17 TIPS FOR SELECTING THE OPTIMAL WASTE DIVERSION CONTAINER

Accurate Graphical Guidance

Fingerprint Resistant

ADA Conforming

Receptacles Without Hinges

Impact & Dent-Resistant Materials

Designed For Employee Safety

Line of Vision Instructions

Consistent Order of Waste Streams

Make Containers Conveniently Located

Eliminate Flat Horizontal Surfaces

Easy to Deploy & Redeploy

Make Them Top Loading

Avoid Food Traps

Accurate Textual Guidance

17 Tips for Selecting the Optimal Waste Diversion Container for Your Facility

Waste Diversion - The Big Picture

Zero Waste is challenging. This very challenge makes our waste diversion progress more rewarding. This white paper will help you on that journey to success.

People are a key part of any successful waste diversion system. And, that is part of the challenge. Motivation levels vary as people approach a waste diversion container. Not all of us process information the same way as we are standing at a waste diversion container. A person may patiently and carefully interpret the labels while at the container and others may only check out the graphics or the text.

Fortunately, we are able to benefit from other facilities prior diversion efforts. Several tips are included in this white paper gleamed from years of working in and for facilities implementing Zero Waste initiatives. While some key factors for success are beyond your control, you can start on the road to success by first selecting the proper waste diversion container for your specific facility.

Empower your users to quickly self-sort correctly the waste items they are holding. Why confuse people attempting to use your container? Confuse them and they will quickly become frustrated with the experience and even vent that frustration specifically at your organization. Your choice for a waste diversion container will be the cornerstone for your success. Achieving your Zero Waste goals hangs in the balance. Let's get started!

Quick Scenario

Someone holding waste items approaches your new waste diversion container. Unsupervised. You eagerly observe. Perhaps the person now standing at the container is a new student or employee. Maybe they are attending an event at your venue for the first time. Count 1-2-3-4-5. That is how long most people allow to figure out where the waste items should properly go. How did they do just now? A perfect result? Or, did they drop something into the wrong bin opening? Were they frustrated and tossed everything in the closest opening?

The Container Is the Hub

Our scenario touched on the container's importance. Zero Waste requires multiple interconnected elements to function smoothly, almost flawlessly. The waste diversion container is the hub of that effort. How much impact does the waste diversion container have? A little? A lot?

The container has practically **everything** to do with an effective waste diversion program. Diversion rates increase with consistency. The location of the bins should be consistent. The order of the waste streams should be consistent. The label design should be exact and consistent. Recycling and composting must be accessible to everyone by providing an ADA-conforming container. The container should not have difficult to clean food traps where odors and associated bacteria occur. The container should be easy for staff to empty and clean. The container needs to be durable so remains in service and is a good investment for your organization. A container made with recycled materials and recyclable at end of life are additional considerations.

Bottom line: A poorly designed waste diversion container will decrease diversion rates, increase cross contamination of the diverted streams and operationally be problematic to service and move.

Getting Down in the Trenches:

Have you ever observed a waste stream audit at a facility? The findings can be disheartening. A typical audit unfortunately finds around 1/3 of the items suitable for the comingle stream are incorrectly self-sorted by guests into the landfill stream. A tremendous missed opportunity. On the other hand, the comingle stream will often have a significant contamination from landfill items. Incorrect sorting creates additional issues including the possibility the entire comingle stream is routinely rejected and sent to the landfill.

The question often arises asking how much waste can potentially be diverted at a facility. This is a great question. The waste amount and mix varies depends on the facility and use. Here are some statistics gathered from a

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20,000 seat venue which hosts over 150 ticketed events per year including NBA basketball games, concerts and community events:

- Across all events, the average waste generated by each attendee is 1.7 pounds.
- Reviewing the raw data, the waste diverted in a 2-stream approach (comingle, landfill) was 58%.
- The waste diverted in a 3-stream approach (compost, comingle, landfill) was 94% if compostable service ware is used for concessions.

The above venue attains very accurate self-sorted waste streams. Not 100%, but very accurate. Minimal post-collection resorting is needed. Guests self-sort items almost flawlessly.

Why does that facility rarely have a plastic bottle incorrectly tossed into a landfill stream? Or a candy bar wrapper incorrectly tossed into a comingle stream? The answer is found in the five seconds a guest, employee, student or visitor self-sorts items into waste streams. Disappointing outcomes are predictable if you overlook key considerations while selecting a waste diversion container.

The Secret To Your Future Zero Waste Success: 17 Tips For Selecting A Waste Diversion Container

1) Provide Accurate Textual Guidance

Choose your words carefully when selecting text. "Plastic" is sometimes the only guidance provided for a diversion stream at a waste diversion container. Here is where people make things challenging. Plastic means many things: plastic bottles, bottle caps, drinking straws, cup lids, forks, writing pens, plastic wrap, food-contaminated containers, candy bar wrappers, chip bags, etc. If "plastic" is your guidance, you should not be upset when your container is filled with multiple types of non-recyclable plastic including food-contaminated plastic.

Select your text so the guidance is accurate and recognizable. If your goal is to collect a stream of compostable food and service ware then "Compost" is more understandable than "Organics." The clearer your text instructions are to a variety of persons then the higher your waste diversion rate.

Bottom line: Nebulous text will greatly diminish waste stream diversion and accuracy.

2) Locate All Text In the Self-Sorter's Line of Vision

Ever encounter a waste diversion container where the text was only visible if you were standing several feet

Contents of the above containers shown below. The Landfill contents on the left incorrectly contains both aluminum cans and plastic bottles. The comingle bin alternately has waxed drinking cups and straws which are not recyclable. Failure to locate guidance in the line of vision, wrapping text around the circumference and inexact text combine for a poor waste diversion outcome.

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away from the container? Ever see a container with text wrapped around the entire circumference? That is even more disruptive for waste diversion since very few people will walk around the unit carefully reading the text. Imagine being one of several people at that container and not being able to read the text? Frustrating? Absolutely.

Bottom line: Text outside the line of vision as disposal choices are made will inevitably diminish waste stream diversion and accuracy.

3) Lifelike Visual Guidance Significantly Enhances the Impact of Text

Text needs partnered with life-like graphics. Textual guidance alone is insufficient. A picture really is worth a 1000 words during waste diversion. Forward-facing graphics will also assist users to recognize the waste diversion unit. Graphics are so effective because they provide examples of what to sort into each waste stream at the actual point of disposal. Graphical images increase the accuracy of self-sorting and diversion rates. Graphics overcome language barriers. Life-like graphics are essential since is not reasonable to require someone to carefully decipher images. Graphics should be in the line of sight as each item is being disposed. Wall posters fail in this aspect as do overhead signs.

Do you expect a lot of fish carcasses and gallon milk jugs in your waste stream? Probably not. Is the green label trying to show a slice of bread on a napkin? Why risk such confusion? Instead, use life-like graphics that represent the items likely to enter your facility's waste stream. Generic labels are not as effective as custom labels.

Bottom line: Graphics which are inaccurate, not representative or generic will greatly diminish waste stream diversion and accuracy.

4) Provide Accurate Graphical Guidance

Choose your graphics carefully. Show those items you expect to divert within the waste stream. The more specific the image then the better your diversion outcomes. If you have a branded item in your waste stream then show that specific item rather than a generic version. Clean, lifelike graphics in combination with text is crucial for providing guidance in the short window of time someone stands by your container and self-sorts. Do not confuse users as to what belongs in each waste stream. Someone self-sorting will not be holding a generic item in their hand. Generic signage may often include items that are not even applicable to your venue.

Compare the design of the compost label (to the right) which incorporates specific textual guidance and life-like graphics to the example shown in Tip #3.

Bottom line: Graphics which are inaccurate, not representative or generic will greatly diminish waste stream diversion and accuracy.

5) Provide A Consistent Order of Waste Streams

Consistency improves accuracy of diverted waste streams. Problems arise when individual containers are used for each waste stream. Often the order of the bins is not consistent between various locations within a facility. Confusion is created when the order of waste streams is inconsistent. A single receptacle with multiple streams which are always in the same order throughout the facility makes self-sorting faster, more accurate and less stressful.

Inconsistent waste stream order confuses guests in the pre-sorting process

Container design should allow for multiple waste streams so fully supports the proven "one stop, one drop" concept. An integrated container with multiple waste

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streams allows for consistent bin order throughout an entire facility. An integrated container ensures guests do not have to "ping pong" back and forth on a crowded concourse or room in order to throw away items into multiple containers.

Bottom line: Waste stream order consistency increases adoption rate by users, accuracy of waste streams and diversion rates.

6) Be ADA Conforming

No law requires a waste diversion receptacle to be ADA conforming. A higher standard should be considered. Dining surfaces must be ADA conforming, so why

Non-conforming waste diversion containers.

would a facility expect a disabled person to interact with a waste diversion receptacle opening much taller than the mandated disabled dining surface specifications?

Bottom line: Recycling and composting should be accessible to everyone.

7) Top Loading Means Gravity is Your Friend

Needing to reposition items in your hands and then push them horizontally into an opening is not only frustratingly awkward but messier when liquids are involved. Spilled liquids create slip hazards in front of your container and increase the workload for housekeeping. Top loading containers also prevent items from springing back towards the user.

Bottom line: Gravity is good.

8) Should Not Require a User to Touch the Container

Waste diversion containers should not require the user to make contact with the unit. This is not only unsanitary

Containers which require you to touch the surface are less sanitary. Mechanical version of these containers can fail spectacularly.

but also requires the user to hold everything with one hand once they get to the unit.

Bottom line: Nothing good happens when a user touches a waste diversion container.

9) Should Be Easy to Recognize

A waste diversion container should be obvious from several feet away. A container which looks like a water foun-

Do not make users speculate about whether your container is a trash and/or recycling center.

tain or a movie prop will significantly diminish waste diversion results. Failure to incorporate forward-facing

labels is counter-productive and makes identifying a waste diversion container more challenging for users.

Bottom line: Employ a unit easy to identify as a waste diversion container.

10) Make Containers Conveniently Located

Waste diversion containers need to be easily accessible. Containers should be deployed in sufficient quantities so user interaction is frequent and becomes routine behavior. One rule of thumb is to locate a container at each entry and exit point of a facility as well as high traffic locations such as a break room, lunchroom, conference room, copier room, elevator lobby, and patio.

To the right is an airport that has conveniently and consistently positioned containers for access whether you are waiting for a flight or walking along the terminal. You are always within a few seconds of a container.

Below is a sports arena that positions a multi-stream waste diversion container at each access point to the seating bowl as well as near concessions. This approach has proven to be very convenient and successful. Crowd flow is an important consideration. Concourses full of people make finding multiple containers frustrating so employ one stop, one drop for your waste diversion.

Bottom line: As in real estate, successful waste diversion is about location, location, location.

11) Eliminate Flat Horizontal Surfaces So Guests Do Not Place Items on the Container

Design is important to keeping your waste diversion unit in service. Inadvertently provide a relatively flat horizontal surface and soon someone will set something on that surface while they check their smart phone. This restricts access for others to sort and divert items.

Bottom line: Containers should not invite alternative use by users.

12) Use Impact and Dent-Resistant Materials

Avoid waste diversion receptacles that are dented if the unit is kicked, crashed into a corner or is hit by a metal cart. Container materials should have consistent color at all depths of the material in case the surface is scratched, cut or marred. The strongest, most durable waste diversion units will be uni-body which eliminate weak connection points and seams which pull apart under stress. Powder-coated finishes chip and flake.

Having scratched, chipped or dented containers will have a negative effect on your facility's image and may create a safety hazard for users and housekeeping staff.

Bottom line: Not all materials perform equally over a long service life.

13) Units Should Be Easy to Deploy and Redeploy

Waste diversion receptacles need to be mobile. Collecting waste streams leads to leaks, splashes and spills. A unit should easily roll aside for cleaning behind and beneath. Units must also roll so the units can be shared between several locations such as on a campus environment with multiple sporting and entertainment venues. This flexibility enhances their waste diversion effectiveness. Locking wheels are a useful option.

Heavy stations prove to be problematic for maintaining and cleaning.

Lightweight waste diversion units being moved to another location easily by rolling onto a truck

Bottom line: Wheels. Containers routinely need to be moved by housekeeping during cleaning operations and possibly units are moved during implementation of a multi-facility waste diversion plan.

14) Avoid Food Traps For Ease of Maintenance and Low Odor Levels

Containers should be durable and easy for operational staff to service. The waste stream includes liquids. Avoid receptacles with seams and recesses where liquids can be trapped. Trapped liquids attract vermin and create strong odors as well.

Containers should be on wheels so they can be easily moved for cleaning. The surface should be textured to hide fingerprints and disguise spills. The material should only require water and mild soap to clean but resist scratching. Seams and crevices should be avoided as these are traps for liquids and food particles.

Different materials create seams where liquids and food particles can collect. This can be extremely difficult to clean out to prevent foul odors and bacteria growth. Unibody construction will help prevent this. Recessed lettering creates the same bacteria and odors issues.

Bottom line: Food traps create multiple problems.

15) Choose a Receptacle With No Hinges

Hinges not only function as a liquid trap but are also hard to clean. Hinges can rust and even become sprung which shortens the unit's productive waste diversion service life.

Bottom line: Hinges will fail causing doors and flaps to no longer function safely and correctly.

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16) Fingerprint-Resistant Construction

Stainless steel requires frequent surface maintenance to remove fingerprints and smudges. Glossy powder-coated finishes also show fingerprints.

Bottom line: Textured finishes are best. Housekeeping will thank you.

17) For Employee Safety, Use Waste Bins That Don't Require Lifting Hands Above The Chest

Ergonomics are critical for the operations team. Service personnel should be able to easily empty the waste streams from the container's bins. Workplace safety rules and workers compensation insurers seek to reduce the need for a worker to lift a heavy object where the hands must rise above the chest. Similar guidance exists for lifting heavy items while your feet spreading beyond shoulder width.

These receptacles require maintenance personnel to lift waste bags above chest height and this significantly increases risk of on the job injury

Compost can be relatively heavy compared to other waste streams. A bin capacity under 25 gallons is suggested for each stream as a way to limit the maximum weight of the bin. Containers should never require you to lift the liner bag upwards then rotate to your side to lower the liner bag. This is a flawed design.

Bottom line: Safety is no accident.

White Paper Recap

Waste diversion is where you can plan the work and then work the plan. These tips will help you on your journey to Zero Waste. Wishing you all the best results.

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