HUMBOLDT

ATLAS ZERO WASTE CAMPUS ASSESSMENT 2022

Post-Landfill Action Network

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INTRODUCTION

In Fall 2022, California State Polytechnic University, Humboldt worked with the Post-Landfill Action Network (PLAN) to support Zero Waste Fellow, Hannah Dominguez '23, to conduct a holistic assessment of the campus' waste management system. Hannah used PLAN's Atlas Zero Waste Program, a program 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 policy, programs, and infrastructure, illustrates ideal material flows throughout a campus, and proposes a few broad recommendations to fill the gaps identified during the assessment.

This report was prepared for Humboldt 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 Humboldt.

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ASSESSMENT PROCESS

Hannah was 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. She used PLAN's Atlas Stage 1 Campus Programs Checklist to complete in-depth interviews with 44 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 at the end of this report.

Following data collection, Hannah 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

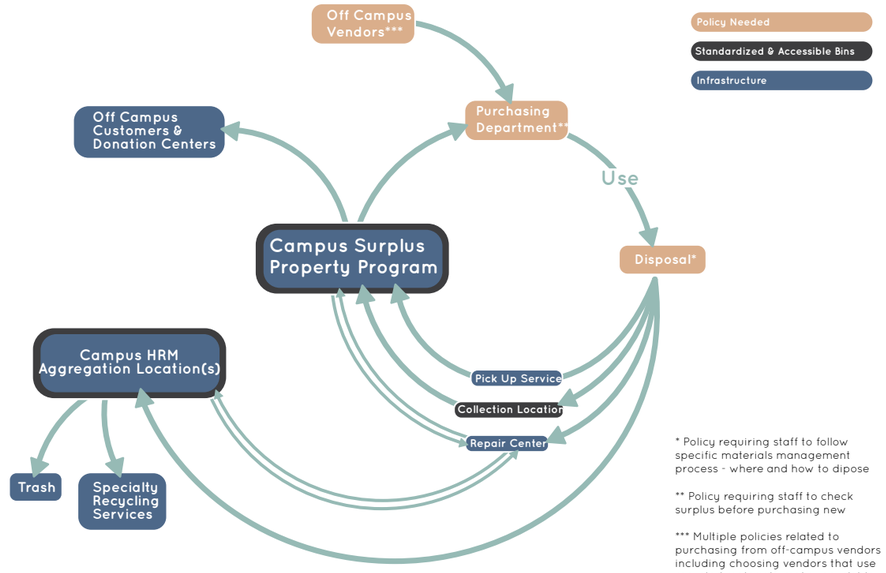
SCOPE 1 HARD GOODS Surplus Property and Hard-to-Recycle Materials Materials the campus has direct control over	**SCOPE 2 SOFT GOODS** Food and Single-Use Materials Materials the campus purchases, but has limited control over which bin the material is placed in
Electronics	Food Waste
Furniture	Food Packaging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

The Atlas Zero Waste 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 **campus 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**.

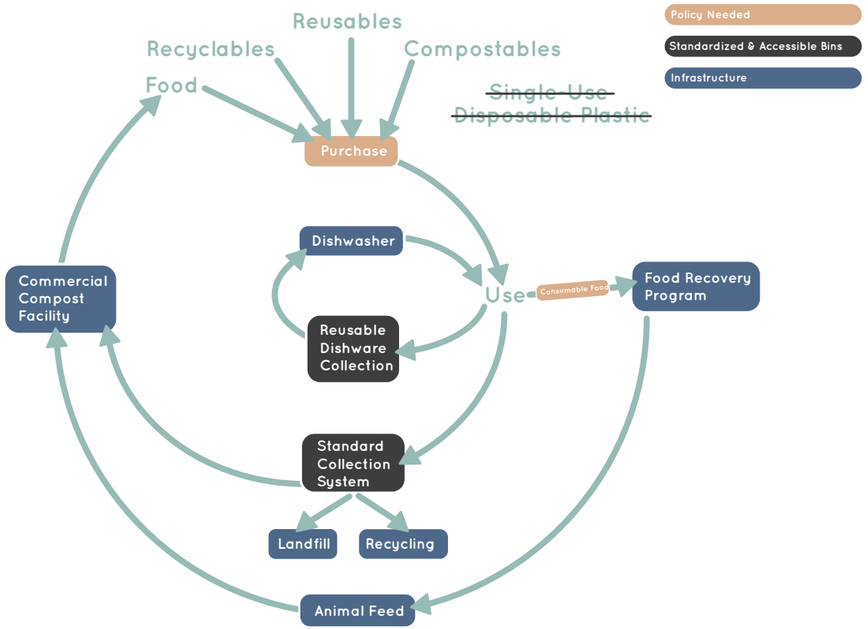
Scope 1 - An Example of Material Flow Options through an Idealized Version of a Hard Goods System Map



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 Atlas Zero Waste 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 residential 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.

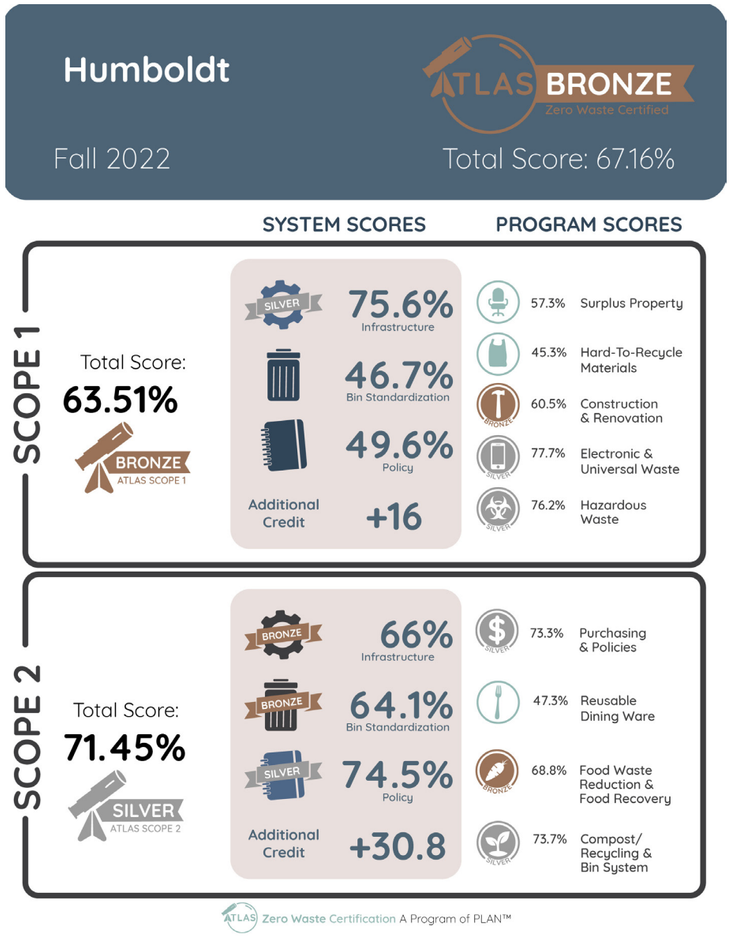
PROGRAM SCORING

Program Scoresheet: 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 on page 9 (PDF linked here), such as reusable to-go ware or residential hall initiatives. Note that what is defined as "programs" are generally smaller-scale projects or components of large systems, and less so campus-wide infrastructure.

Tables & Additional Programs: The majority of the assessment's findings are presented in tables and can be interpreted as shown below. 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. Additional Programs are defined as programs that go above and beyond standard waste management.

yes	full points awarded, i.e. 100% adoption across all facilities
partial	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

HUMBOLDT'S ZERO WASTE SCORECARD



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PROGRAM SCORESHEET

	Points Earned	Points Possible
Scope 1: Surplus Property & Hard-to-Recycle Materials (HRM)	**985.5**	**1577**
Surplus Property	**204.5**	**357**
Surplus Program Policies & Communication	48	133
Surplus Program & Managed Materials	75	119
Reuse & Repair of Departmental Surplus Items	51	57
Reuse & Sharing of Student Items	30.5	48
Hard-to-Recycle Materials (HRM)	**214.5**	**473**
HRM from Specialized Facilities	166	272
HRM Aggregation & Collection Point Accessibility	48.5	201
Construction & Renovation	**37.5**	**62**
Construction & Renovation Policies	37.5	62
Electronic & Universal Waste	**369**	**475**
Policy Requiring Staff to Send E-Waste to Surplus/Recycling	27.5	39
Procurement Policies for Purchase, Takeback & Recycling	13.5	24
Electronics Repair & Recycling	199	215
E-Waste Collection Infrastructure	129	197
Hazardous Waste Collection & Management	**160**	**210**
Hazardous Waste Collection & Management	160	210

Scope 2: Compost, Food, and Plastics	**850.5**	**1233.5**
Purchasing & Policies	**439.5**	**600**
Adherence to Campus Procurement Policies	212	244
Policies That Favor Bulk Products Over Single-Use	131.5	216
Institutionalizing Zero Waste Goals & Plans	45	66
Paper Reduction & Reuse Initiatives	51	74
Compost/Recycling & Bin System	**227.75**	**309**
Composting Program	39	41
Compostable Dining Ware & Disposables	42	68
Bin Standardization	103.25	154
Recycling	43.5	46
Reusable Dining Ware & To-Go Ware	**88.25**	**186.5**
Accessibility Policy	0	12
Reusable Dining Ware at Sit-Down Eateries	36.25	37.5
Reusable To-Go Ware Program	19.5	85
Hydration Station Availability	28	28
BYO Program	3	19
Collection Locations for To-Go Ware	1.5	5
Food Waste Reduction & Food Recovery	**95**	**138**
Food Recovery Program	42	67
Food Waste Reduction Initiatives & Education	53	71

Additional Credit	**51.5**	**210.5**
Additional Credit - Surplus Sharing Initiatives	11	34
Additional Credit - Hard-to-Recycle Material	2	34
Additional Credit - Hard Goods Reuse	3	5
Additional Credit - Reusable Dishware, To-Go Ware, BYO	5.5	47.5
Additional Credit - Food Recovery & Waste Minimization	0	0
Additional Credit - Compost	3	10
Additional Credit - Education	24.5	49
Additional Credit - Soft Goods Policies	0	4
Additional Credit - Liquid Collection	2.5	27

PLAN's Atlas Zero Waste project has found so far that the average campus scores 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.

A detailed breakdown of the campus' points can be found in the Campus Programs Checklist.

REVERSE PROGRAM SCORESHEET

	Points Earned	Points Possible	Points Remaining	% of Scope Score*	% of Total Score*
Scope 1: Surplus Property & HRM	**985.5**	**1577**	**591.5**	**37.51%**	**21.05%**
Surplus Property	**204.5**	**357**	**152.5**	**42.72%**	**5.43%**
Surplus Program Policies & Communication	48	133	85	5.39%	3.02%
Surplus Program & Managed Materials	75	119	44	2.79%	1.57%
Reuse & Repair of Departmental Surplus Items	51	57	6	0.38%	0.21%
Reuse & Sharing of Student Items	30.5	48	17.5	1.11%	0.62%
Hard to Recycle Materials (HRM)	**214.5**	**473**	**258.5**	**54.65%**	**9.20%**
HRM from Specialized Facilities	166	272	106	6.72%	3.77%
HRM Aggregation & Collection Point Accessibility	48.5	201	152.5	9.67%	5.43%
Construction & Renovation	**37.5**	**62**	**24.5**	**39.52%**	**0.87%**
Construction & Renovation Policies	37.5	62	24.5	1.55%	0.87%
Electronic Waste	**369**	**475**	**106**	**22.32%**	**3.77%**
Policy Requiring Staff to Send E-Waste to Surplus/Recycling	27.5	39	11.5	0.73%	0.41%
Procurement Policies for Purchase, Takeback & Recycling	13.5	24	10.5	0.67%	0.37%
Electronics Repair & Recycling	199	215	16	1.01%	0.57%
E-Waste Collection Infrastructure	129	197	68	4.31%	2.42%
Hazardous Materials	**160**	**210**	**50**	**23.81%**	**1.78%**
Hazardous Waste Collection & Management	160	210	50	3.17%	1.78%
Scope 2: Compost, Food, and Plastics	**850.5**	**1233.5**	**383**	**31.05%**	**13.63%**
Purchasing & Policies	**439.5**	**600**	**160.5**	**13.01%**	**5.71%**
Adherence to Campus Procurement Policies	212	244	32	2.59%	1.14%
Policies That Favor Bulk Products Over Single-Use	131.5	216	84.5	6.85%	3.01%
Institutionalizing Zero Waste Goals & Plans	45	66	21	1.70%	0.75%
Paper Reduction & Reuse Initiatives	51	74	23	1.86%	0.82%
Compost/Recycling & Bin System	**227.75**	**309**	**81.25**	**6.59%**	**2.89%**
Composting Program	39	41	2	0.16%	0.07%
Compostable Dining Ware & Disposables	42	68	26	2.11%	0.93%
Bin Standardization	103.25	154	50.75	4.11%	1.81%
Recycling	43.5	46	2.5	0.20%	0.09%
Reusable Dining and To-Go Ware	**88.25**	**186.5**	**98.25**	**7.97%**	**3.50%**
Accessibility Policy	0	12	12	0.97%	0.43%
Reusable Dining Ware at Sit-Down Eateries	36.25	37.5	1.25	0.10%	0.04%
Reusable To-Go Ware Program	19.5	85	65.5	5.31%	2.33%
Hydration Station Availability	28	28	0	0.00%	0.00%
BYO Program	3	19	16	1.30%	0.57%
Collection Locations for To-Go Ware	1.5	5	3.5	0.28%	0.12%
Food Waste Reduction & Food Recovery	**95**	**138**	**43**	**3.49%**	**1.53%**
Food Recovery Program	42	67	25	2.03%	0.89%
Food Waste Reduction Initiatives & Education	53	71	18	1.46%	0.64%

	Additional Credit	51.5	210.5
	Additional Credit - Surplus Sharing Initiatives	11	34
	Additional Credit - Hard-to-Recycle Material	2	34
	Additional Credit - Hard Goods Reuse	3	5
	Additional Credit - Reusable Dishware, To-Go Ware, BYO	5.5	47.5
	Additional Credit - Food Recovery & Waste Minimization	0	0
	Additional Credit - Compost	3	10
	Additional Credit - Education	24.5	49
	Additional Credit - Soft Goods Policies	0	4
	Additional Credit - Liquid Collection	2.5	27

*This represents the maximum % boost to the Scope

KEY to Colorcoding	
	HIGH PRIORITY: ≥3.0% of total points remaining
	MED PRIORITY: 1.0-2.9% of total points remaining
	LOW PRIORITY: ≤1.0% of total points remaining

SUMMARY RECOMMENDATIONS

We recommend that Humboldt gather a Zero Waste Task Force (ZWTF) to review this report. Following that review, we recommend working collaboratively with all stakeholders in these groups to discuss and build a strategic vision to address system-wide solutions, using this report to inform a “Zero Waste Roadmap” that directly informs the University's long-term strategic goals. The established vision may outline ambitious 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 ZWTF should aim to develop a timeline to achieve measurable progress towards the following recommendations:

SCOPE 1

- Establish a **permanent surplus property facility** that has the capacity to handle large volumes of material flow during busy times of the year (move-out, large renovation projects, etc.) This facility should have significant storage and aggregation space as well as loading dock capacity.
  - Expanding the breadth of materials the program is able to collect to allow for greater on-campus circularity of items.
  - Open this program up to students and the broader Humboldt campus community.
  - Further, surplus facilities that follow best practices also offer educational and learning opportunities as a site of academic research and student jobs. An ideal space would have **repair stations**, electronics and furniture **deconstruction facilities**, art studio space, etc. The surplus facility should serve as a **sustainable materials management lab** to the campus community, and offer **workshops**, programs, and **educational tours**.
    - To encourage campus staff to not discard items, transportation of goods to and from this space should be offered as a **free service** to campus staff and students.
- Practice sustainable management of university property by repairing equipment instead of buying new, **sharing** materials across campus by listing available shared resources online, and **reusing** or **donating** equipment and materials off-campus or through Surplus Property.
- Encourage same-type campus departments to practice **centralized purchasing** for bulk purchase options of commonly procured materials.
- Establish sustainable **construction and renovation** policies that require the use of the campus surplus property and electronic waste recycling programs when discarding items, as well as when selecting furniture and equipment for newly renovated facilities.
  - Explore the addition of policy language to require reusable materials in construction - such as reusable air filters and modular carpet squares or the reuse of previously deconstructed materials like brick, lumber and installed fixtures.
  - Add language requiring **deconstruction over demolition** whenever feasible. Prioritize the on-campus reuse of building materials and establish systems to collect, aggregate and recycle all non-reusable materials.
- Expand **hard to recycle material (HRM)** management and recycling, especially within specialized facilities. Decrease reliance and use of single-use materials across campus. Where possible, use reusable or compostable materials in their place.
  - Increasing accessibility of HRM and e-waste collection beyond staff members by establishing year-round collection points in residence halls and other high-traffic areas.
- Establish collection locations for **hard to recycle materials**, such as electronics, batteries and lightbulbs, and soft plastics like plastic film or food wrap, at **aggregation points** across campus, including residence halls, and ensure they are accessible and communicated to students.
  - The surplus facility can also serve as a site where hard to recycle materials can be aggregated for industrial collection and recycling.
- We recommend standardizing and documenting the **electronics recycling** process and ensuring that all staff are well-informed of these expectations.
- Establish and communicate sustainable procurement policies for electronics with language prioritizing:
  - EPEAT Products certified Bronze, Silver, or Gold
  - Leased equipment
  - 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.

[1] The University Surplus Property Association is a fantastic resource and network for campuses looking to implement or improve their surplus property programs.

SCOPE 2

- Establish a **3-bin collection system** with **clear and standardized signage for trash, recycling, and compost.**
  - Collated waste streams may be efficient for collection but they are not efficient on the back-end of materials management diversion efforts. Food waste and non-recyclable plastics are a significant contaminant to the recycling process, and mechanical sorting systems at Materials Recovery Facilities (MRF's) don't produce high-value recycling because the streams have such high risks of contamination.
  - Similarly, composting at MRF's that have a depackager can be a challenge and compostable disposable products are often treated as trash rather than compost. It is an emerging best practice across the country to not consolidate waste streams so this recommendation is also about education, and creating systems to sort waste on campuses so that students do not become accustomed to putting all of their waste in one bin when most other facilities don't operate this way.
- Create a coordinated and communicated **reusable to-go ware program** that can function across the entire campus.
  - Have dishwashers at all campus eateries to enable the use of reusable dishware.
  - Collection locations should be accessible across campus to encourage use of the program and a higher return rate of the containers. Drop-off for to-go ware is currently only accepted at the Commons Dining Hall.
  - As the program is being developed, Humboldt should encourage students to bring their own reusable containers.
- Humboldt does not offer snacks in bulk at the dining facilities on campus. We recommend the University explore options for installing **bulk snack bins** in the eateries, convenience stores, athletics concessions, and at on-campus events, along with expanding reusable to-go container options for bulk products in order 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.[1]
- Establish a **zero waste events guide** in line with the guidelines outlined in the Break Free From Plastic Pledge.[2]
- Increase communication and collaboration between existing student organizing around zero waste and staff/faculty:
- Create more compensated opportunities for students to be involved in sustainability projects and planning committees.
- Increase funding for waste reduction infrastructure and staffing.
- Integrate a zero waste session for new students into orientation and continue creating academic curriculum that addresses zero waste.

Additional resources to aid your campus in zero waste programming can be found on PLAN's Member Hub; these include manuals advising on waste reduction programs, case studies on best practices gathered from different campuses, Beyond Waste Leadership Certification training, partner discounts on products and services such as reusable to-go boxes and surplus property asset management platforms, and free virtual events for member campuses. Campuses that are interested in further exploring strategic planning around campus-wide zero waste are encouraged to consider a Stage 2 Atlas engagement with PLAN.

[1] 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.

[2] See PLAN's manual on Zero Waste Events as a guide.

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

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.)	yes
Textiles (clothing, uniforms, etc.)	partial
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	yes
Lab equipment*	yes
Medical supplies (e.g. crutches)*	partial
Bikes & bike parts	yes

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

The campus has the full capacity to collect and manage 11 of 13 assessed surplus property items for reuse. Stakeholders reported difficulties with not being able to see the condition of the item before selection, and noted it is difficult to choose surplus over buying new because of this hindrance. Despite there being a policy requiring staff to check surplus, only 6 of the 41 interviewed stakeholders indicated that they knew of the policy and had used it. Another 8 stakeholders responded saying they are unaware of policy but they have used the system in the past. We recommend improving the campus's capacity to manage surplus property by establishing a digital asset management system.

Students, Staff, Faculty, and the larger campus community at Cal Poly Humboldt have access to various programs to donate, buy, and repair items. WRRAP (Waste Reduction and Resources Awareness Program) is an umbrella program that houses various waste related on-campus programs, such as ROSE (Reusable Office Supply Exchange), Donation Dash, Compost Squad, and the Bicycle Learning Center (BLC). ROSE is a year-long program that is open to the campus community and that also works with community partners.

Other programs are run seasonally, such as OhSNAP! which runs pop up thrift shops in the fall for students returning to campus. During the rest of the year, OhSNAP! collects food from The J Dining Hall and brings it to the on-campus Food Pantry. This program offers fresh fruits and vegetables and is able to provide delivery for those who are unable to visit in person. Humboldt also captures materials during their move out program, Donation Dash, through WRRAP, OhSnap!, and local charities.

There is also CCAT (Campus Center for Appropriate Technology), which is a student-led, student-funded, and student-staffed organization that prioritizes student-led projects, such as clothing swaps, workshops, and concerts that are focused on living gently on the Earth. This organization uses their building and surrounding grounds and garden to educate people on ways to live with a focus on sustainability. CCAT focuses on reusing and reinventing materials from the salvage yard and surplus facility. They also offer 1 credit courses that are facilitated by the student staff. Students can use various carpentry tools to repair, renew, or modify pre-existing items.

The University owns an off-campus warehouse to accommodate their surplus needs, although with the current number of programs, and expected growth in circulation of pre-existing materials, the University should consider future opportunities for expanding the space these programs currently occupy. Furthermore, there are opportunities for reuse and repair on campus. The automotive shop is responsible for fleet repair and maintenance. When possible, the Information Technology (IT) center is able to provide electronic repairs.

Students, staff, and faculty are provided with access to a secure platform, Campus Wall, to buy and sell personal belongings that cannot be captured through the aforementioned program and initiatives. This platform aims to capture the remaining materials that are outside of the campus' direct control.

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 (Items like pipette tips, etc are usually not placed in a normal recycling bin.)	yes
Lab glass (Lab glass is Borosilicate glass and is usually not placed in a normal recycling bin.)	yes
Plastic film & bags (Items like bubble wrap, plastic wrap, air packages are usually not placed in a normal recycling bin.)	yes
Styrofoam & packing peanuts	yes
Rigid plastics (e.g. tubes, pots, pesticide containers)	no
Rubber gloves	no
Scrap metal	yes
Wood and/or sawdust	yes
Concrete	yes
Brick	yes
Drywall	yes
Roof shingles	yes
Porcelain (e.g. sinks, toilets, tubs, etc.)	yes
Textiles	yes
Carpet	yes
Mattresses	yes
Plastic signage	no
Wood pallets	yes
Cooking oil	yes
HVAC air filters	no
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)	partial
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

This section measures the campus's capacity in terms of infrastructure, services, and staff to fully capture Hard-to-Recycle Materials (HRM) from all departments and locations on campus with the intended purpose of aggregating those items for economical recycling of them through industrial facilities. HRMs exist in different pockets and departments of Cal Poly Humboldt's campus, and are more efficient and cost-effective to manage at campus-scale via a campus-wide system.

The campus has the capacity to collect 36 of the 40 assessed materials for specialized recycling or disposal. Across campus, there is evidence of disjunctive disposal of materials. Some facilities have specific drop-off locations for materials, while others dispose of the same material through reuse and recycling or sending it to a landfill. For example, with Plastic film & bags (Items like bubble wrap, plastic wrap, air packages are usually not placed in a normal recycling bin.), drop-off points are being utilized by 6 facilities. An additional 8 facilities are able to reuse or recycle the plastic on their own. Unfortunately, there are 11 more facilities that send it to landfill. Lab plastics and lab glass are not collected separately to reduce the risk of recycling contamination, aside from three labs who use a separate drop-off point. In regards to e-waste and electronics recycling, 9 of the stakeholders were uncertain of a policy requiring them to use the recycling system for campus-owned electronics.

Through these interviews, it is clear that despite there being multiple strong programs on campus that aim to return a wide range of items into the material loop, additional communication and explanation of the policies and practices is necessary. For example, rigid plastics do not have an aggregation point and are being disposed of in a landfill at 9 facilities. Despite this, 5 facilities reported using a drop-off point for disposal. Rigid plastics are reportedly being recycled or reused at four facilities. However, the campus does not collect these materials for recycling, so while these departments may think these items are being recycled when they put them in their recycling bin, they likely are being sent to landfill instead.

All other hazardous and regulated waste have clear and accessible drop-off points with signage for campus staff and facilities where these items are present like labs and garages.

HRM COLLECTION INFRASTRUCTURE

To view HRM Collection Infrastructure in more detail, click here.

This table shows what types of HRM are generated and collected at each facility and is intended to serve as a starting point for streamlining HRM collection across the entire campus.

KEY

- **Thrown Away**
- **Internally Recycled or Reused**
- **Accessible Drop-Off Point**
- **(Doesn't Exist)**

HRM Type	Aggregation Point?	SF: LAB: Marine Lab	SF: LAB: Chemistry	SF: LAB: Biological Sciences	SF: LAB: Schatz Energy Research Center	SF: LAB: Environmental Resources Eng	SF:LAB: Geology	SF: LAB: Forestry & Wildland Rscs	SF: LAB: Physics & Astronomy	SF: LAB: Kinesiology & Rec Admin	SF: LAB: Wildlife	SF: LAB: Computer Science	SF: LAB: Fisheries Biology	SF: LAB: Geography
Lab plastics	yes	Thrown Away	Thrown Away				Thrown Away	Thrown Away		Accessible Drop-Off Point	Thrown Away			
Lab glass	yes	Thrown Away	Thrown Away	Accessible Drop-Off Point		Thrown Away	Thrown Away	Accessible Drop-Off Point			Thrown Away		Thrown Away	
Plastic film & bags	yes	Thrown Away	Thrown Away		Internally Recycled or Reused	Thrown Away	Thrown Away	Thrown Away	Thrown Away	Thrown Away	Accessible Drop-Off Point	Internally Recycled or Reused	Thrown Away	Thrown Away
Styrofoam and packing peanuts	yes	Thrown Away	Internally Recycled or Reused		Internally Recycled or Reused	Thrown Away	Internally Recycled or Reused	Thrown Away	Thrown Away	Thrown Away	Accessible Drop-Off Point	Internally Recycled or Reused	Thrown Away	Thrown Away
Rigid plastics (e.g. tubes, planting pots, pesticide containers)	no	Thrown Away	Thrown Away			Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point		Thrown Away	Thrown Away
Rubber gloves	no	Thrown Away	Thrown Away		Thrown Away	Thrown Away	Thrown Away	Thrown Away	Thrown Away	Thrown Away	Thrown Away	Thrown Away	Thrown Away	
Textiles (e.g. rags, clothing, draperies, etc.)	yes	Thrown Away					Thrown Away			Thrown Away	Internally Recycled or Reused			
Mattresses	yes													
Plastic signage (e.g. vinyl banners, plastic corrugated signs)	no	Thrown Away						Thrown Away						Accessible Drop-Off Point
Wood pallets	yes	Accessible Drop-Off Point			Internally Recycled or Reused	Accessible Drop-Off Point						Internally Recycled or Reused	Accessible Drop-Off Point	
Cooking oil	yes													
HVAC air filters	no													
Construction Material														
Scrap metal	yes	Accessible Drop-Off Point			Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Thrown Away	Internally Recycled or Reused		Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point	
Wood and/or sawdust	yes	Thrown Away				Internally Recycled or Reused	Accessible Drop-Off Point	Thrown Away	Thrown Away		Thrown Away		Internally Recycled or Reused	Thrown Away
Concrete	yes	Thrown Away				Accessible Drop-Off Point							Accessible Drop-Off Point	
Brick	yes					Accessible Drop-Off Point							Accessible Drop-Off Point	
Drywall	yes													
Roof shingles	yes													
Porcelain (e.g. sinks, toilets, tubs, etc.)	yes													
Carpet	yes													
Electronic & Universal Waste														
Laptops/computers	yes	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused
Lab and medical electronic equipment	yes	Accessible Drop-Off Point	Internally Recycled or Reused		Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused		Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	
Freon-containing equipment (e.g. refrigerators, air conditioners, etc.)	yes	Internally Recycled or Reused	Internally Recycled or Reused	Accessible Drop-Off Point		Internally Recycled or Reused					Accessible Drop-Off Point		Internally Recycled or Reused	
Microwaves	yes	Accessible Drop-Off Point	Thrown Away	Accessible Drop-Off Point		Accessible Drop-Off Point							Accessible Drop-Off Point	
Household appliances (fans, vacuum cleaners, anything with a cord or battery)	yes	Accessible Drop-Off Point	Thrown Away			Accessible Drop-Off Point	Internally Recycled or Reused						Accessible Drop-Off Point	
Handheld electronics	yes	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused		Accessible Drop-Off Point		Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point
Wires and cables	yes	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused		Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point
CD's and DVD's	yes	Thrown Away	Thrown Away	Accessible Drop-Off Point		Thrown Away	Thrown Away		Thrown Away		Accessible Drop-Off Point		Thrown Away	Accessible Drop-Off Point
Batteries	yes	Accessible Drop-Off Point	Accessible Drop-Off Point		Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point
Lightbulbs	yes	Thrown Away	Internally Recycled or Reused		Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point
Mercury-containing equipment (e.g. thermometers, thermostats, fluorescent bulbs, ink cartridges, etc.)	yes	Accessible Drop-Off Point	Accessible Drop-Off Point		Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused				Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	
Hazardous Waste														
Tires	yes													
Paints and oil-based supplies (e.g. paint thinner)	yes	Accessible Drop-Off Point				Accessible Drop-Off Point							Accessible Drop-Off Point	
Lab chemicals or radiological waste	yes	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused		Accessible Drop-Off Point		Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	
Waste oil (e.g. from vehicles)	yes	Accessible Drop-Off Point				Accessible Drop-Off Point							Accessible Drop-Off Point	
Pesticides	yes	Accessible Drop-Off Point		Accessible Drop-Off Point							Internally Recycled or Reused			
Fertilizer	yes	Accessible Drop-Off Point		Accessible Drop-Off Point				Internally Recycled or Reused						
Propane and propane tanks	yes					Accessible Drop-Off Point							Accessible Drop-Off Point	
Custodial chemicals	yes	Accessible Drop-Off Point									Accessible Drop-Off Point			
Sharps	yes	Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point		Accessible Drop-Off Point					Accessible Drop-Off Point		Accessible Drop-Off Point	

HRM Type	Aggregation Point?	SF: LAB: Environmental Science & Management	SF: LAB: Anthropology	SF: Art Studio	SF: Theater	SF: Music	SF: Health	Central Receiving	Printing Services	Mail Services	Childcare	Library	Campus Bookstore	Admin Offices & Academic Classrooms
Lab plastics	yes		Thrown Away				Thrown Away							
Lab glass	yes		Thrown Away				Internally Recycled or Reused							
Plastic film & bags	yes	Accessible Drop-Off Point	Thrown Away	Internally Recycled or Reused	Internally Recycled or Reused	Internally Recycled or Reused	Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Internally Recycled or Reused	Internally Recycled or Reused	Accessible Drop-Off Point
Styrofoam and packing peanuts	yes	Internally Recycled or Reused	Thrown Away	Internally Recycled or Reused	Internally Recycled or Reused	Internally Recycled or Reused	Thrown Away	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point		Internally Recycled or Reused	Internally Recycled or Reused	Internally Recycled or Reused
Rigid plastics (e.g. tubes, planting pots, pesticide containers)	no	Thrown Away	Thrown Away				Thrown Away		Accessible Drop-Off Point		Internally Recycled or Reused		Internally Recycled or Reused	Thrown Away
Rubber gloves	no	Thrown Away	Thrown Away	Internally Recycled or Reused	Thrown Away		Thrown Away		Thrown Away				Thrown Away	Thrown Away
Textiles (e.g. rags, clothing, draperies, etc.)	yes	Internally Recycled or Reused	Thrown Away	Internally Recycled or Reused	Internally Recycled or Reused						Thrown Away		Internally Recycled or Reused	Internally Recycled or Reused
Mattresses	yes	Internally Recycled or Reused		Internally Recycled or Reused										Internally Recycled or Reused
Plastic signage (e.g. vinyl banners, plastic corrugated signs)	no	Thrown Away	Thrown Away	Internally Recycled or Reused	Internally Recycled or Reused	Thrown Away			Thrown Away		Thrown Away		Internally Recycled or Reused	Thrown Away
Wood pallets	yes	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Internally Recycled or Reused			Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point			Internally Recycled or Reused	Accessible Drop-Off Point
Cooking oil	yes													
HVAC air filters	no	Thrown Away		Thrown Away	Thrown Away	Thrown Away					Internally Recycled or Reused			Thrown Away
Construction Material														
Scrap metal	yes	Accessible Drop-Off Point	Accessible Drop-Off Point		Internally Recycled or Reused		Internally Recycled or Reused					Internally Recycled or Reused	Internally Recycled or Reused	Accessible Drop-Off Point
Wood and/or sawdust	yes	Accessible Drop-Off Point	Thrown Away	Internally Recycled or Reused	Internally Recycled or Reused				Thrown Away					Accessible Drop-Off Point
Concrete	yes	Accessible Drop-Off Point	Thrown Away											Accessible Drop-Off Point
Brick	yes	Internally Recycled or Reused		Internally Recycled or Reused										Internally Recycled or Reused
Drywall	yes	Internally Recycled or Reused												Internally Recycled or Reused
Roof shingles	yes	Internally Recycled or Reused												Internally Recycled or Reused
Porcelain (e.g. sinks, toilets, tubs, etc.)	yes	Accessible Drop-Off Point		Internally Recycled or Reused							Internally Recycled or Reused			Accessible Drop-Off Point
Carpet	yes	Internally Recycled or Reused									Internally Recycled or Reused			Internally Recycled or Reused
Electronic & Universal Waste														
Laptops/computers	yes	Accessible Drop-Off Point	Accessible Drop-Off Point		Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point
Lab and medical electronic equipment	yes		Accessible Drop-Off Point				Accessible Drop-Off Point							
Freon-containing equipment (e.g. refrigerators, air conditioners, etc.)	yes	Internally Recycled or Reused	Internally Recycled or Reused			Accessible Drop-Off Point					Internally Recycled or Reused			Internally Recycled or Reused
Microwaves	yes		Accessible Drop-Off Point	Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point			Internally Recycled or Reused		Internally Recycled or Reused			
Household appliances (fans, vacuum cleaners, anything with a cord or battery)	yes		Accessible Drop-Off Point	Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point			Internally Recycled or Reused		Internally Recycled or Reused			
Handheld electronics	yes	Internally Recycled or Reused	Accessible Drop-Off Point		Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point		Accessible Drop-Off Point	Internally Recycled or Reused	Internally Recycled or Reused
Wires and cables	yes	Accessible Drop-Off Point	Accessible Drop-Off Point	Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point
CD's and DVD's	yes	Internally Recycled or Reused	Thrown Away		Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused		Internally Recycled or Reused				Internally Recycled or Reused	Internally Recycled or Reused
Batteries	yes	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point
Lightbulbs	yes	Accessible Drop-Off Point	Thrown Away	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point		Internally Recycled or Reused		Internally Recycled or Reused	Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point
Mercury-containing equipment (e.g. thermometers, thermostats, fluorescent bulbs, ink cartridges, etc.)	yes	Internally Recycled or Reused	Accessible Drop-Off Point		Accessible Drop-Off Point	Accessible Drop-Off Point	Accessible Drop-Off Point		Internally Recycled or Reused		Internally Recycled or Reused	Accessible Drop-Off Point		Internally Recycled or Reused
Hazardous Waste														
Tires	yes	Internally Recycled or Reused												Internally Recycled or Reused
Paints and oil-based supplies (e.g. paint thinner)	yes	Internally Recycled or Reused	Accessible Drop-Off Point		Accessible Drop-Off Point				Internally Recycled or Reused					Internally Recycled or Reused
Lab chemicals or radiological waste	yes		Accessible Drop-Off Point				Internally Recycled or Reused							
Waste oil (e.g. from vehicles)	yes	Internally Recycled or Reused	Accessible Drop-Off Point											Internally Recycled or Reused
Pesticides	yes	Accessible Drop-Off Point	Accessible Drop-Off Point											Accessible Drop-Off Point
Fertilizer	yes	Accessible Drop-Off Point	Accessible Drop-Off Point											Accessible Drop-Off Point
Propane and propane tanks	yes	Internally Recycled or Reused		Accessible Drop-Off Point										Internally Recycled or Reused
Custodial chemicals	yes	Internally Recycled or Reused	Accessible Drop-Off Point						Internally Recycled or Reused					Internally Recycled or Reused
Sharps	yes	Accessible Drop-Off Point		Accessible Drop-Off Point			Internally Recycled or Reused		Internally Recycled or Reused			Accessible Drop-Off Point		Accessible Drop-Off Point

SCOPE 2 - SOFT GOODS: FOOD, PLASTIC & COMPOST

CAMPUS DINING FACILITIES & FOOD-SERVICE VENDORS

For the purposes of this assessment, we divide dining facilities and campus vendors into assessment categories based on the style of food service (dine-in vs. to-go), and group facilities based upon management. We choose to include Events within Dining Facilities because in order to achieve Zero Waste Events, the same systems that service all dining facilities (e.g. reusable dining ware, food recovery, bin standardization, etc.) must be set up to also serve events. The following tables depict our findings of all assessed dining facilities.

Campus Dining Halls	Locations with buffet style service in an enclosed setting. May be "all you can eat" or food court style with multiple stations, but under one facility.	- The J
Restaurants	Locations with full sit-down service in an enclosed setting.	- Bigfoot Burgers
Casual Sit-Down Eateries	Locations that have seating for customers but may not be fully enclosed locations (i.e. may share seating with common area seating), with both dine-in and to-go options.	- N/A
Grab & Go	Locations that primarily serve food for take-out. May have some seating but majority of food is to-go.	- Los Bagels - Obento! - Hey Juan Bagels - Kinetic Koffee - Wild Blue Sushi - Vedge Craft - Library Cafe
Convenience Stores	Locations that sell primarily pre-packaged food that generally do not prepare food on-site.	- The Cupboard - College Creek Market
Athletics	Concessions stands within Athletics Facilities; also includes tailgates and catering for traveling athletes.	- Concession Stands (Chartwells)
Events	Food served outside of the above locations provided by catering or off-campus vendors.	- Concession Stands (Chartwells)

TABLE 3: PROCUREMENT POLICIES

Table 3: Procurement Policies

	Campus Dining Hall: The J	Restaurant: Bigfoot Burgers	Grab & Go: Los Bagels	Grab & Go: Obento!	Grab & Go: Hey Juan Burritos	Grab & Go: Kinetic Koffee	Grab & Go: Wild Blue Sushi	Grab & Go: Vedge Craft	Grab & Go: Library Cafe	The Cupboard	College Creek Market	Athletics	Events
Procurement Policies													
Vendor required to comply with campus procurement policies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Reusable gloves/aprons/hairnets	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	n/a
Eliminated plastic bags	n/a	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	n/a
Eliminated sales of bottled water	n/a	yes	yes	yes	yes	yes	yes	yes	yes	no	no	yes	yes
Bulk Procurement													
Eliminated unnecessarily wrapped single-serve items	yes	yes	partial	partial	partial	partial	partial	partial	partial	no	no	no	yes
Snacks and sides in bulk	n/a	n/a	no	no	no	no	no	no	no	no	no	partial	yes
Beverages in bulk dispensers	yes	yes	partial	partial	partial	yes	partial	partial	n/a	no	partial	partial	yes
Eliminated K-Cups and plastic-wrapped tea bags	yes	yes	n/a	n/a	n/a	yes	n/a	n/a	yes	yes	yes	yes	yes
Bulk dispense creamers, condiments, butters, jellies	yes	yes	n/a	partial	n/a	yes	no	n/a	n/a	no	yes	yes	partial

As seen in **Table 3**, all campus vendors are required to comply with campus procurement policies. The J Dining Hall, Bigfoot Burgers Restaurant, as well as at Events have eliminated unnecessarily wrapped single-serve items, such as K-Cups, tea bags, beverages, and condiments. The campus could look to the Break Free From Plastic Pledge for a full list of single-use plastic items that we recommend phasing out. Aside from the two convenience stores, The Cupboard and College Creek Market, the sale of plastic water bottles has been eliminated from all Eateries, Athletics concessions, and at Events. Five of these facilities have bulk dispensers for creamers, condiments, butters, and jellies. To varying degrees, all but one of these facilities offer beverages in bulk dispensers. Snacks and sides that are dispensed in bulk can be found at The J Dining Hall and at on-campus event concessions.

TABLE 4: REUSABLE DINING WARE INFRASTRUCTURE

Table 4: Reusable Dining Ware Infrastructure

	Campus Dining Hall: The J	Restaurant: Bigfoot Burgers	Grab & Go: Los Bagels	Grab & Go: Obento!	Grab & Go: Hey Juan Burritos	Grab & Go: Kinetic Koffee	Grab & Go: Wild Blue Sushi	Grab & Go: Vedge Craft	Grab & Go: Library Cafe	The Cupboard	College Creek Market	Athletics	Events
Dishwasher	yes	yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	yes	yes
Reusable Dishes													
Plates	yes	yes	+0	+0	+0	+0	+0	+0	+0	n/a	n/a	n/a	partial
Bowls	yes	n/a	+0	+0	+0	+0	+0	+0	+0	n/a	n/a	n/a	yes
Utensils	yes	yes	+0	+0	+0	+0	+0	+0	+0	n/a	n/a	n/a	yes
Mugs/cups	yes	yes	+0	+0	+0	+1	+0	+0	+1	n/a	n/a	n/a	yes
Straws*	+0	+0	+0	+0	+0	+0	+0	+0	+0	n/a	n/a	n/a	n/a
Napkins*	+0	+0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	partial
Reusable To-Go Ware													
Clamshell	yes	no	no	no	no	n/a	no	yes	n/a	n/a	no	0	0
Soup	no	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0
Utensils	yes	no	n/a	no	n/a	n/a	n/a	no	n/a	n/a	no	0	0
Mugs/cups	no	no	no	no	no	no	no	no	no	n/a	no	0	0
Containers for bulk items*	n/a	n/a	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0
Customers Allowed to BYO Containers	yes	no	no	no	no	no	no	no	n/a	n/a	yes	no	no
Bring Your Own Discount													
Containers*	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0
Mugs/cups*	+1	n/a	no	no	no	yes	no	no	yes	+0	+0	+0	+0
Bags*	n/a	+0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	+0	+0	+0	+0
Utensils*	n/a	n/a	n/a	no	n/a	n/a	n/a	no	n/a	+0	+0	+0	+0
Bulk bins*	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	+0	+0	+0	+0

Additional Credit question

*Additional Program questions that are eligible to be added as unweighted extra credit to a campus' total Scope 1 or Scope 2 score.

As shown in **Table 4**, reusable dishware is only available at The J, Bigfoot, and some events (when requested). Reusable OZZI clamshells are only available to use at The J Dining Hall and Vedge Craft. We recommend expanding this program to include all food-service facilities and expanding the drop-off locations for to-go containers to include residence halls and additional centralized locations to increase the ease of transitioning to campus-wide reliance on this program. We also recommend having standardized bins and signage for the to-go ware drop-off locations, and possibly exploring best practices for tracking container returns and usage through an app or other barcode tracking technology

We also recommend allowing customers to bring their own container and incentivizing that behavior with discounts - which are currently only allowed at The J Dining Hall and the College Creek Market Convenience Store.

TABLE 5: FOOD RECOVERY & FOOD WASTE REDUCTION

Table 5: Food Recovery & Food Waste Reduction Programs

	Campus Dining Hall: The J	Restaurant: Bigfoot Burgers	Grab & Go: Los Bagels	Grab & Go: Obento!	Grab & Go: Hey Juan Burritos	Grab & Go: Kinetic Koffee	Grab & Go: Wild Blue Sushi	Grab & Go: Vedge Craft	The Cupboard	College Creek Market	Athletics	Events
Food Recovery Program	yes	no	yes	no	yes	no	no	no	no	yes	yes	yes
Food Waste Reduction												
Run audits	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	yes
Purchase gleaned	yes	yes	yes	yes	yes	n/a	yes	yes	yes	yes	n/a	n/a
Food waste education	yes	no	no	no	no	no	no	no	n/a	yes	no	n/a
Trayless dining	no	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

As seen in **Table 5**, there is scattered participation in the University's food recovery program. We recommend expanding the reach of the food recovery program by including the Bigfoot Burgers Restaurant, all remaining Grab & Go locations (Obento!, Kinetic Koffee, Wild Blue Sushi, and Vedge Craft), and The Cupboard Convenience Store, to collect and redistribute fresh, prepared, and pre-packaged food.

Looking at Humboldt's Food Waste Reduction efforts, all facilities purchase gleaned produce but only two facilities (The J Dining Hall and The College Creek Market) offer food waste education. Excluding Athletics, every facility reports they regularly run waste audits on food purchasing to examine consumption habits and reduce food waste.

TABLE 6: COMPOSTABLE MATERIALS

Table 6: Compostable Materials	Campus Dining Hall: The J	Restaurant: Bigfoot Burgers	Grab & Go: Los Bagels	Grab & Go: Obento!	Grab & Go: Hey Juan Burritos	Grab & Go: Kinetic Koffee	Grab & Go: Wild Blue Sushi	Grab & Go: Vedge Craft	Grab & Go: Library Cafe	The Cupboard	College Creek Market	Athletics	Events
Compostable Ware													
Plates/bowls	n/a	yes	yes	partial	no	n/a	partial	yes	n/a	n/a	partial	yes	yes
Hot bowls	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Utensils	n/a	yes	n/a	yes	n/a	n/a	n/a	yes	n/a	n/a	yes	yes	yes
Cups/mugs	n/a	no	no	yes	yes	yes	no	no	yes	n/a	partial	yes	yes
Straws	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Napkins	yes	yes	yes	yes	yes	yes	yes	yes	yes	n/a	yes	yes	yes
To-go ware	n/a	yes	yes	partial	no	partial	partial	yes	n/a	n/a	partial	yes	yes
Miscellaneous packaged food Items (e.g. sushi boxes)	n/a	n/a	no	no	no	no	partial	no	no	n/a	no	no	partial
Single-use creamers, condiments, butters, etc.	n/a	n/a	n/a	no	n/a	n/a	no	n/a	n/a	no	n/a	n/a	no
Containers for bulk items	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	no	no
Recyclable/compostable gloves/aprons/hairnets*	+0.25	+0.25	+0.25	+0.25	+0.25	+0.25	+0.25	+0.25	+0.25	+0.5	+0	+0.25	n/a
Compost Program													
Food waste as feedstock for agriculture*	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0	+0
Back-of-house collection	yes	yes	yes	yes	n/a	yes	yes	yes	yes	n/a	n/a	n/a	no
Front-of-house collection	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes

As seen in **Table 6**, compost collection is present in both front-of-house and back-of-house capacities on campus. Students involved in WRRAP (Waste Reduction and Resource Awareness Program) collect the compost bins from campus residence halls and use the food waste for educational and practical purposes such as workshops and fertilizer by OhSnap! and CCAT. An additional 30+ compost bins are collected from Facilities Custodial Services from departmental break-rooms, building locations, and the paper towel compost from restrooms.

Some miscellaneous packaged food items are made with compostable materials at Wild Blue Sushi and at on-campus Events. The Cupboard Convenience Store is the only facility to not have a front-of-house compost collection system.

We recommend reducing the contamination of waste, recycling and compost streams by establishing a system that is standardized across campus, is simple to navigate, and reduces confusion. Humboldt should be working towards the long-term elimination of single-use disposable products by switching to reusables as much as possible, and relying on compostable disposables only where necessary. We recommend focusing on changing infrastructure to allow for the implementation of bulk food offerings rather than individually packaged snacks, and providing more reusables to student users or increasing incentivizes for “Bring Your Own” container programs.

TABLE 7: PAPER RECEIPT ELIMINATION

Table 7: Paper Receipt Elimination	Campus Dining Hall: The J	Restaurant: Bigfoot Burgers	Grab & Go: Los Bagels	Grab & Go: Obento!	Grab & Go: Hey Juan Burritos	Grab & Go: Kinetic Koffee
Transitioned from paper receipts to electronic	partial	partial	partial	partial	partial	partial
Can turn off paper receipts	yes	yes	yes	yes	yes	yes

Grab & Go: Wild Blue Sushi	Grab & Go: Vedge Craft	Grab & Go: Library Cafe	The Cupboard	College Creek Market	Athletics	Bookstore & Retail
partial	partial	partial	partial	no	no	yes
yes	yes	yes	yes	yes	no	yes

As seen in **Table 7**, all of the campus’ facilities, with the exception of Athletic events, can turn off paper receipts. All of the eateries on campus have partially transitioned to electronic receipts, allowing receipts to be printed by request. The Bookstore is the only facility to have fully transitioned away from paper receipts.

TABLE 8: ACCESSIBILITY

Table 8: Accessibility	Campus Dining Hall: The J	Restaurant: Bigfoot Burgers	Grab & Go: Los Bagels	Grab & Go: Obento!	Grab & Go: Hey Juan Burritos	Grab & Go: Kinetic Koffee
Plastic straws still accessible	no	no	no	no	no	no

Grab & Go: Wild Blue Sushi	Grab & Go: Vedge Craft	Grab & Go: Library Cafe	The Cupboard	College Creek Market	Athletics	Events
no	no	no	no	no	no	no

In line with the Break Free From Plastic Pledge, we assess plastic straw accessibility in the policy section because it is imperative that straws are still available for those who need straws for accessibility reasons. No dining locations on campus have plastic straws available to those who require them. To ensure the University is following California Assembly Bill 1276, we recommend adding language (sample language provided in the BFFP Pledge) into Dining or general Procurement policies to ensure that this is understood by all eateries.

TABLE 9: TO-GO WARE COLLECTION INFRASTRUCTURE

Table 9: Reusable To-Go Ware Collection

	Campus Dining Hall: The J	Restaurant: Bigfoot Burgers	Grab & Go: Los Bagels	Grab & Go: Obento!	Grab & Go: Hey Juan Burritos	Grab & Go: Kinetic Koffee	Grab & Go: Wild Blue Sushi	Grab & Go: Vedge Craft
To-go ware collection	yes	no	no	no	no	no	no	no

Grab & Go: Library Cafe	The Cupboard	College Creek Market	Athletics	Events	Res Halls	Library	Admin Offices & Classrooms
n/a	n/a	yes	no	no	no	no	no

As seen in **Table 9**, the campus has not expanded its reusable to-go ware collection to all facilities. It is currently collected at The J Dining Hall and the College Creek Market Convenience Store. We recommend expanding the to-go ware program to be campus-wide.

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 Humboldt. This will require the collaboration between students, staff, and administration.

We encourage the campus to develop a goal that incorporates data from previous waste characterizations and quantitative measurements like aversion, reduction, and diversion, as well as qualitative goals to develop campus-wide service models for sustainable materials management and program areas such as engagement and education. For Humboldt 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 utilize this report as a wayfinding tool to benchmark and track progress on the remaining opportunities for waste reduction.

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