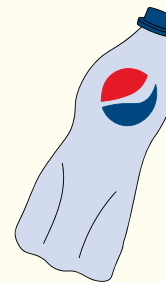


WASTE AUDIT MANUAL





Brand Audits are the new Waste Audits



A Brand audit is a sorting waste audit that identifies the brand names present on each piece of plastic. The [Break Free From Plastic Movement](#) began the [Brand Audit Campaign](#) in 2017, as a way to draw attention to the corporations that are producing waste. For years, these corporations tried to convince us that waste was [an individual problem](#), and we know that is not true. These corporations should be held responsible for the waste they create, and be pressured into changing their packaging because, let's face it, eliminating single-use plastics from your life does not cause everyone else to eliminate it from theirs. Brand audits have been wildly successful in creating change at corporations, and we are joining in on the effort.

The Re-Introduction of PLAN's Waste Audit Manual

This manual will be the first time that PLAN has recreated one of its principle program manuals. It feels like a big occasion, so we wanted to provide some insight on why we decided to recreate this particular manual. There are a few reasons:

1. Our 2015 Waste Audit Manual has become outdated.

We have more information about the best practices to audit waste than when we first created this manual. Whereas our previous manual contained guidance specifically around waste audits, we now incorporate and apply the understanding of holistic systems change through the additional lens of brand audits and systematic infrastructure audits. This change prioritizes corporate accountability and infrastructure change, which calls on producers to change the actual systems they are operating within. We have come so far from simply sorting waste as a tactic to advocate for behavior change. Completing waste audits alone is not helpful; however, having strategic data is helpful, and we want to fully represent that. [Read more about the limitations of trash sorting in this blog post here.](#)

2. We want to emphasize that Infrastructure Change Must Precede Behavior Change.

You'll notice in this manual that most of the advocacy and action items from all types of audits have to do with changing systems, not individual behavior or education. Our years of working with campuses of every size and setting across the United States illuminated a few common challenges that campuses face in their pursuit of zero waste. We saw countless colleges and universities focusing their energy and resources on educating their student body on the importance of recycling and how to correctly sort their trash. However, increased education did not amount to real improvements in diverting trash away from the landfill or decreased contamination rates.

Why was this the case? Our big takeaway was that education was ineffective in changing students' habits because existing systems did not facilitate behavior change. If the administration wanted to see their students and other campus users better manage and reduce their waste, infrastructure was the first thing that needed to change. [Read more about why infrastructure change must precede behavior change in this PLAN blog post here.](#)

The 4 Types of Waste Audits

Note: There is no specific order to these types.

Type 1: Sorting/Event Waste Audits [\[page 4\]](#)

The priority of these audits is to sort through physical waste.

Examples include: contamination audits, clean-ups, litter-pick ups, and brand audits.

Type 2: Infrastructure Audits [\[page 13\]](#)

These audits gather visual or written data about infrastructure.

Examples include: bin standardization audits and waste hauler record analysis.

Type 3: Awareness Audits [\[page 16\]](#)

These audits conduct surveys of staff and students to assess the community's awareness of collection infrastructure (basically, their understanding of waste bin placement, signage, and use) and where items should go.

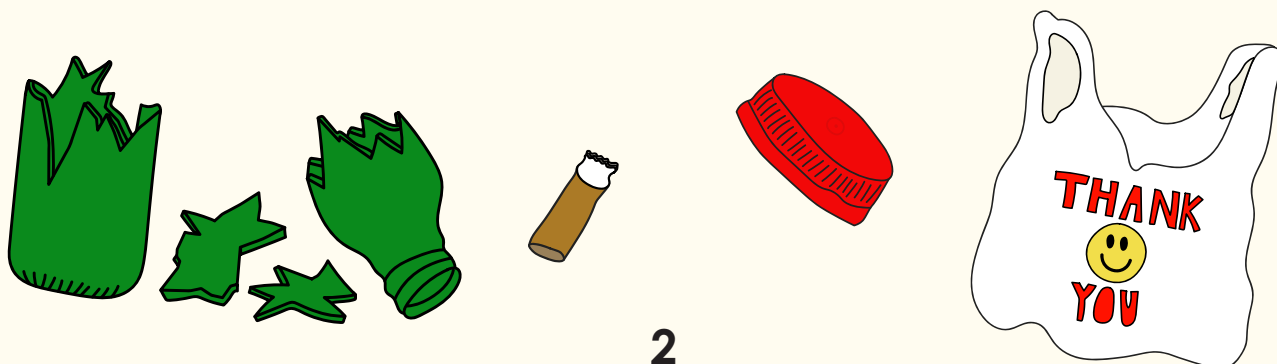
Examples include: Surveys, polls, and petitions.

Type 4: Campus-Wide Systems Audit [\[page 18\]](#)

These audits provide an assessment of campus systems and the capacity of the campus to achieve zero waste. This type assesses both procurement and infrastructure.

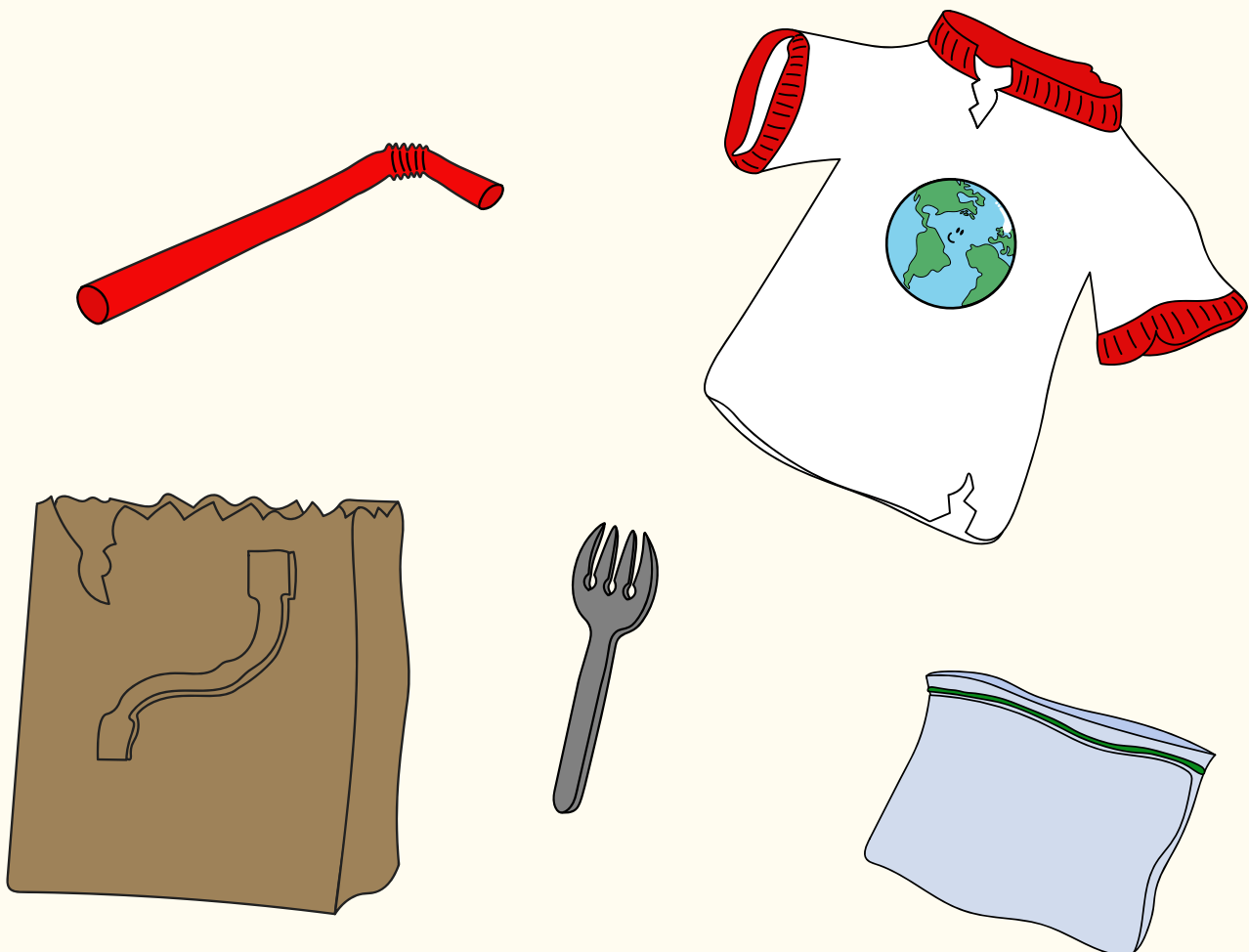
Examples include: [an Atlas Zero Waste Assessment™](#).

Glossary of Terms: [\[page 21\]](#)



Work with your campus stakeholders to answer the following questions as you move throughout your process. You can use the [How to Work With Campus Stakeholders](#) PLAN resource to identify who you might need to talk to first.

- What happens to the waste that leaves your campus? How much is recycled, landfilled, composted, or incinerated? Does it go to an **overburdened community**?
- What are potential waste reduction solutions that your campus could implement that aren't currently set up (reusable to-go container programs, compost collection, electronic waste collection, etc.)?
- How much are your campus's waste costs and how have they changed in recent years?



Type 1: Sorting/Event Waste Audits



When we say Waste Audit, this is most likely the type that you are thinking about: a big pile of garbage, with folks in hazmat suits sorting it into piles to be weighed and analyzed. There are so many different aspects you can “add on” to this, and we’ll cover some ideas, but first here are the basics to consider when doing this.

Sorting Waste Audits: The Basics

1. Check with the experts.

Talk with key departments, such as Facilities/Grounds or the Dining Department to find out if they would partner with you on a waste audit conducted by students. They could help you identify the best location for sorting your waste and provide physical materials like tarps and gloves. If they can’t or aren’t interested, ask if they would be willing to let students conduct their own waste audit on campus, and reach out to us at PLAN for additional support!

- a. Use PLAN’s resource: [how to talk to campus staff and other stake holders.](#)
- b. Think strategically about what data you are wanting to collect and where it would be most helpful to gather that data from (dining locations, student housing, a Student Activities Center, etc). Use this manual to guide your decision-making on where your audit will be most effective.

2. Gather appropriate resources.

Resources can fall under many categories: people, physical supplies, places, and more!

- a. Regarding supplies, depending on if the Facilities Department can support your audit, you may need to purchase or borrow some of these materials. Double check with them to figure out what they can provide.

b. Here's a list of items to consider having for sorting purposes:

- Tarp(s) for sorting waste; a tent for shelter
- Sandbags or weights, to hold down the tarp(s)
- Grabbers for separating materials
- Protective gear; gloves, safety glasses, masks, hazmat suits
- Shovels, for leftover materials left after sorting of materials into categories
- A luggage scale or other weighing device
- A [document/worksheet](#) to record weights by category
- Trash, Recycling, and Compost receptacles to dispose of all materials after the audit is completed
- Cleaning supplies to clean the tarp when you're done



- c. Recruit volunteers to help you sort the waste, organize the event, or analyze the data. *You can't do it all alone!* Make sure all volunteers understand the assignment and sign the appropriate waivers for potential safety concerns of sorting trash. Some ideas of how to find and cultivate support are:
- Tap into your organization to split up responsibilities in planning: Facilities Department contact, Outreach Coordinator, and Event Manager are some common roles.
 - Do you have a volunteer portal or sub-department? Or a Greek Life presence on campus that may require students to secure volunteer hours? Use all your resources and, in the process, possibly recruit folks to your organization or cause.
 - Is there a Research Department that may be interested in your data? Or a student looking for an independent study project? They can analyze that data and possibly use it for more purposes!
 - **Use your PLAN membership**; we are here to support your efforts!
- d. Consider costs: depending on what you already have access to, you may need to buy supplies, pay for the space, or assess other costs. If you are searching for funds to accomplish this, but aren't sure where to go first, **[check out PLAN's Finding Funding on Your Campus quick-guide here for some step-by-step guidance.](#)**

SAFETY FIRST!

Keep in mind that the sorting process can expose people to harmful waste, including sharp objects, toxins, and medical waste that were not properly disposed of. While these are usually minimal in campus waste streams, it is important to take precautionary measures. Safety garments such as puncture-resistant gloves, sturdy boots, long pants, and long-sleeve shirts should be used during the trash pick-up. Participants should have the option of wearing additional outerwear (coveralls or Tyvek suits) and masks. Include a standard waiver that mentions these possible harms with volunteer sign-ups.

3. Completing the audit: After preparing and planning the audit, it is time to actually complete the audit itself. Here are a couple pointers.

a. Setting Up: Some of this might be set up by your Facilities Department, but we recommend laying out a big tarp and creating clear category indications of where each sorted item should be placed. Make sure to consider weather conditions and accessibility needs. We think stations can be helpful during audits, such as:

- **Station 1 – Scales:** Weigh a bag before you empty it so that you know the total weight of material in that bag before sorting. We recommend going one bag at a time, and adjusting based on how many people are sorting.
- **Station 2 – Dump and Sort:** Dump out the contents of a bag to be sorted. There are many options on how to sort, depending on the data you want to collect. Check out the [Add-ons & Options section](#) to review a list of options.
- **Station 3 – Scales Again:** Each pile needs to be documented in some way, whether that's weight, brand, or something else! Record this weight and the waste category the items are in.
- **Station 4 – Properly-Sorted Disposal:** Have receptacles set up to properly dispose of each category of items in each waste stream your campus has available. Once the weights of items have been recorded, you can put sorted items into their proper receptacles and start the process over again with a new bag.

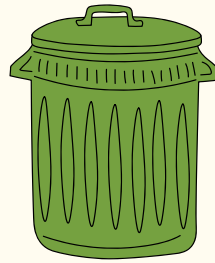
b. Sorting: This is what we've been waiting for, the sorting! Here's some considerations.

- **Sorting Roles:** Just like with your student club, roles and responsibilities are important. Here's some roles we recommend:
 1. *Sorters* – Have at least two people physically sorting through the waste (note this role is more physically demanding). These folks will need to be able to move up and down a lot, so make sure to indicate that on the sign-up form for accessibility purposes.
 2. *Weighers* – If you are recording weights in your audit, these folks will handle the scales, and [ensure that the scale is TARE when weighing each category](#).
 3. *Recorders* – You probably only need one or two people to be able to record any data that is gathered. This could be weights, plastic types, brands, or something else!
 4. *Media/Press Liaison* – Make sure to have someone that can explain to passerby or any press what you are doing, why you are doing it, and who you are. This person can also hand out fliers to a follow-up event or meeting.

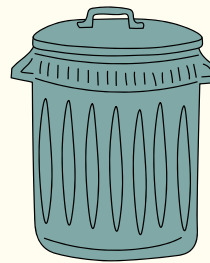
- **Sorting Pace:** Consider the number of volunteers you have, the time you allotted, and the space you have. We recommend working incrementally, possibly a single trash bag at a time. This gives flexibility on choosing how much you will sort and won't overwhelm the sorters with too much waste. You won't be able to sort the entire campus waste system, so regardless of how much you sort, you are getting a snapshot.
- **Sorting Categories:** The categories you choose to sort into are completely up to you. Take a look at the [Add-ons & Options](#) section for all the different options you have.



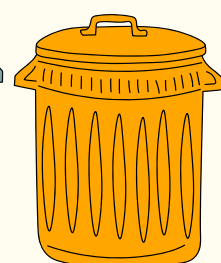
waste bags



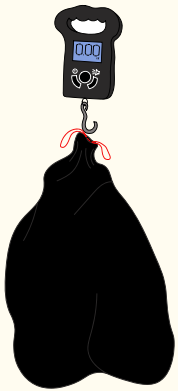
compost



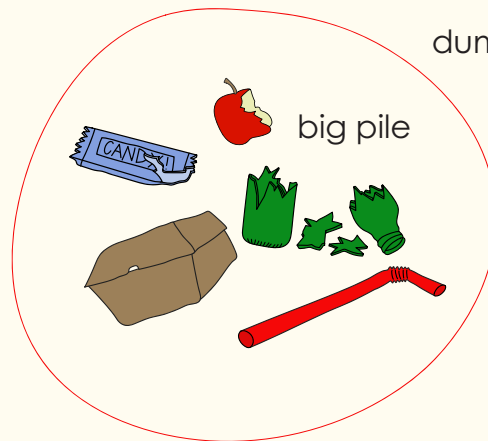
recycle



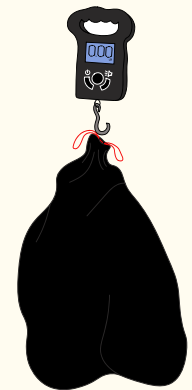
landfill



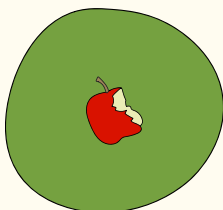
weigh station 1



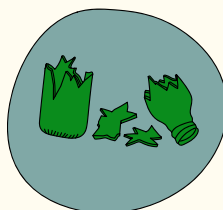
dump + sort



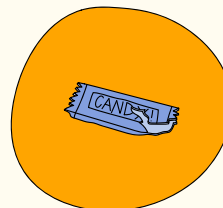
weigh station 2



category 1



category 2



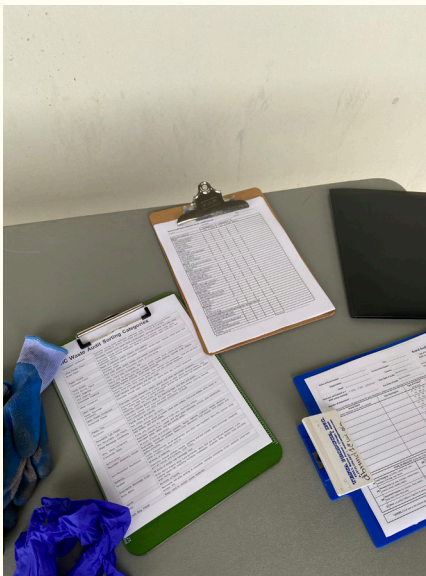
category 3

4. Cleaning Up

- a. It's safe to say that sorting audits are a messy undertaking. Make sure you allow time at the end of your audit for clean-up and check with your Facilities/Custodial Department to find out how you can be the most helpful at this point.
- b. Place sorted waste into the correct receptacles. Consider if you are adding a "return to sender" or art element first; check the add-on section. Now that everything is in neat categories, it should be simple to properly dispose of waste into the waste streams that your campus already has (for example, a Recycling or Compost process, if applicable).

5. Analyzing Data and Advocating for Change

- a. There are many approaches you can take to analyze and present the data that you compile from your sorting audit. Graphs and pie charts can be useful tools to present the different proportions of materials in your waste stream. Depending on your data needs, your analysis may simply include material proportions and weights.
- b. A well-conducted waste audit will identify areas where your campus can improve its waste system. Improvements can often be made from management, environmental, educational, and fiscal perspectives.
- c. The more you publicize the results from your audit, the more likely it is that your recommendations will be considered and put into action. Make sure your arguments make it clear for your institution why it is in their best interest to implement changes. While many of your suggestions may be well-founded, not all institutions are quick to adopt changes. By talking to the right people and gaining sufficient support, your team can bring real changes to the way your campus handles waste.



Sorting Waste Audits: Add-ons & Options

There are lots of different parts that you can add onto this basic sorting audit to make it fit what you are trying to do. Be creative; feel free to mix and match the various elements below!

Sorting Categories

The categories you choose to sort your waste into will determine what data you collect. Consider what is most helpful or impactful for your campus. You can do parts of them, combine them, or whatever you desire. Here are just a few examples of different ways you can customize your waste audit.

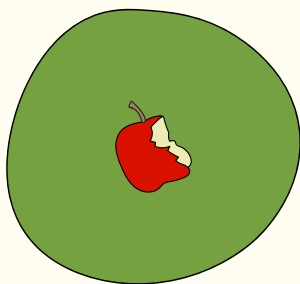
Audits to identify contamination rates:

These will mean you are pulling receptacle bins after they are full to assess how contaminated they are post-consumer. **You can use this data to advocate for better bins and signage, for adding compost or recycling receptacles themselves, or something else!** Consider the follow categories:

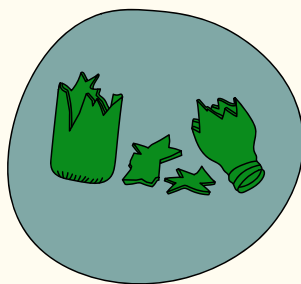
- Sorting Landfill Waste into Compost/Recycling/Landfill
- Sorting Recycling Waste into Compost/Recycling/Landfill
- Sorting Compost Waste into Compost/Recycling/Landfill

Example:

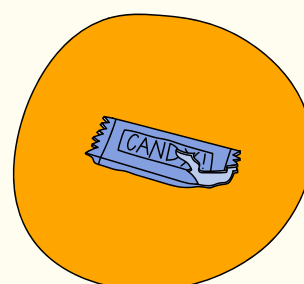
A student conducts a waste audit and finds out that over 70% of the landfill waste could have been composted. They present this data to the Facilities Department to propose the addition of a compost bin to every bin system on campus.



Compost



Recycling



Landfill

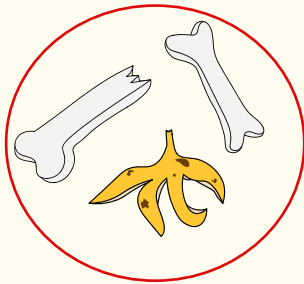
Audits to identify food waste trends:

Campuses also call these “Weigh the Waste” (thanks to our friends at Food Recovery Network for this resource!) events sometimes. This means gathering what is left on a plate once someone is done in the dining hall and sorting to assess which items in the dining hall are not eaten at the highest rates. You can use this data to advocate for better serving systems in the dining hall, or for changes in menu options.

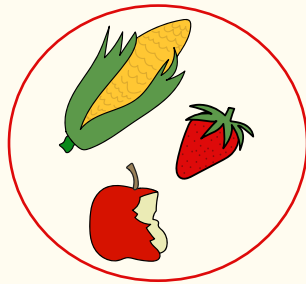
Separate food waste from other waste. Then, separate food waste into edible and non-edible categories (bones, scraps, cores, and peels). Record observations of trends - like a large number of discarded food items of the same type (for example: maybe students are consistently discarding a food item that the facility should know is undesirable or no longer popular).

Example:

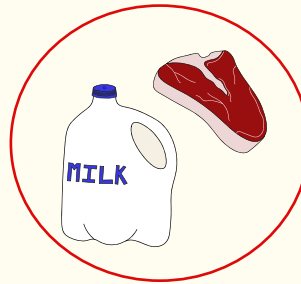
A student finds that the buns on the hamburgers are wasted more often than not. They show this data to the dining hall and the dining hall now offers buns on the side, as an option, instead of on the plate to be inevitably wasted.



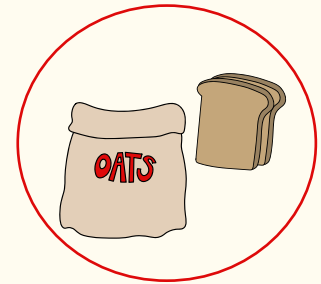
Bones & Scraps



Fruits & Vegetables



Meat & Dairy



Grains

Audits to identify which brands are on campus:

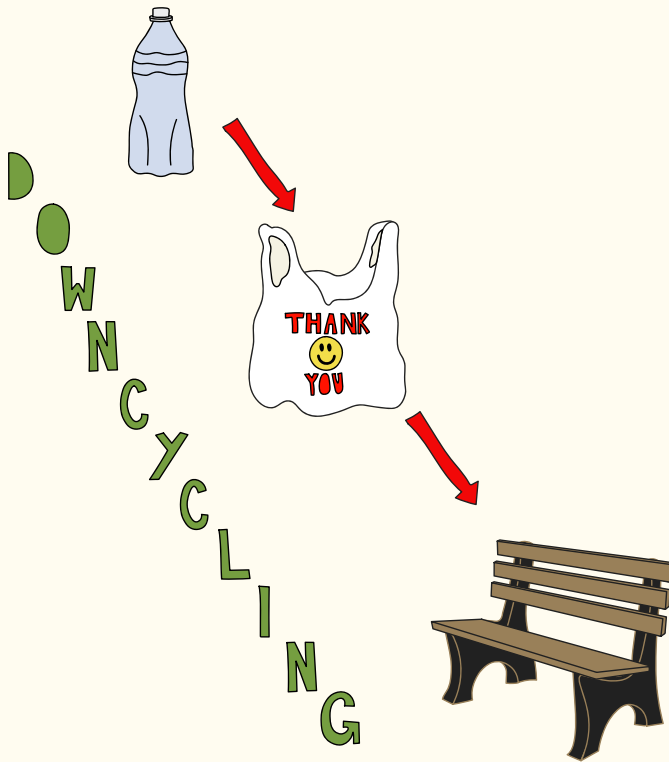
This global Citizen Science project created by the Break Free From Plastic (BFFP) Movement holds producers accountable for the waste they create. The resources available for these audits will likely change and be updated every year. We recommend navigating their website to make sure you have the most up-to-date resources; if you need any help, you can always reach out to a PLAN staff member. With this audit, you can submit your data to the global report as well and be part of an international movement. Here is the global toolkit: breakfreefromplastic.org/brandaudittoolkit. You can use this data to advocate for different local and sustainable brand brands on campus.

Example:

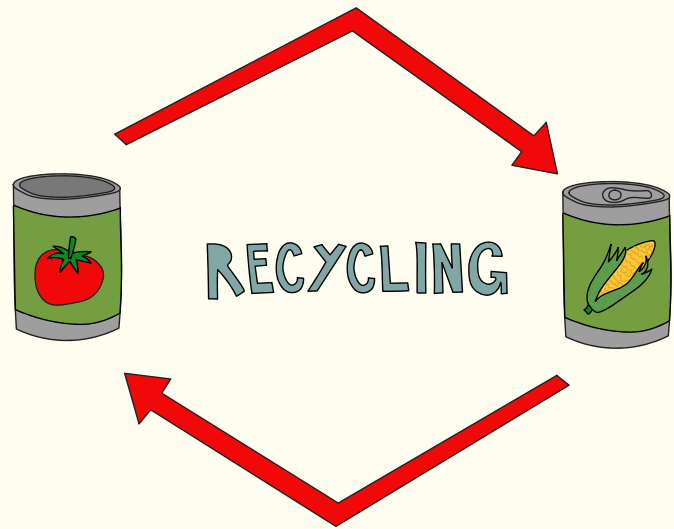
A student finds that of all the plastic waste, Pepsi products make up around 60% of the total. They use this data to advocate for aluminum cans in vending machines or reusable ones that can be recycled, instead of the regular plastic bottles that can only be downcycled.



PLASTIC



ALUMINUM



OTHER WAYS TO FRAME YOUR WASTE AUDIT

1. Start with a Clean-Up

Do you have a part of campus that is littered with, well... litter? This audit can feed two birds with one scone. In the process, you can both beautify an area that has been littered and record valuable data in the process. Litter pick-ups, however, are not permanent solutions. It doesn't address the core issue of why waste is ending up on that particular part of campus/land. **You could use the data to advocate for changes to address that.**

2. Make it an Advocacy Event

Put a spin on your audit to make it more appealing to a broad audience. Sorting waste can be boring on its own, but what if there was music and food at the end? Think about what your campus community is activated by and consider adding an element of fun! If you are choosing a public location, make sure you are not blocking any sidewalks or areas needed for physical accessibility.

3. Add an Artivism Spin

Sometimes you find the most unexpected things in the trash can. Maybe you can create some sort of art display with (some of) the waste once you are done sorting and cleaning it, or consider the sorting itself to be an art piece and pick a really public location!

4. Mail in the Waste back to its Source

Return To Sender is a campaign that sends plastic waste back to the producer responsible for creating it. This can be fossil fuel, beverage, and/or food companies.

Type 2: Infrastructure Audits

Bin standardization is an important part of the infrastructure that is needed to achieve zero waste on campus, from the perspective of accessibility. It should be as easy and convenient as possible for people to discard items into the proper receptacle. Ideally these bins are universal, easy to understand (for example: legible, with clear instructions), and located in all facilities across campus.

Working towards bin standardization across campus helps to streamline disposal systems to make them easier to use and understand, while also reducing contamination rates. Bin standardization, however, is only one part of the puzzle. To reduce waste, we ultimately need to eliminate the sale of disposable products and work with the campus to switch to reusables or compostables.

Bin Standardization Audit

Infrastructure assessments and audits are much less hands-on and provide more visual data collection. This can be combined with a Sorting Audit, as part of a campus-wide Capacity Audit, or can simply be done on their own! To start, we narrowed it down to two ideas here.

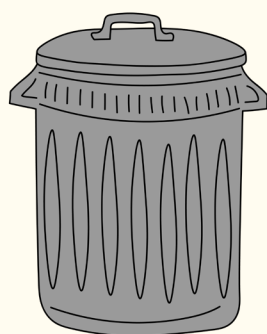
We use the phrase “infrastructure change has to precede behavioral change” because we know that most campuses tend to focus on behavior change first. It’s nearly impossible to educate and teach people to use complicated and inconsistent systems (for example: compost bins that are blue in one spot and green in another). The campus has to make the infrastructure simple and accessible.

We recommend that this assessment is performed in partnership with the Sustainability Office, Facilities Office, or other relevant stakeholders. *The information gathered during this audit should help inform the development of new bin standards for the campus (example from Dalhousie University), or offer a framework for a roll-out process to fix bins that are not in line with current standards (example from U of Michigan). This could mean replacing old bins with new ones, updating signage (example from Arizona State University), or retrofitting existing bins with new colors, labels, and lids to better match the campus system overall.*

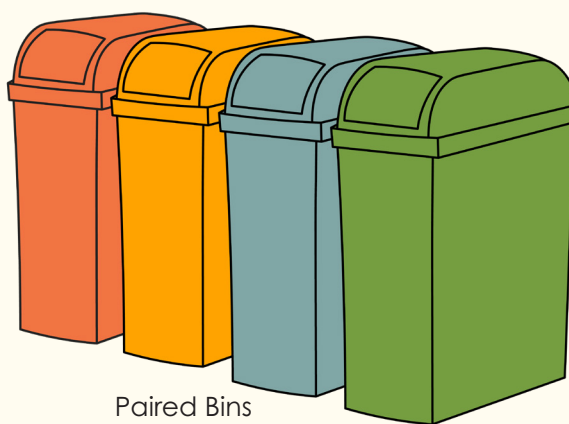
During these audits, **we recommend that students document bin stations around campus.** We recommend taking pictures and using [a spreadsheet like this one](#) to map and keep track of the following key components of standardized collection stations.

- **Paired, Unpaired, and Excess Bins**

Are there any unpaired (stand-alone) bins? Are there any stations with extra bins? It is important that all waste stations have a standardized set of bins to collect separated materials. There shouldn't be any unpaired bins. Trash bins should always be accompanied by at least Recycling and Compost bins. Even better is if central locations include additional collection bins for things like liquids, hard-to-recycle materials like electronics and plastic film, and even a donation space for reusable items.



Single Bin



Paired Bins

- **Bin Colors, Sizes, Shapes, and Signage**

Take note of bins that seem outside of the standard your campus has set. The ideal bin standardization system has uniform colors, sizes, shapes, and signage. All material streams should be assigned a color and shape. All signage should be the same. While bin sizes may vary (for example: large bins in the hallway, smaller bins in the classroom), ideally the large bins at one station are the same shape and size as the large bins at another location.

- **Bin Accessibility**

Are any bins in hard-to-reach locations? Sometimes, bins are placed in areas that simply aren't accessible to all (for example: when they are placed on a landing in between two sets of stairs). Sometimes, bins are blocking pathways and entrances, and need to be moved for accessibility and fire code safety reasons.

Another thing to keep in mind is when campuses expect students to bring waste from their dorm rooms to dumpsters outside of the building. Are those dumpsters accessible? Bins should be in high-traffic, easy-to-access locations. They should be highly visible and easily physically accessible.

Bin Station Examples



Two large, grey trash bins in a lobby of a campus building. The bins are open-top with no lid, and they have no labels or signage. These are likely two trash bins, with no paired Compost or Recycling bins in the area. Although a common display of waste streams, on campuses, we do not recommend having this type of set-up.



A "Zero Waste Station" at UC Berkeley is a well-designed bin system. 4 bins are paired together. Compost is green, with a diamond-shaped hole in the lid. Paper, Bottles, & Cans are blue for recycling and have rectangular and circular-shaped holes in the lid. Trash is black, with a square hole in the lid. The signage attached to the bin system provides clear imagery and examples of materials that go in each bin. The color-coding and shape-coding of this bin system allows for standardized bins across campus to look the same and help people easily identify the correct receptacle for their waste.



Bins don't have to be as beautiful and perfect as the UC Berkeley bins for them to meet a set of campus-wide standards. This bin station at Gonzaga University is a good example. The bins aren't attached as part of a single unit, but they are clearly paired together. The signage doesn't fit over them because they are in front of a railing, but the signage is taped to the wall as close as possible to the bins. The recycling bin is blue, with no lid. The trash bin is tan with a black lid that is closed. The compost bin is green, with a half-open lid. Many campuses retro-fit bin solutions like this, and often repurpose old bins by adding new lids, or painting them new colors, in order to meet a set standard for the campus.

Waste Hauler's Records Audit

Working with waste haulers to reformat collection routes and frequency of pick-ups can result in significant cost savings. It's possible that there is a need to increase hauling capacity for recyclables, which may result in an increase in recycling rates. There is no guarantee, however, that this project will reduce waste or contamination rates.

This project requires a lot of data analysis, is largely administrative, and its operations are mostly behind-the-scenes. For these reasons, we recommend that this work is performed by a paid staff member of the college/university, or by a consulting firm. While this project can be helpful and result in cost savings, there aren't many good learning or educational opportunities for the rest of the campus community to be able to take on this initiative.

- If you are finding it difficult to access these documents and resources, you can check out [PLAN's Accessing Contracts quick-guide](#) to learn more about how to file a Freedom of Information Act (FOIA) request to access contracts and documents from your campus.
- Most contracted waste haulers keep records of the weight of material collected by location. This information is recorded via a scale on the dump truck and is usually sent to your campus's Facilities Department. Some records may be better than others. This data can provide a lot of valuable information, such as the answers to these key questions:
 - a. What locations on campus produce high volumes of trash?
 - b. When are there periods of time when we see more or less waste?
- Some campuses explore cost-savings measures here, like working with your hauler to reduce how often a dumpster is dumped if the dumpster is frequently being picked up while it's empty. Every pick-up costs money, so the campus can save money and [Greenhouse Gas \(GHG\)](#) emissions by reducing the frequency of trash pick-ups.

Type 3: Awareness Audits

Awareness audits can help gather information and opinions about the stakeholders that engage with waste on campus. These surveys can be structured differently based on the information you are hoping to gather and how you plan to use the data you are collecting. Here are a couple of examples.

Informational Surveys & Polls

Administrators are motivated by knowing that students want or demand changes. You have little control over the results of the survey and many times these surveys are not a representative and random sample. However, surveys allow you to ask more than one question and gain an understanding about where your campus community is regarding a certain subject.

- **Create the survey:** Students, housekeeping staff, administrators, and other faculty will all offer different insights into waste practices and attitudes on your campus. Additionally, you can work with a [stakeholder group](#) to develop questions and make sure that these questions provide the information you need.
 - a. Think about how you want to use this information. How can the results of this survey be leveraged to create change on campus?
 - b. What information do you need to communicate to administrators that students, faculty, and staff want changes made on campus?
- **Administer the survey:** You can use many different methods of surveying, including electronic surveys or in-person interviews. Electronic surveys are easily set up through Google.
 - a. Alternatively, tabling is an opportunity to gather survey information from passersby. Use [PLAN's Effective Tabling 101 quick-guide](#) for some tips.
 - b. Simple incentives, such as entering participants into a gift card drawing, can increase response rate.
 - c. A good rule of thumb for your response goals is to aim for around 10% of your student body by random selection. This is a good representation! Once you hit this mark, you can wrap up your survey administration process.

Advocacy Petitions

Petitions are used to gather support surrounding one topic. They can include the choice of agreeing or disagreeing, although most petitions only have a sign-on for agreeing. Check out this example using our [Break Free From Plastic Pledge](#). Petitions are an essential element to democracy and most elections require a number of signatures before the name can be placed on the ballot. These are tried and true tools to garner support.

- a. Petitions should be clear and concise. They should state what you are hoping to do and provide a list where people can add a name, email, and possibly phone number. You can create paper versions or use websites like [change.org](#).

- b. Similar to surveys, gathering 10% of a student body's support is a good sample size because you will ultimately bring your petition to administration to advocate for concrete changes.

Type 4: Campus-Wide Systems Audits

System audits are holistic assessments of the campus's capacity to achieve zero waste, rather than audits of the material output of the campus. While most materials output assessments are quantitative in nature, system audits tend to be more qualitative. They assess the existence of policies, programs, logistics, labor, infrastructure, equipment, and more to determine what the campus needs in order to eliminate disposables from campus.

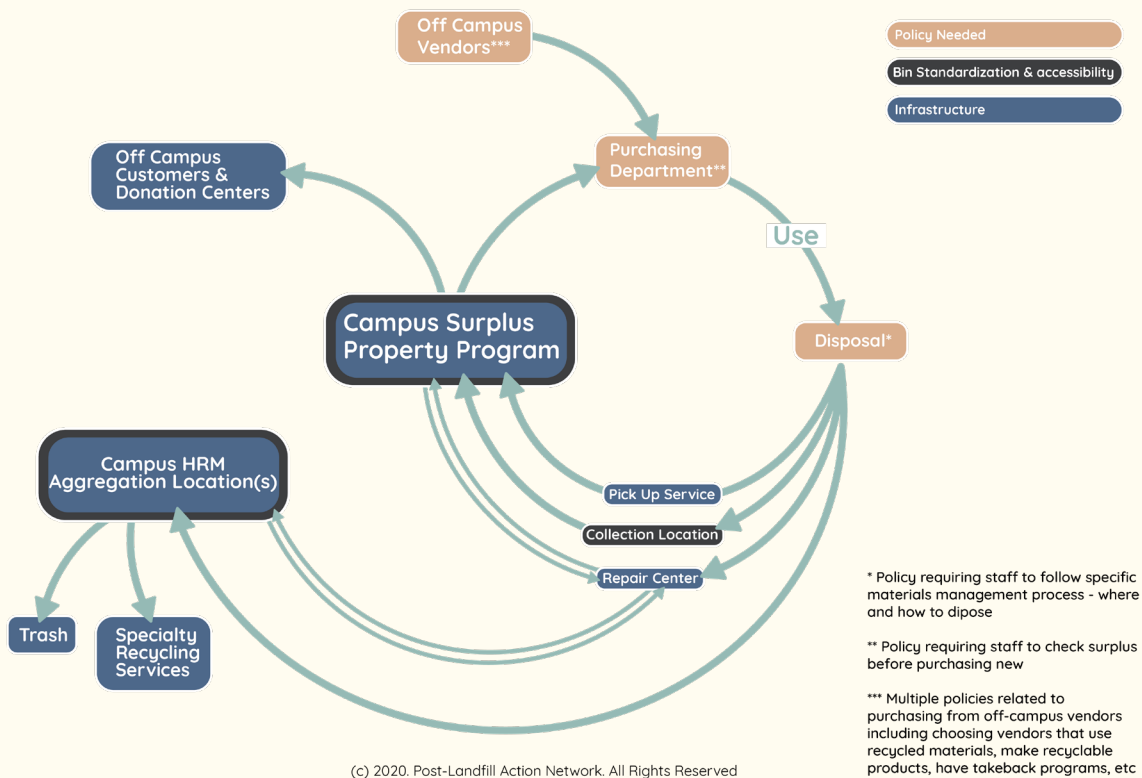
Atlas Assessments

In 2017, we developed the [Atlas Zero Waste Assessment™](#) and started working with campuses on comprehensive audits of their materials management systems. Taking a systems approach allows us to assess the big picture, whereas all other audit types mentioned in this manual zoom in on one piece of the puzzle. However, this approach requires a lot of work and investment!

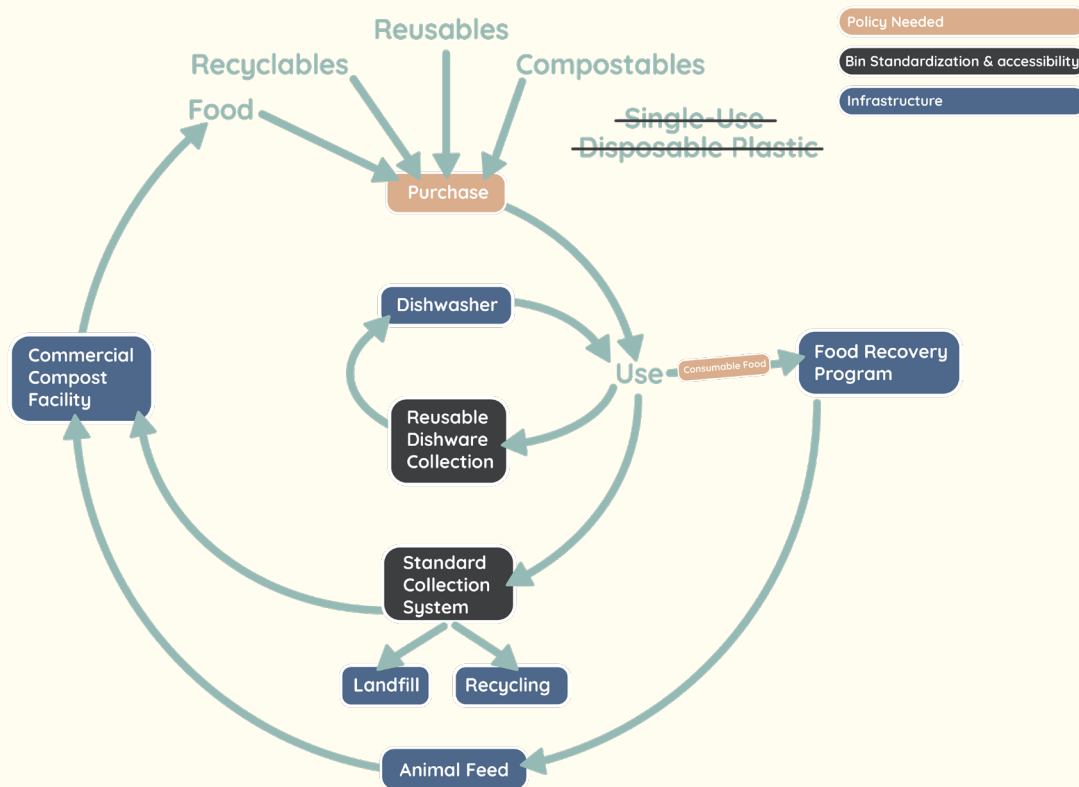
Through the Atlas Zero Waste program, we work with student fellows that are hired by their campus's Sustainability Office and are paid for about 5 hours per week, over the course of a semester, to complete the assessment. Below, we've included a snapshot from one of our top-scoring campuses. If your school is interested in creating a comprehensive, systems-based assessment, reach out to us at atlas@postlandfill.org.

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

Atlas Zero Waste Assessments review materials management using two separate system scopes. This chart shows materials categorized into two separate scopes. Each scope is managed differently, as evidenced by the graphic below, on page 19.



This graphic is a "circular economy" style of flow chart that shows three components of the Scope 1 Materials Management System on a campus. The three components are color coded: Policy Needed, Standardized & Accessible Bins, and Infrastructure.

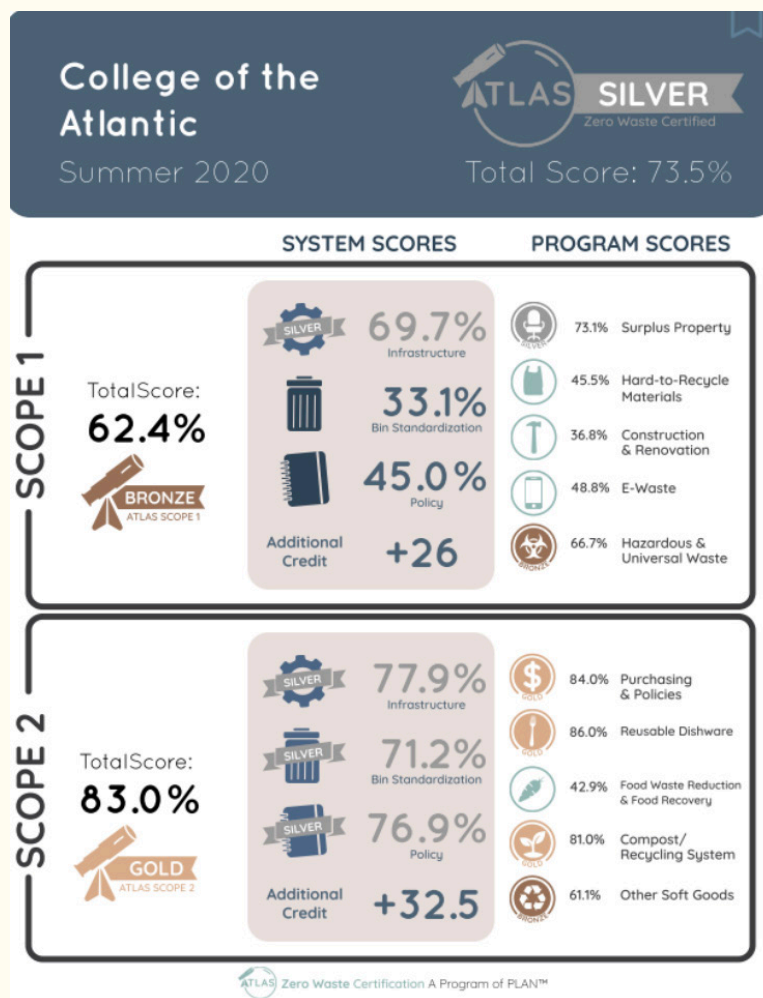


A "circular economy" style flow-chart showing three components of the Scope 2 Materials Management System on a campus. The three components are color coded - Policy Needed, Standardized & Accessible Bins, and Infrastructure.

System Change

The issues addressed in this manual often fit together like puzzle pieces to make up the whole picture of the materials management system. We often advise campuses to take a step back from isolated projects to envision how the solutions can be approached through a wider lens. For example: while bin standardization efforts are a necessary component of a zero waste campus, so are procurement policies that work towards the long-term elimination of items that cause confusion and contamination in recycling and composting streams. Bin standards are easier to establish when the signage focuses on four common items rather than 15 mixed items. Implementation of bin standards may also require conversations with multiple other departments and stakeholders, such as Facilities, Custodial Teams, Housing, Residential Life, Grounds and Events, Athletics, the Library, and many others.

We encourage campuses to think about how to bring together a group of stakeholders – often called a Zero Waste Task Force (ZWTF) – to explore opportunities for cross-departmental collaboration. PLAN is available to advise member campuses on strategies for how to approach these conversations effectively, and we encourage member campuses to utilize case studies on projects like bin standardization, compost program expansion, and plastic reduction in our Program Case Study Library located in the [PLAN Member Hub](#).



Glossary of Terms

Break Free From Plastic (BFFP) Pledge

This is a pledge developed and directed by PLAN and other student organizing groups such as Student PIRG, Surfrider, and more. Read the full pledge at postlandfill.org/bffp-pledge.

Bin standardization

Refers to the accessibility and standardization of collection infrastructure for different materials, as well as accompanying signage. This can describe a collection site or point, or a physical bin.

Paired bins vs. Unpaired bins

A paired bin refers to when a bin has other waste streams paired with it. Alternatively, an unpaired bin means that the bin is alone. Landfill/ Recycling/Compost is a common 3 pair of bins. Landfill alone on a campus that accepts recycling too would be an unpaired bin.

Brand Audit (a type of Waste Audit)

A waste audit is a physical survey of waste streams. A brand audit is a more specific type of waste audit, in which you document additional details to identify the company or brand that created the product. Brand audits take waste audits to the next level and hold big corporations responsible for the amount of trash they produce, through the generation of cumulative audit reports.

Circular Economy

We like this definition from the [Ellen Macarthur Foundation](#): a circular economy decouples economic activity from the consumption of finite resources. The circular economy is a systems-solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution.

Downcycled

Downcycling is the term used to describe the recycling process that plastic goes through and infers that, each time plastic is recycled, the quality of the material is lower. A plastic bottle is not made back into a plastic bottle, because the plastic quality has been downgraded. Aluminum can be recycled indefinitely without losing quality, which is why we advocate for cans over bottles.

Freedom of Information Act (FOIA)

This United States act allows people to request and receive access to any government (federal or local) documents. Because public universities receive government support, they must abide by this act. Some states have their own FOIA acts, as well. Public universities must respond to FOIA requests, but private and “state-related” universities are exempt from this law, as they are private entities.

Infrastructure

Refers to the programs, resources, staffing, and logistics required to support waste reduction initiatives on campuses. Examples include space for storing and managing surplus property, industrial dishwashers for washing reusables, a hauling contract with a compost facility, etc.

Overburdened community

We like [this definition from the EPA \(crafted in 2020\)](#): overburdened communities refer to minority, low-income, tribal or indigenous populations, or geographic locations in the United States that potentially experience disproportionate environmental harms and risks.

Post-consumer

This refers to waste that is generated after a product has been otherwise consumed. For example, food that has been taken to the table at a restaurant and not eaten by the consumer is called post-consumer waste because that food gets thrown away.

Stakeholder

A stakeholder is a person who has a stake in the project that you are working on. This can be staff, students, faculty, or generally anyone that may be affected by your idea.

Waste haulers

These are the people who regularly drive hauling trucks to collect full bins and dumpsters. They come and haul away waste, recycling, and compost.

Links in this Manual

Campus Examples

Bin Standardization

[Dalhousie University](#)
[University of Michigan](#)

Bin Tracking Audit

[Williams College](#)

Labels & Signage

[Arizona State University](#)

Photos

[Williams College](#)
[UC Berkeley](#)
[Gonzaga University](#)
[University of Illinois: Chicago](#)
[Depauw University](#)

PLAN Resources

[Atlas Zero Waste Assessment](#)

[Break Free From Plastic Pledge](#)

[Why We Don't Want To Dig Through Your Trash – PLAN Blog Post](#)

[Infrastructure Change Must Precede Behavior Change – PLAN Blog Post](#)

[How to Talk to Campus Staff and Other Stakeholders](#)

[Contamination Waste Audit Template](#)

[PLAN Membership Benefits Doc](#)

[PLAN Member Hub](#)

[Finding Funding on Your Campus](#)

[Food Waste Audit Template](#)

[Campus Brand Audit Template](#)

[Accessing Campus Contracts](#)

[Effective Tabling 101](#)

Other Articles

[EJ 2020 Glossary](#)

[Ellen Macarthur Foundation](#)

[Truth Behind the Trash](#)

[Break Free From Plastic – website](#)

[Brand Audits](#)

[Brand Audit Toolkit](#)

[Tare Weight](#)

[Food Recovery Network – website](#)

[Weigh the Waste](#)

[Greenhouse Gas Emissions](#)

[Change.org](#)

Image Credits

[Gloves](#)

[Hazmat Suit](#)

[Luggage Scale](#)

[Mask](#)

[Paired Trash Bins](#)

[Safety Glasses](#)

[Sandbag](#)

[Shovel](#)

[Tarp](#)

[Trash Grabber](#)

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