply to on-campus vendors also apply to outside vendors so that they do not receive a cost advantage, especially with catering.
c. Establish a process for how event hosts can request additional infrastructure like extra compost bins and more standardized bin stations for large events.
d. Develop zero waste event policies, guidelines and resources that clearly explain how all members of campus (student organizations, campus departments, visitors) can host a zero waste event.

H. Student & Staff Engagement

Create mandatory courses and training to educate and orient all students and staff to the campus's materials management infrastructure and practices.

a. Establish accessible, educational resources for students and staff to learn about campus sustainability
   i. Require new students and staff to take a campus sustainability CANVAS course that focuses on waste management. Ensure these sessions are available in multiple languages for accessibility purposes and that they are consistent with all student, staff, and faculty training. This course will include:
      1. How to properly dispose of HRMs, recyclables, compost, and trash
      2. How to donate appliances and clothes
      3. Facilities and student organizations on campus that offer repair or donation services
      4. Reoccuring zero waste events such as move-in and move-out
      5. Resources to learn about UW-Madison's waste management such as SWAP

        ii.   Explore implementing mandatory training for new employees to provide education on waste management and reduction efforts on campus. This would create cohesion and increase interdepartmental communication. Ensure these sessions are available in multiple languages for accessibility purposes and that they are consistent with all student, staff, and faculty training.

    b. Create educational 1-hour long or shorter seminars/workshops for professor's courses and student organizations to request from various UW-Madison waste management facilities that can be both virtual or in-person

        i.   Increase zero waste sustainability events for campus stakeholders to attend

    c. Develop strategies to better advertise and recruit students for UW Housing and Dining employment with an emphasis on its importance to sustainability.

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University of Wisconsin-Madison

Spring 2021

ATLAS Zero Waste™ Certification
A Program of PLAN

Total Score: 47.9%

SYSTEM SCORES | **PROGRAM SCORES**

SCOPE 1

TotalScore: **53.8%**

ATLAS SCOPE 1

BRONZE — **67.3%** Infrastructure
25.9% Bin Standardization
51.8% Policy
Additional Credit **+3**

60.7% Surplus Property
44.5% Hard-To-Recycle Materials
31.6% Construction & Renovation
54.9% Electronic Waste
73.9% Hazardous & Universal Waste (SILVER)

SCOPE 2

TotalScore: **42.9%**

ATLAS SCOPE 2

38.9% Infrastructure
50.6% Bin Standardization
39.6% Policy
Additional Credit **+36**

39.3% Purchasing & Policies
35.4% Reusable Dishware
43.9% Food Waste Reduction & Food Recovery
44.8% Compost & Recycling System

ATLAS Zero Waste Certification A Program of PLAN™

Atlas Scorecard Methodology

The Atlas Zero Waste Assessment is a holistic, largely qualitative measurement of the campuses capacity to achieve zero waste across the entire system. The scorecard and scoresheets in this Appendix were calculated through the Atlas Zero Waste Stage 1 Assessment® that was referenced and linked on Page 1 of this Vision. There you can see further detail of the results of the Stage 1 Assessment. The Atlas Zero Waste Assessment® is developed and managed by the [Post-Landfill Action Network](#) (PLAN). Our assessment looks at every possible material that can exist on a college campus from purchase to disposal, and compares that to every unique facility that manages those materials on each campus we assess. The assessment divides material management into two different scopes (illustrated in the diagram on Page 1), based on how those materials are typically procured and used, and ultimately how those materials are managed when it comes time to either reuse, repair, compost, recycle, or dispose of them.

All questions in the Checklist ask about the existence of systems, infrastructure, and policy that demonstrate sustainable materials management, based on best practices that the Atlas team has observed and researched on college campuses across the U.S. Each question is assigned a point value based on where the practice would fall on the [zero waste hierarchy](#). A more detailed explanation of the scoring methodology can be found on our [Atlas Certification Scores](#) page. If you would like to see your campus's internal audit checklist for a point-by-point breakdown, please email [atlas@postlandfill.org](#).

KEY to Colorcoding

	HIGH PRIORITY: ≥5.0% of total points remaining
	MED PRIORITY: 1.0-4.9% of total points remaining
	LOW PRIORITY: ≤1.0% of total points remaining

	Points Earned	Points Possible	Points Left to Earn			Strategic Vision Section
			Points Remaining	% of Scope Score*	% of Total Score*	
Scope 1: Surplus Property & HRM	472	883	411	46.55%	20.04%	
Surplus Property	127.5	210	82.5	39.29%	4.02%	
Surplus Program Policies & Communication	47.5	75	27.5	3.11%	1.34%	1G
Surplus Program & Managed Materials	51.5	81	29.5	3.34%	1.44%	1A / 1B / 1C / 1F
Reuse & Repair of Departmental Surplus Items	15	19	4	0.45%	0.20%	1A / 1B / 1C / 1F
Reuse & Sharing of Student Items	13.5	35	21.5	2.43%	1.05%	1D / 1H
Hard to Recycle Materials (HRM)	120.5	271	150.5	55.54%	7.34%	
HRM from Specialized Facilities	102	180	78	8.83%	3.80%	1A / 1B / 1C / 1F
HRM Aggregation & Collection Point Accessibility	18.5	91	72.5	8.21%	3.54%	1E
Construction & Renovation	18	57	39	68.42%	1.90%	
Construction & Renovation Policies	18	57	39	4.42%	1.90%	1G
Electronic Waste	141	257	116	45.14%	5.66%	
Policy Requiring Staff to Send E-Waste to Surplus/Recycling	22.5	26	3.5	0.40%	0.17%	1G
Procurement Policies for Purchase, Takeback & Recycling	6	27	21	2.38%	1.02%	1G
Electronics Repair & Recycling	95	111	16	1.81%	0.78%	1A / 1B / 1C / 1F
E-Waste Collection Infrastructure	17.5	93	75.5	8.55%	3.68%	1E
Hazardous Materials	65	88	23	26.14%	1.12%	
Hazardous Waste Collection & Management	65	88	23	2.60%	1.12%	1E

			Points Left to Earn			
	Points Earned	Points Possible	Points Remaining	% of Scope Score*	% of Total Score*	Strategic Vision Section
Scope 2: Compost, Food, and Plastics	**472**	**1167.5**	**695.5**	**59.57%**	**33.92%**	
Purchasing & Policies	**200.5**	**510**	**309.5**	**26.51%**	**15.09%**	
Adherence to Campus Procurement Policies	69	176	107	9.16%	5.22%	2F / 2G
Policies That Favor Bulk Products Over Single-Use	64.5	178	113.5	9.72%	5.54%	2F / 2G
Institutionalizing Zero Waste Goals & Plans	18	51	33	2.83%	1.61%	2F / 2G
Paper Reduction & Reuse Initiatives	49	105	56	4.80%	2.73%	2F / 2G
Compost/Recycling & Bin System	**141.25**	**315**	**173.75**	**14.88%**	**8.47%**	
Composting Program	23.5	47	23.5	2.01%	1.15%	2C
Compostable Dining Ware & Disposables	6.5	96	89.5	7.67%	4.36%	2C
Bin Standardization	70.25	128	57.75	4.95%	2.82%	2D
Recycling	41	44	3	0.26%	0.15%	2D
Reusable Dining and To-Go Ware	**83.25**	**235.5**	**152.25**	**13.04%**	**7.43%**	
Accessibility Policy	7	9	2	0.17%	0.10%	2F / 2G
Reusable Dining Ware at Sit-Down Eateries	39.25	94.5	55.25	4.73%	2.69%	2A
Reusable To-Go Ware Program	19	87	68	5.82%	3.32%	2A
Hydration Station Availability	15	20	5	0.43%	0.24%	2F / 2G
BYO Program	1	12	11	0.94%	0.54%	2A
Collection Locations for To-Go Ware	2	13	11	0.94%	0.54%	2D
Food Waste Reduction & Food Recovery	**47**	**107**	**60**	**5.14%**	**2.93%**	
Food Recovery Program	16.5	46	29.5	2.53%	1.44%	2B
Food Waste Reduction Initiatives & Education	30.5	61	30.5	2.61%	1.49%	2B

	Points Earned	Points Possible
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

Strategic Vision Section	Gap Points	Percent of Scope Score	Percent of Total Score
1A / 1B / 1C / 1F	127.5	14.44%	6.22%
1D / 1H	21.5	2.43%	1.05%
1E	171	19.37%	8.34%
1G	91	10.31%	4.44%
2A	134.25	11.50%	6.55%
2B	60	5.14%	2.93%
2C	113	9.68%	5.51%
2D	71.75	6.15%	3.50%
2F / 2G	316.5	27.11%	15.44%