Understand Your Waste and What Can Be Recycled

Whether your business is big or small there is value in learning about what waste your operation is generating. Waste is generated in every place of business, but the profile of the waste stream and the amount of waste can be wildly different from establishment to establishment. SWACO recommends that you conduct some type of "waste audit" to familiarize yourself with your waste in order to design the most effective recycling program. A waste audit is an analysis of the types and quantities of waste that you generate, and where that material is generated. Even if you have a recycling program currently in place, there is still value in conducting a waste audit.

Initial questions you will want to answer with a waste audit:

- What are the types of materials are generated during typical operations?
- How much of each of that material is generated during a typical operation timeframe?
  - Look at a one-week timeframe
- What portion of that material is recyclable?
- Where is this material being generated within your operation?

There are different methods of waste audits that can be conducted. Each audit method will require different levels of preparation and supplies before conducting an audit. The different audit methods also provide varying levels of detail and precision to results for businesses to analyze.

Waste Audits

A waste audit is considered a best practice and will provide more detailed and precise information. When conducting a waste audit, the waste materials are collected, physically sorted into specific material categories and weighed. The results from this type of audit are detailed, quantified data that can be useful for helping develop a program and future evaluations on that programs success. It is also helpful information when determining the costs or revenues associated with recycling certain waste streams. While conducting a waste audit is probably more useful for a larger business or a business with a complex waste stream, it can be valuable data for a business of any size.

EXAMPLE OF COMMERCIAL WASTE STREAM COMPLEXITY:

A **waste stream** is an aggregate flow of waste materials from generation to treatment.

A small office might generate the following recyclable material in their waste stream:

- White Office Paper
- Corrugated Cardboard
- Envelopes
- Junk Mail
- Plastic Bottles
- Aluminum Cans

In contrast, a food production facility might generate these recyclable materials:

- Corrugated Cardboard
- Film Plastics
- Steel Cans
- Food Waste
- Rigid Plastic Containers

Each operation would have to look at those materials, where they are generated within their process and determine the best system for collection and management of the

Visual Audits

Audits can be simple as a visual audit of all or select waste receptacles. The information gleaned from this approach will be less precise as you are simply walking through your building taking an inventory of the location of waste collection containers and the types and percentages of materials inside those containers. While the information obtained through this process isn't as detailed, it will require less time and planning to implement while providing you with useful insights. If your team or operation is smaller this might be the best method for you.

SWACO has provided more information and tools in below to help you conduct a waste audit. Once you understand the types and amounts of recyclable materials that you generate, the next step is to find a service provider that can collect and process your recyclable material.

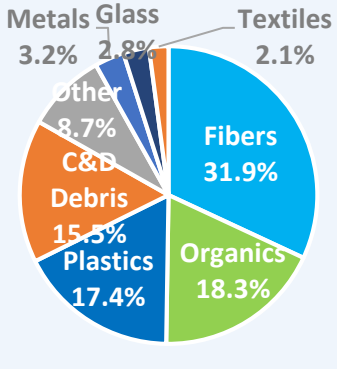
UNDERSTANDING FRANKLIN COUNTY'S WASTE STREAM

In 2019, SWACO completed a Waste Characterization Study of the waste stream to better understand waste trends and determine the composition of the materials in the waste stream and how much of it could be captured or diverted.

- **Up to 76% of the material being sent to the Franklin County landfill could be recycled/composted. Of that, 41% could be diverted today through existing programs and an additional 35% has the potential to be diverted with new programs and infrastructure.**
- **The top 3 materials entering the county landfill included- Food Scraps (15%), Corrugated Cardboard (10%) and other Compostable Fiber (8%), all of which can either be recovered through existing programs or have the potential to be captured and diverted if new programs and services are established.**
- **The study also assessed the value of the recyclable commodities (paper, cardboard, plastic bottles and jugs, glass bottles, metal cans) currently being landfilled at approximately $23 million dollars.**
- **SWACO has a goal to increase Franklin County's diversion from 50% to 75% by 2032 and the study identified food waste and cardboard as presenting the greatest opportunities to increase Franklin County's diversion.**

The results of the Waste Characterization Study reinforce the need to improve diversion from the landfill through reuse, recycling and composting and demonstrate the economic value of these wasted materials. SWACO has a variety of programs and activities that are designed to help our local businesses and communities reduce waste and divert more material, including our Recycle Right, Make a Difference educational campaign, community consortiums, a recycling cart initiative, business programming, as well as our economic development efforts. We appreciate your support of these efforts and look forward to advancing this important work alongside you!

76%
Of Material is Divertible



WASTE AUDIT GUIDE

Recycling and waste diversion are integral to business success, especially as waste is becoming more expensive. In the past 15 years, food costs have increased 66%, paper 16%, metals and minerals 90%. Many companies have already identified waste as an issue and are increasing their profits by changing production processes to reduce waste, educating their workforce, and engaging with consumers to recover or refurbish items.

The purpose of auditing your waste stream is to identify the materials in your waste stream and the amount of materials produced. The resulting data will then inform actions to increase waste reduction, improve or expand recycling practices, and focus education with staff.

In order to conduct a Waste Audit, you'll want to adhere to the following framework:

1. **Plan**
   - Identify locations of your business where you want to audit waste from
     - Cafeteria, copy room, employee work area, shipping/receiving employee work area, etc.
   - Determine the number of samples (bags of trash)
     - It is recommend trying to get 10% of your weekly trash (if possible)
   - Identify the location for the audit
   - Identify the types of categories you will break these materials out to
     - This can be a simple or as detailed as you desire
   - Recyclable vs. Trash vs. Compost
   - Paper vs. Plastic vs. Metal vs. Food Scraps vs. Cardboard
   - Organize staff (unless using a 3rd party group to conduct audit)
2. **Collect**
   - Collect waste at its source
     - If using a custodial service coordinate with them on properly collecting material
     - You will minimally want to collect a few days' worth of waste to get a good idea of average disposal habits
   - Identify central location for storing waste
     - You can work with your waste hauler on providing a container to store material

3. **Sort**
   - Provide employees with appropriate personal protective equipment, including at least puncture-proof gloves, eye protection, aprons, and hand sanitizer.
   - Weigh each bag/container of waste
   - Open bag and sort materials into designated categories
   - Weigh the sorted material
   - Record the weight of each material type
4. **Analyze**
   - If you plan on analyzing your results yourself, you'll want to calculate the sorted waste versus the total waste collected to give you an understanding of how much of each material is in your waste stream. For instance, of the sorted waste, 31% was office paper, 22% was cardboard, 18% food waste, etc.
5. **If you kept track of the departments the material came from you can organize and identify the material generated in each area**
   - Organize results to be presented to your group to help strategize on how to implement recycling in other areas of work.
   - This information can make for great baseline information for
     - Total weight or volume being generated
     - Contamination rates (amount of trash in the recycling containers)
     - Composition

Waste Audit Tool

SWACO has created a tool that should allow you and your team to input information related to your operation and show the opportunities for recycling, composting, or even for reducing waste. There is also a place to write observations from your audit and a place to write down some overall goals for your recycling program which you can save and use a reference point.

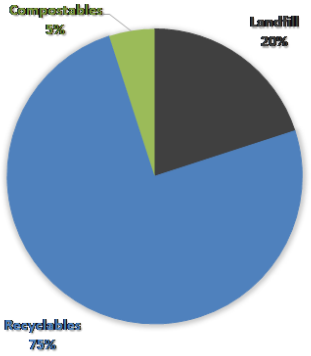
Current Service Levels

	Bin Size	Compacted?	# Bins	Pickups per week	Monthly cost
Landfill	30 cubic yd	Y	1	2	$6,000
Mixed Recycling	35 cubic yd	Y	1	0.5	$400
Glass	8 (select)	N	2	2	$200
Food Scraps	10 (select)	N	5	2	$100
Yard Trimmings	(select)	N	0	0	$0
				Total Monthly Cost	$6,700

Current Recycling Rate:

58%

Landfill Bin Contents



Other Bin Contents

These graphs shows the composition of the each waste stream by broad material categories (landfill, recyclables, compostables).

Mixed Recycling
16% contaminated

Glass
0% contaminated

Food Scraps
0% contaminated

Yard Trimmings
0% contaminated

Recycling Potential

If you diverted all recyclables in your landfill waste stream, you could:		
reduce landfill service by	68	cubic yards per week
divert	323	tons of recyclable material from the landfill annually
reduce greenhouse gas emissions by	686	mtCO2e per year
reduce your waste service costs by	$6,374	per year

Potential Recycling Rate:

83%

If you diverted all compostables in your landfill waste stream, you could:		
reduce landfill service by	5	cubic yards per week
divert	57	tons of compostable material from the landfill annually
reduce greenhouse gas emissions by	41	mtCO2e per year
increase your waste service costs by	$1,443	per year

Potential Cost Savings:

$4,931