



# HOW TO CONDUCT A WASTE AUDIT





## BEFORE THE AUDIT

Before you start getting ready for your audit, there are a few things you should do first

- Make sure you have enough Green Team members and volunteers that are willing to get their hands dirty with a waste audit! While you could do an audit with only a couple people, it will be far (*far*) easier with 5 or more people.
- Get approval from the school to perform the waste audit. Be sure to be clear on why you want to conduct this audit and how important and insightful the results can be, as this can help with staff approval!
- Reach out to the school custodians. Find out when garbage is picked up, where it is stored until it is picked up, how much garbage is generated in an average day, what supplies you will be able to use (we have a materials list below).
- Based on what you hear back from your custodians and staff, ensure that you will have a space large enough to store, separate, and sort the waste that you collect for the audit.

## SAFETY

Once you've got the approval from your school (yay!), it's time to start thinking about safety. Remember, you will be going through garbage, and that will come with many safety hazards.

- PPE (Personal Protective Equipment) is a must! Everyone needs to wear gloves, masks, safety-goggles, and close-toed shoes, and it is recommended to wear long sleeves and pants, or even aprons.
- Plan and coordinate with the custodial staff to use clear bags for all garbages on the day of collection to make it easier to identify



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- any hazards or substances that you will want to avoid
- Keep safety in mind when setting up your sorting area. Make sure your bins are close to your sort area so that you don't have to toss or throw any of the garbage.
- Be sure to remove your gloves when touching surfaces other than the garbage, bins, and sort area, so you are not spreading garbage around.
- Don't include any bathroom garbages in your audit to help eliminate exposure to bio-hazards.
- You may think this is silly to include, but it must be said: do not take, keep, or eat anything you find in the garbage! It has been in the garbage and is full of germs and bacterias. No matter how 'fine' it looks, it must stay in the garbage!

Of course, this list is not fully inclusive of all the safety risks. Be sure to use your best judgement and be safe!

## WHAT YOU'LL NEED

You will need to tailor this list to the specific audit that you will be conducting, but generally speaking, here is a list of things you will want for your audit:

- A large space big enough to accommodate the estimated amount of bags collected
  - Depending on when you plan to sort, this space may need to be able to store the bags overnight
- A few large tarps/drop cloths to cover any table surfaces and help with clean-up
- Gloves, masks, goggles, and aprons for each auditor
- Bins for sorting the waste
  - The number of bins will depend on how many different types of





material you are auditing for. For example, if you are interested in tracking only the amount of recyclables in the garbage, you will only need 2 bins: one for garbage and one for the recycling. If you want to know how much of each type of recyclable material is ending up in the trash (deposit beverage containers, plastics, papers, metals, etc.) then you will need a bin for each material type plus the garbage bin.

- Clear garbage bags to put the sorted materials into
- A scale to weigh the bags (industrial hook-scales are the best, but a bathroom scale will also work)
- A tracking spreadsheet (since the work will be messy, we suggest recording everything with paper and a pen, and consolidating the data afterwards using Excel or something similar - There are already many premade templates online!)
- A camera to photograph/record your audit
- Hand sanitizer
- Cleaning supplies (sponges, rags, mops, cleaning solution, etc.)

## PLANNING YOUR AUDIT

As we mentioned before, involving custodians and teachers in this process can help out a lot. They will be able to inform you of anything you may want to consider when planning (dates that won't work, typical heavy waste days, etc.)

- Decide how you will sort
  - As we mentioned earlier, decide what you are auditing for - are you checking for general recyclable materials that are ending up in the waste stream? Are you breaking that down by material? Will you also be looking for organics (food scraps and other compostable materials)?
  - Do some research to find out what can be recycled or otherwise





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diverted from your waste stream so your sorters will know what to pull out and where it goes

- Plan an end-game for all the material once it has been sorted. Where and how will you take all of the plastics/metal/paper/etc you pull out?
- Whatever you decide, create your tracking/recording sheet. For each material you audit for, you will want to record the amount of bags you fill up and the weight of each of those bags.
- Assemble your team and assign tasks
  - You'll need sorters, bag changers, weighers, recorders, photographers
- Choose a day to collect
  - Choose a regular, run of the mill, school day that doesn't have any special events or guests visiting to avoid adding waste that would normally not be there
  - You will want a full day to audit. Work with the custodians to ensure that all garbage is removed the night before and that all the garbages have clear bags in them.
  - Inform the people who need to know - custodians, teachers, fellow Green Team members - but don't announce it to all students. You want an accurate representation of a normal day and won't want anyone intentionally putting things in the garbage knowing that you will be going through it (we all know *that* class clown)!
  - Remember, don't collect bathroom garbages.
- Choose a day/time to sort
  - If you can arrange it, plan to sort through as soon as possible to avoid the garbage sitting and stewing.
  - Talk with your custodial staff to estimate how much waste you will be sorting.
  - If possible, you may even be able to start the sorting process



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- throughout the collection day once garbage starts to fill up.
- Remember to account for breaks, rests, and meals.
- Prepare your area
  - Set up and get your sorting area ready to go the day before collection
  - Lay your tarps or drop cloths down on the surfaces where the bags will be stored and sorted.
  - Get the bins you will be sorting the material into set up with bags in them and spare bags nearby for quick changes. Remember to keep them close to your sorting area to avoid having to throw the material
    - Set up an extra bin for 'other' materials you may not fit in your categories or trash
  - Have your scale and recording sheets all ready to go so you can jump right in and start as soon as the bags start to come in!

## PERFORMING THE AUDIT

Bags of garbage have been collected and now it's time to get sorting!

- Opening
  - Perform a visual inspection of the contents of each bag before opening (this is why you use clear bags!), looking for any hazards
  - Assuming all is good, open the bag and spread out the contents.
  - This is a good time to grab some pictures to show your fellow students, teachers, and parents, the current state of the schools waste stream.
- Sorting
  - Separate all the material into the appropriate bins





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- If you have a few people doing this, assign certain materials to certain sorters to ensure accuracy
- Be sure to stretch, keep proper form by trying not to bend or twist too much, and take micro-breaks throughout the process. While it might not seem like much, the repetitive motions can be quite the workout!
- Pull out any oddities or 'weird' garbage you find. Snap a pic to share with your school afterwards
- Recording
  - As the bins fill up, have your bag changers swap out the full bags for fresh ones and pass the full ones on to the Weigher
  - If you have an industrial hook-style scale, simply hook the bag and record it's weight. If you are using a bathroom scale or something similar that the bags won't fit on to weigh, have the Weigher weigh themselves without the bag, then again with the bag and record the difference.
  - As you are changing, weighing, and recording, give the bag a look over to make sure that nothing got mis-sorted into the bag
  - Once a bag has been weighed and recorded, mark it so you know it has been recorded and set it aside until you are able to dispose of it properly (recycling plant, scrap metal places, etc.)
- Finishing!
  - Do one last check to ensure that everything has been weighed and recorded properly
  - Arrange for the sorted materials to be disposed of properly
  - Clean up your audit station, being sure to properly sanitize all supplies and surfaces
  - CELEBRATE! Performing a waste audit is no small feat! Be sure to thank everyone involved and give yourselves a big pat on the back and round of high-fives!





## AFTER THE AUDIT

You've finished sorting and weighing the waste from your school, now it's time to crunch some numbers to find out how much of that waste could be diverted and disposed of in a more environmentally friendly way. We won't go into all of the different measurements and calculations you can do with your data, but a couple to start with are

- Total Waste Currently Generated
  - Adding up all of the weights you recorded will give you the total amount of waste that your school generates in an average day.
  - You can then use that number to find out how much your school generates in a week, month, and for the entire year.
- Waste Currently Generated Per Student Per Year
  - Take the total weight of the waste and multiply by the number of days in the school year. Then, divide that number by the number of students in your school.
- Actual Waste Generated
  - Do those same calculations, only this time just use the weight of the actual garbage you sorted out. If your school were to divert the other material that is going into your waste stream, this is the amount of garbage you would *actually* have.
- Percentage of Non-Waste Materials Entering the Waste Stream
  - On the flip side of the previous metric, figure out how much of those other materials are mixed in with the waste.
  - Which materials were the biggest culprits?
  - Which materials are the worst, environmentally speaking, to end up in a landfill and what % of the total waste was it?



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- Available Savings
  - This one is a bit more advanced. Based on the difference between the current waste and the actual waste, how much would your school save on waste disposal?
  - How many Lbs of material would your school divert from landfills if they disposed of the other materials properly?
  - Do some research online to see if you can find out what the emission reductions/carbon-offsets would look like if some of those non-waste materials were disposed of properly.

There are many more ways to breakdown and analyze the results from your audit. We will leave that to you to come up with.

Once you have crunched the numbers, plotted and graphed them (data visualization is a great way to be able to see your results clearly!), meet with your Green Team to review the results.

- What surprised you about your findings?
- What can your Green Team do to help the situation?
- What do you think your school could be doing better?
  - Take this one a step further than just waste diversion. Remember, the first R is Reduce! Some materials you pulled out were probably in there mostly because of lack of access to an alternative disposal (recycling bins, compost, etc). But were there any items in the trash that didn't need to be there in the first place? Single use plastics, food packaging, etc. What can your school do to reduce these items?
- How can your school decrease it's waste generation?





## **PRESENT YOUR FINDINGS**

After you've gotten dirty, did some math, had a few conversations and thought about the waste situation at your school, present your findings! Put together a full Waste Audit Report to showcase all of the things that you've learned from your experience and what steps you think you can take to make your school a less wasteful, more environmentally friendly, green school.

Present this report at PTA meetings, staff meetings, and assemblies. Talk to your teachers to see if you can get it included in any newsletters that your school sends out.

Use these presentations to start the conversation about doing better in your school and as your springboard to the goals you've already set (or have come up with since the audit)!

## **PARTY!**

And lastly: **BE PROUD AND CELEBRATE!!** We've said it before in this guide, but it can be said again - conducting a waste audit is a lot of hard work and you should be proud of yourselves for taking it on and completing it! They can be incredibly eye-opening, and often, after hearing the results, many people will change their behaviours and attitudes towards the waste they generate - not only in the school, but in their homes and communities. Just by performing this audit, you have already made a change. So celebrate! You deserve it!!

