

Waste Audit Template Assessment for Schools – Recover & Divert

This document is a tool to assist with executing a baseline waste audit in a school cafeteria and food service areas. There are many detailed guides available online and are linked in the Maryland Department of the Environment’s (MDE) [Toolkit for Schools](#).

Organize a Team

Who: Cafeteria staff, Parent Teacher Association (PTA), Janitorial/Facilities Staff, Administration Staff, “Green School” leaders and students. You could also consider asking community members who can support food diversion to help you with your efforts.

What: You’ll need the assistance of several people. Some will need to direct the students to specific discard stations, some to assist with sorting and others to help with tabulation. You’ll also need people to answer questions (inquiring minds make future changes!), and to assist with setting up and cleaning up. Students will be needed to analyze the data, make recommendations and work towards action items. Funds will need to be secured for future programming so that may require another team of helpers.

Create a Short Plan for Data Collection

- Keep an honest account from the start. If your school does not routinely have “zero waste” lunch days, do not try to hold one on the day of your audit. You want an accurate reflection of your typical cafeteria day. Remember, no one is ‘wrong’ this is all to develop a stronger plan of action.
- Plan for members of the team to help facilitate the signage, station for data collection and recording, and disposal at the end of data counting. If the assessment is performed over many days, plan for the extra hands and consistent setups daily. Take photos and document the process.
- What materials are necessary to collect?
 - Sanitation – reusable metal tongs are great for scraping food off plates and moving items.
 - Sorting station(s) – tables with signage directing students where to place what. Keep signs at student eye level. Use images instead of lots of words. Tarps will help protect flooring and keep everything together, bins are necessary for separating all of the different items needed in the count.
 - Count and weighing – score cards (see page X) and if possible, a scale
 - Disposal post collection
 - Food Residuals: Unless you have an organics diversion (compost or anaerobic digestion) lined up, unfortunately this will need to be put in the trash.
 - Liquids: Pour down drain

- Recyclables: If the school already recycles, then the separated recyclables can be processed as usual (note, plastic film wrap CAN be recycled outside of school!)
- Recovered Food (unopened) – SHARE TABLE
- Data collection – pencil, paper, and later spreadsheets

Collect Data

All hands-on deck for this activity!! This may be a day that dismissal from the cafeteria takes a little longer as this is an initial sort and divert. Clear explanations, well placed and labeled sorting stations, and a clear plan will help students and staff with the transition.

Set up a station with great signage, provide notice during morning announcements and follow up with a reminder prior to students moving into the cafeteria.

- Count the number of whole food items recovered (fruits, vegetables, yogurts, cheese sticks, etc.) that could be used as edible foods (aka share table or donation). Keep a separate column for milks recovered. Use these numbers to estimate how many milks and whole food items are thrown out in one day. For example, if you sorted one-third of total cafeteria trash from a day at school, multiply the number of items three times for the totals for one day.
- Weigh and record each separated waste: trash, recycling, compostable materials (if possible, keep food serving trays separate and weigh/count them separately), and the liquids bucket(s). Also weigh all the perfectly good unopened, unpeeled food that was recovered. Note, don't forget to subtract the weights of the empty containers used when collecting the materials (i.e., 5 gallon bucket) from the recorded weights.

Note: Don't forget to quantify back of house food preparation residuals, trash, and recycling!

Analyze Data

Why: Understanding the reasons items were discarded is very important. To begin this process your team would have to identify the sum of the data collected. If accounting occurs over a series of days or week it may present a better picture. If you are performing an extended study, avoid "count" days on the same days of each week (ex: don't always do the audit on pizza day if that's a very popular day for students to buy lunch, be sure to capture less popular school lunches so you have an accurate reflection of waste that is actually produced).

How: Encourage a grade or a class to analyze the data using graphs and charts. Visuals for all ages are important to assess what concerns and what solutions may arise.

What else: Once you've quantified the types of foods that are discarded, you may want to determine why. Surveys are a great tool to accomplish this and depending on timing and participation, this can be as simple as a hand raising, pen and paper essay or online selection tool.

Example questions may include (with either fill in the blank or circle examples):

- Why was only ½ of a food item eaten?
- Why are there so many of one type of food item uneaten?
- Why are there so many types of "x" wrapper? Why is that food so great?

Report the Data

Sharing what is observed with the students and community will help to determine the next steps. How this information is presented can be through a variety of methods.

- Use this as a part of classroom lessons to generate presentations, reflection essays, summary analysis and data analytics.
- Share through social media, community fliers, school newsletters, morning school announcements and present at community public speaking events.

Next Steps

Now that you've shared the data you can begin to form plans for the next steps. In these plans, make sure to include: identifying who will be involved, who is responsible for each of the necessary actions, and what is their required staffing commitment. How will reporting be handled? How long will the planning time take for this "action item" and how will each be funded?

- What are the opportunities that could begin within the school in a short time frame (within a month to a school quarter)?
 - Sharing results of collection
 - Sharing results of survey
 - Setting up a food recovery (aka: share) table
 - Collecting liquids separately
 - Education in class on what is wasted food and what is source reduction.
- Moderate time frame (by end of school year or beginning following school year)
 - Establishing a community free food market
 - Collaborating with agricultural partners for animal feed distribution
 - Diversion for organics recycling (compost or anaerobic digestion)
 - Finding avenues for all types of recycling collected (note: identification of the material types is essential along with where those materials can be sent to)
 - Reuse or upcycling of materials collected (packaging or serving materials)
 - Report diversion information to county
- Long term planning
 - Identify meal changes to align with demographics of the school community.
 - Modify schedules to ensure students have exercise prior to lunchtime (recess or physical education)
 - Host a 'healthy snack' at days end (move the share table(s) at the exit for a grab and go available for all students)
 - Reassess to see if there have been behavior changes and where improvements can be made.
 - Inclusion in all subject curriculum
 - Host community workshops on food residual diversion opportunities

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Example of a Waste Assessment Data Sheet

Make sure to list the units – for trash and recycling you may want to include the weight in pounds (lbs) and for other items, a unit count (ea) may be easier. Just be sure to be consistent and include it in your notes. For future audits consistency will be key.

NOTES: *Recycling varies from county to county, so don't add recycling of items that can't be recycled. You can also separate this column into school recycling and plastic film if plastic film recycling is realistic option for your school (e.g., [NexTrex](#)).

^^Consider separating serving materials and itemizing trays, cutlery, etc. as that provides forecasting for future changes – make sure to not double count or add a “subtotal” for trash and compost (if the trays are BPI certified compostable).

#Milk counts as ‘recoverable’ if it is stored properly.

Date	Time/Class Period	Trash	Recycling	Compost	Serving Materials	Liquids	Recoverable		
		Wrappers, etc.	*only what CAN be recycled at the school	Organics: unwrapped food materials	^^Trays, cutlery, cups, lids, etc.	Poured into a bucket	Packed Materials	Whole Fruits/Veg	#Milk
TOTALS									

If there's no scale available for actual weight, the following can be used for best estimates:

- Liquid Weights (full containers, estimate based on fullness the fractional weight)
 - 1 gallon = 12 lbs
 - 2 gallons = 24 lbs
 - 5 gallons = 60 lbs
- Most food scraps generally weigh about 3-6 lbs per gallon
 - Estimate a full 5-gallon bucket to weight 30 lbs
 - Estimate a full 32-gallon wheeled cart at 140 lbs

