

Conducting a Waste Characterization on Nantucket

A How-to Guide



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Guide Overview



The purpose of this guide is to provide thorough guidelines for those looking to conduct a waste characterization study. It is designed with details and insight from a waste characterization conducted on Nantucket, Massachusetts, and thus detailed toward Nantucket-specific considerations. However, broad concepts will still be applicable and can be adapted to work in other locations if desired. The user will be lead through the planning, action, and analysis phases of a waste characterization study. Waste characterization data allows for a greater understanding of municipal solid waste. Below is a summary of the guide, divided into each phase of the study and the chapters in each:

- ★ **Section 1 Planning Phase:** occurs in the weeks prior to executing the waste characterization study. Chapter 1 provides an overview of sample preparation and tools needed to conduct a successful study. Chapter 2 addresses safety concerns. Chapter 3 describes the setup of the location of the study, roles of participants, documents to be prepared prior to the day of the study, and scheduling.
- ★ **Section 2 Action Phase:** occurs when the waste characterization study is conducted. Chapter 3 details how a waste characterization operates by detailing equipment, communication and awareness, and outside factors. Chapter 4 describes the extra details that need to be considered, such as data keeping, handling untrained volunteers, and recording videos or pictures.
- ★ **Section 3 Analysis Phase:** occurs in the weeks following the waste characterization study. Chapter 5 provides recommendations in regards to record keeping for the collected data, including spreadsheet use. Chapter 6 describes how to determine findings from the collected data, and discusses creating graphs and messaging based on the results.

Acknowledgements

Thank you to our project advisors from WPI and our project sponsors from the Nantucket DPW for their help in the completion of this guide.

This guide was developed following a study conducted on October 30th, 2018 by a team of WPI students and the Nantucket DPW. In the study, 200 bags of waste were sampled. 100 bags were from private haulers and 100 bags were from residential drop-off.

All analysis conducted on the collected data was synthesized into a final report, available at <https://wp.wpi.edu/nantucket/projects/2018-projects/dpw/>.



All photographs were taken by our project sponsors and have been provided for our free use.

I. Planning Phase

Chapter 1: Characterization Overview

1.1 Waste Categories

One of the most essential and difficult aspects of planning for a waste characterization study is deciding upon the waste categories the samples will be sorted into. Fundamentally, categorizing is meant to divide the things people are putting in the waste stream into percentages.

Categories will make a difference in the analysis phase when the data is being analyzed. The greater the number of categories, the more detailed the data will be. A decision on how many categories and subcategories to use during the waste characterization study is one that should be carefully thought through and decided upon before the sort begins.

The number of categories should be influenced by the intention of the study. Section 1.2 details deciding on the sample size further, but the number of categories should be dictated by the desired size and scope of the sort. If the purpose of conducting the sort is to find basic or very generalized data, there isn't a need to delve into deeper subcategories. Further, if there are not many participants available or only a small sample size is prepared for sorting, the number of categories can be lowered.

Below is the waste category list used for the waste characterization study conducted in Nantucket, Massachusetts on October 30th, 2018:

Category	Definitions and Examples
1. Organics	
1.1 Compostable	Food waste, leaf and yard waste, and manure.
1.2 Non-Compostable	Bones and shells.
2. Paper	
2.2 Corrugated Cardboard	Package boxes.

2.3 Waxed Paper	Paper with a plastic film or wax over it. Examples include poster board.
2.4 Paper and Cardboard	Paper towels, cereal boxes, and pizza boxes.
3. Plastic	
3.1 Non-Recyclable Plastics	Candy wrappers.
3.2 Recyclable Plastics	Plastic bottles and containers.
3.3 Styrofoam	Coffee cups made from Styrofoam.
3.4 Films	Shrink wrap and mattress bags.
3.5 2020-Banned Plastics	K-cups, nip bottles, and single-use water bottles.
4. Other Waste	
4.1 Textiles	Clothing items like shirts and pants, rags.
4.2 Other Materials	This category is open to any materials found that do not already fit somewhere, such as toy cars.
5. Construct. & Demolition	Furniture, wood, bricks, tree branches, and concrete.
6. Metal	
6.1 Tin/Aluminum	Soda cans, cans from canned foods, Aluminum Foil
6.2 Other Metals	Ball bearings, screws and nails, unidentifiable metals
7. Glass	
7.1 Recyclable Glass	Jars and bottles for processed glass aggregates.
7.2 Other Glass	Light bulbs and mirrors.
8. Household Hazardous Waste	
8.1 Batteries	
8.2 Other H.H.W.	Human and animal waste, and paint.
9. Electronics	Computers and chords.
10. Bulky Materials	Mattresses.

Recommendations for Deciding Categories:

- Ensure categories are understood by all sorters before beginning to enhance team cohesion and avoid delays.

- Decide how sorters should handle cross-contaminated materials. This means there are two or more categories that the material could be sorted into. This can be determined by which of the multiple categories is the heaviest or most notable on the material, or it can be determined by the toxicity of the material.
- Be willing to adapt or create new categories if a material is repeatedly being found by sorters. There could be something that becomes evident once the sort begins that wasn't thought of beforehand and should then be noted and tracked as a separate category.
- Prepare signs to attach the waste drums in advance. If lamination is possible, this will help in keeping the signs clean and readable during the sort and may allow them to be reused in a future sort. In categories that are not self-explanatory, it is useful to list several examples of materials that go into the category on the sign, as well. Examples are provided below:



1.2 Sample Preparation



The sample in which the waste characterization study will analyze should be thought through and prepared prior to the sort. Although it shouldn't be dropped off too far in advance, there should be an understanding of the timing and size of the sample. The type of sample needed for the study can be determined by several factors, including:

- **Location and Date:** if a specific area in a city produces a high volume of waste and it wants to be understood further, the sample can be taken only from a specific region. Thus, the data will be targeted and can be analyzed based only on that specific location. This same idea applies to a date. If there is a time of year or season that produces a particularly high or interesting volume of waste, a study can be conducted specifically at this time.

An example of this is the waste receptacles in the downtown area of Nantucket being used as a sample during the Christmas Stroll, which is Nantucket's busiest weekend of the year.

- **Variance:** if there are multiple methods of trash collection or differences in the production of waste between different sets of population in an area, two or more samples from unique circumstances can be used for a study.

An example of this would be using a sample of privately-hauled waste and a sample of resident drop-off waste, which would give a versatile set of data that looks at the differences in the methods of trash collection.

In preparing the sample, there is a list of questions to answer before the day of the waste characterization:

- ☐ When will the sample be dropped off?

- ☐ Where will the sample bags be stored as the sort is occurring?
- ☐ How many bags will be sorted?
- ☐ How will the bags be handled?

1.3 Equipment List

There is a long list of equipment necessary to properly conducting a waste characterization study. Some of the equipment should be provided by the event coordinators, while some should be brought by participants in the study.

Checklist:

Participants Bring:

	Pen / Sharpie
	Water
	Weather-Conscious Clothing
	Closed-Toe Shoes or Boots

Event Coordinators Provide:

	Sorting Tables
	Tyvek Suits
	Non-Latex Gloves
	Sharps Protective Gloves
	Masking / Duct Tape
	Waste Drums (approx. 20-25)
	High-Visibility Vests
	Clipboards
	Sharps Collection Bin



Hi-Visibility Vest



Tyvek Suit



Sharps Collection Bin

Equipment Recommendations:

- Use tables with underlying screen (about 1/4 to 1/2" mesh) to allow liquids and small waste to fall through, which helps in keeping the overall process cleaner and easier to organize for sorters.
- Bring more hi-visibility vests than expected to be necessary, as unexpected volunteers and spectators may come that will also need them.
- Get as much of the equipment ready for use and in place in the days before the day of the study, as this part of the process should not cause a delay to the start of sorting.

1.4 Health and Safety

When preparing for a waste characterization study, there may be the expectation that it will be a dirty and health-adverse event. However, if procedures are followed and all participants understand the health and safety risks, the sort should be clean and safe.

Procedures:

1. No sorter should be touching the garbage without wearing protective gloves.
2. When a “sharp” is found, it should be immediately announced to the table and the table should stop sorting until it is removed. The object will then be picked up and placed in the Sharps Container with the sharp-edge facing down.
3. Any health and safety concerns or questions warrant a full stop until they are addressed and resolved by the safety officer. Also, a first aid kit should be available and under the control of the safety officer.

Recommendations:

- **Dress appropriately for the weather of the day.**
 - During a sort, there is not a lot of moving around.
 - Keep the wind in mind.
 - Hi-Viz vests must be worn by all participants and spectators of the sort for while they are in the sorting area.
- **Have all types of protective gear available.**

Depending on the situation, a participant may want:

 - Ear protection, such as earplugs
 - Eye protection, such as sunglasses
 - Face protection, such as face mask
 - Hand protection, such as gloves
- **A sort should be relatively clean if participants are careful.**

Chapter 2: Characterization Planning

2.1 Location Preparation

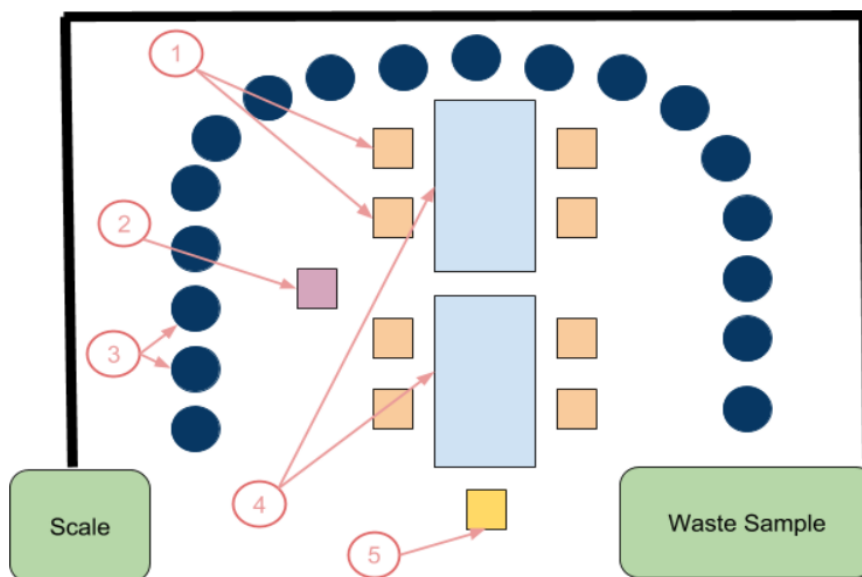
A crucial part of planning a waste characterization study is deciding on a location for the sorting. There are several factors that must be considered, including:

1. **Space:** There needs to be adequate space for all equipment necessary for the sort. In the diagram below, the key elements are listed. However, there must also be a clear walking lane around the outside of the waste barrels for spectators, photographers, and participants. It is important that the sorters are not being hindered because of lack of mobility.
2. **Exposure:** Depending on weather conditions, an area may be too exposed for a sort to take place in it. When dealing with paper and plastic waste, high winds can make a major issue of trash being blown around. In response, either set-up wind screens around the sorting area or ensure the waste barrels are big enough whereas the sorting materials will not fly away.

If rain is present the sort must be either moved inside or rescheduled to another day. Even with a slight drizzle, the rain will impact all of the data collection, and will make participants miserable. In the event of a hot sunny day, prepare sunscreen and possibly even umbrellas or beach tents to keep sorters and trash out of the sun. Pay attention to conditions and consider moving the sort to a more protected area or rescheduling if necessary.

3. **Convenience:** There should be a parking lot available for participants and volunteers. The site itself should be accessible and safe for all involved.

On the next page, there is a diagram of an example waste sorting site with descriptions of the individual pieces of equipment and people involved.



1. **Waste Sorters** - When sorting, the waste sorters should be distributed between the tables available.
2. **Bin Manager** - This person surveys the bins regularly to check for improperly sorted materials. They are sorters, as well. This job allows for mistakes to be corrected quickly. All sorting questions should be directed to them.
3. **Labelled Waste Sorting Barrels** - When placing these barrels, place the barrels that will be most used in locations that will be most efficient for sorters. For example, “compostable organics” is a category that will be found in almost all bags being sampled and should close to the sorters for easy access. All individual barrels should be weighed when empty before the sort to gather a “zero-value” for the data collection.
4. **Sorting Tables** – These are used to empty the bags of waste in the sample, allowing sorters to more effectively separate individual materials in the waste. There may only be one sorting table, depending on the size of the sample.
5. **Data Collector** – This person should be regularly walking around the area and taking notes on the frequency of certain materials, recording obscure materials found, tallying the bag count, and staying aware of any problems or confusion. They should try to have a clear view of the entire sorting area throughout the characterization study.

Note: All guests not involved in the sort or wearing protective gear should stay outside of the waste barrels, which is why there is a U-shaped area around the outside.

2.2 Roles



An effective waste characterization study functions because of its team and their coherence to their assigned jobs. These roles should be designated and established in the week leading up to the sort and agreed upon before any sorting begins. Each role has a unique and important task or set of tasks. Some team members may be able to take on more than one of these jobs without any negative impact on the efficiency of the sort.

By planning the roles in advance and agreeing upon their requirements, the sort can begin as early as possible without confusion or need for stoppages.

The roles are divided into three categories:

- **Pre-Sorting**
- **Post-Sorting**
- **Sorting**

These categories, and their specific roles, are detailed in a table on the next page of the guide.

Role	# Needed	Description
Pre-Sorting: these roles must be completed before the sort begins.		
Job Manager	1	This person acts as manager, dictating what people do specific roles.
Table Set-up	2-3	The tables need to be brought into the sort area and arranged.
Drum Set-up	2-3	The drums should be set up according to the chart in the following pages.
Sorting: these roles become active once the sort begins and will stop upon its completion.		
Sorters	4-6	These personnel are the ones directly sorting through the bags.
Data Collector	1	This person has access to the data collection sheets and is actively recording findings, weights, and bag count. They allow the sorters to focus solely on their task..
Safety Officer	1	This person is informed on all safety procedures and is the main contact when a health or safety issue or question arises.
Greeter	1	This person is tasked with greeting and interacting with guests and volunteers that arrive after the sort has started.
Bin Manager	1	This person surveys the bins regularly to check for improperly sorted materials. They are sorters, as well. This job allows for mistakes to be corrected quickly. All sorting questions should be directed to them.
Bag Grabber	1-2	This person grabs and brings over to trash bags for the sorters. They are sorters, as well.
Bin Emptier	2-3	If waste drums get filled during the sort, they will be carried to the scale, weighed, and emptied. They are sorters, as well.
Post-Sorting: these roles must be completed before the sort can officially end.		
Clean-up	4-5	The sorting area must be cleared of any fallen materials, the tables must be returned, and the bins must be put away.
Weighing	2-3	The drums need to be carried to the scale, weighed, and emptied of contents appropriately.

2.3 Scheduling

A waste characterization study is not the easiest event to predict, as a lot of the timing, findings, and ease are based off the contents of the random samples and the day it is held. When planning to conduct a study, having a rough schedule that can be distributed amongst participants can serve to help guide the day along.

Factors to consider when planning a schedule include:

- **Number of Samples**
- **Desired Starting and Ending Times**
- **Status of the Sorting Area**
- **Having a Scheduled Break**
- **Status of the Volunteers and Participants**
- **Scope of the Sort**

The schedule below was used during the waste characterization study conducted in Nantucket on October 30th, 2018.

Task	Start Time	End Time	Duration
Team arrives	6:45	7:00	0:15
Team labels the bins with categories	7:00	7:30	0:30
Team sets-up sorting area (tables, scale)	7:00	7:30	0:30
Team gets into safety gear	7:25	7:30	0:05
Team reviews health and safety procedures	8:00	8:05	0:05
Team reviews specifics of categories	8:05	8:15	0:10
Team sorts through first sample of waste	8:15	11:15	3:00
Barrels of waste are weighed, data is recorded	11:15	11:40	0:25
Team cleans tables and area	11:15	11:40	0:25
Debrief, review of first sample	11:40	11:45	0:05
Break	11:45	12:30	0:45
Second sample is dropped-off	12:00	12:35	0:35
Team sets-up for second sample of waste	12:35	12:45	0:10
Team gets into safety gear	12:40	12:45	0:05
Team sorts through second sample of waste	12:45	3:45	3:00
Barrels of waste are weighed, data is recorded	3:45	4:15	0:30
Team cleans tables and area	3:45	4:15	0:30
Debrief, review of second sample	3:45	4:15	0:30

An important note to remember about scheduling the event is that times can and will vary. It is not crucial that every part of the study runs for the exact amount of time that was planned for prior.

II. Action Phase

Chapter 3: Conducting a Waste Characterization

The main goal of a waste characterization study is to gain a full understanding of what is getting into the trash, given Nantucket's expectations regarding how waste is sorted. Through the findings, it becomes possible to determine how to improve recycling to minimize what is being put into the landfill. Nantucket's goal is to have anything that isn't compostable diverted elsewhere.

3.1 Communication and Awareness



It is important to establish ways of communicating with the entire sorting team when there is confusion, a problem, or question. There are several situations that can arise while conducting a waste characterization that may require a full stop to address.

- **Confusion about Waste Categories**
- **A Sharp is Found** (i.e. Broken glass)
- **An Unexpected Item is Found** (i.e. Spray can)
- **Volunteers Arrive**
- **A Sorter Feels Unwell**
- **Not Knowing What is Being Touched**

3.2 Adapting on the Fly



A waste characterization study requires flexibility. There is a level of unpredictability that comes with it, regardless of the preparation. When going through random samples of waste, it is impossible to predict what exactly will be found and to what extent.

Possible Factors that can Affect the Study:

Weather	
Wind	Any of the factors to the left can cause discomfort or interfere with the sorting process. All participants should be dressed weather-appropriately, but if a participant is uncomfortable they should stop and address their problem. If a sort begins and the weather is negatively impacting its productivity, safety, or legitimacy by tampering with the samples, it should be stopped.
Rain	
Cold	
Heat	
It is crucial to have a second date planned for the sort in case of cancellation.	
Animals (e.g. seagulls)	
Although this may be a rare case, animals may tamper with the sample as it is waiting to be sorted.	

Delays	
Samples	The samples, participants, or equipment may arrive late or be unavailable at the beginning of a study. If a piece of equipment is unavailable, the sort may continue if safe and possible to do so. Otherwise, the sort must be postponed or cancelled.
Participants	
Equipment	
Participant Motivation	
Music	By having music playing, a sort is more enjoyable for participants. By including 45-60-minute break for food and water in the schedule, participants can rest and re-energize during a sort.
Scheduled Break	
Positivity	
Unexpected Materials	
There may be materials found in a sample that weren’t expected based on what was expected during the planning phase. The note-taker can handle this by making a special note. If this is a recurrent issue and there is a high quantity of a specific, unexpected material, there can be another category added to the sort (1.1).	

Chapter 4: Extra Details

4.1 Data Recording



The importance of note-taking is an element of a waste characterization study that can't be overlooked. As explained in 2.2, the data collector is responsible for actively tracking bag count, recording category weight readings, and recording any significant notes or findings.

Recommendations:

- **Come prepared.** Bring a clipboard with all data sheets that will be needed already in place. Come with extra data sheets, as a mistake should not mean the sort must stop until a new sheet is printed. The note-taker should be dressed properly for the wind, cold, or heat (as applicable) and should have gloves, water, etc. as necessary.
- **Be attentive.** A waste sort is a long process with a lot of potential distractions. The note-taker cannot miss any detail for the study to be entirely accurate and successful.
- **Communicate.** The sorters will be focused on their own roles. Agree upon a process in which the sorters tell the note-taker when a new bag is sorted, so the note-taker can tally it. This same concept applies to when there is a unique finding that should be noted separately.

4.2 Volunteers and Spectators



Inviting guests to a waste characterization study can increase community involvement, outreach, and interest. These guests may be a local writer for the newspaper, a photographer or videographer, or members of a community recycling program. Guests can also include local people that want to volunteer in helping sort the waste.

Recommendations:

- People arriving to observe should be greeted immediately by the designated Greeter (2.2) at the entrance of the sorting area. They should not be allowed to roam the area freely.
- Photographers should be handled differently. If arranged with the Greeter, they can get closer to the action, but should not be inhibiting the sorters in any way.
- Videographers should arrive early to set-up their cameras and microphones. Any interviews being conducted should be done with the knowledge that it may be interrupted or stopped at any time.
- Volunteers should be informed of the categories, the location of each category, and what goes into each category. They should also be trained on the proper sorting process and the health and safety procedures before joining, so they are safe and do not slow the study down.

4.3 Video and Photography

Documenting a waste characterization study can serve several purposes. In thinking of the analysis and reflection that immediately follows the conclusion of a sort, there are major benefits to photographs and videos of the process, findings, and the participants. Given these characterizations may only occur once or twice a year, there needs to be an emphasis on preserving as much detail as possible when they happen. There may be unique items found in a sample that will be recorded outside of a category. Including a photo of these items in the final report increases reputability.



Another benefit of documenting a waste characterization is the potential for creating public education materials. The data that comes from them is invaluable, but a picture of a participant holding a fish head or a picture of the sorting table after a sample is completed will increase the imagery and messaging. A person seeing participants in action would be more inclined to believe these participants truly care about the waste disposal and recycling efforts in the location, and are willing to get dirty to improve those efforts.

III. Analysis Phase

Chapter 5: Record Keeping

5.1 Immediate Reflection

The action phase is a long and tiring process that brings in a lot of invaluable information. It is important to remember once the action phase is completed that the work is not done. A crucial element to conducting a waste characterization study is documenting the experience and its findings.

Steps to ensuring proper reflection are listed in the table below:

Immediately After Sort	Place all data sheets in a single folder in a safe place. Write down all reflections, including: <ul style="list-style-type: none">➤ Specifics about the day (weather, number of participants, etc.)➤ What went well➤ What went poorly➤ Considerations for future studies
Next Day of Work	Enter data into the online spreadsheet skeleton (5.2). Scan data sheets or create online back-ups.
Next Days of Work	Begin data analysis. <ul style="list-style-type: none">➤ Draw conclusions from graphs.➤ Determine major issues to target in messaging.

The main purpose of immediate reflection is to ensure no detail of the sort is lost or forgotten. As these studies can only be conducted once or twice a year, it's essential they are used to their full potential.

5.2 Spreadsheets

Inserting the collected data into spreadsheets following the completion of a waste characterization study is essential for beginning data analysis. A link to skeleton spreadsheets that were created for the Nantucket waste characterization study from October 30th, 2018 is available at this link: <https://wp.wpi.edu/nantucket/projects/2018-projects/dpw/>. The spreadsheet contains explanations on how to correctly use them.

Pictured below is an example of the populated raw data sheet from the waste characterization study conducted for Nantucket, as mentioned earlier. The raw data sheet should only include the categories, sample denotations, and basic calculations, such as totals and percentages.

General Category	Sub-Category	Sample 1 Wt (lb)	Sample 2 Wt (lb)	Total Wt (lb)	Wt % of Total		Sample 1 Volume (gal)	Sample 2 Volume (gal)	Total Vol (gal)
Paper	Paper and Cardboard	178	251	429	24%		540	450	990
Paper	Non-Compostable (waxed)	13	18	30	2%		60	50	110
Paper	Corrugated Cardboard	37	43	79	4%		120	100	220
Organics	Compostable	239	429	668	37%		180	87.5	268
Organics	Non-Compostable	40	15	55	3%		0	50	50
Plastic	Non-recyclable plastics	80	78	158	9%		120	75	195
Plastic	Recyclable plastics	18	25	43	2%		180	100	280
Plastic	2020-Ban plastics	7	6	12	1%		0	50	50
Plastic	Films	48	45	93	5%		180	100	280
Plastic	Styrofoam	3	20	22	1%		0	25	25
Other Waste	Textiles	36	13	49	3%		120	50	170
Other Waste	Other materials	-	-	-	0%		0	0	-
Metal	Tin/alluminum	13	52	64	4%		100	22.5	123
Metal	Other metals	14	-	14	1%		0	0	-
Glass	Bottles/Jars	3	50	53	3%		0	5	5
Glass	Other Glass	4	-	4	0%		0	0	-
Electronics	Electronics	11	-	11	1%		0	0	-
Bulky Materials	Bulky Materials	-	-	-	0%		0	0	-
Totals		739	1,042	1,781	100%		1,600	1,165	2,765

Recommendations for Spreadsheet Use:

- Ensure the simple, raw data is well-structured and accurate before attempting to extrapolate it further.
- Focus more specific data to target areas of concern, as the specific data will be used in the creation of graphics.
- Sort spreadsheet data in ways that make sense and are easy to follow.
- Create sheets separate from the raw data to avoid confusion.

Chapter 6: Findings

6.1 Tables and Graphs

An important step in analyzing data is using graphics to convey the information. Tables and graphs are useful tools to display findings quickly and accessibly. A spreadsheet contains all the numbers, but the graphics will take the next step in representing what is important.

Effective Graphics are:

- Readable
- Informative
- Purposeful
- Labelled
- Explained
- Conclusive

The graphics below are both being taken from Nantucket data used for analysis following the waste characterization study conducted on October 30th, 2018.

Figure 1 represents the total MSW in tons per month from July 2014 to November 2018. The use of a line graph demonstrates the fluctuation in total MSW between the summer “on-season” months and the winter “off-season” months in Nantucket. It gives a clear overview of an important aspect of Nantucket’s waste production.

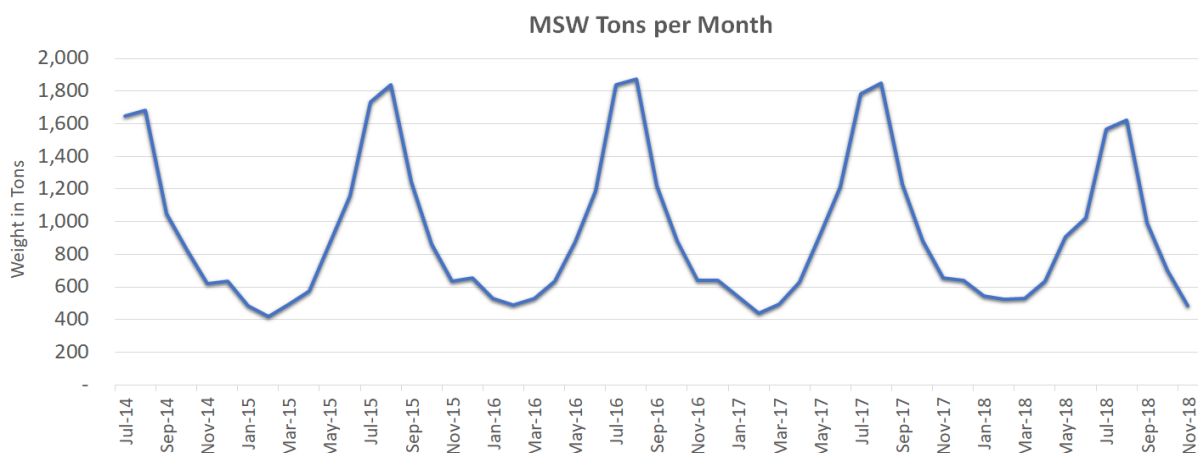


Figure 1. Municipal solid waste intake July 2014 through November 2018.

Table 1 focuses in a specific portion of Figure 1 (October 2017 to October 2018) and organizes it in a clear manner, allowing the audience to gain a more focused understanding. The month with

the lowest tonnage, February 2018, is highlighted in red, while the month with the highest tonnage, August 2018, is highlighted in green.

Table 1. *Percentage of Non-Compostable Materials by Weight*

Month	Weight (tons)
Oct-17	883
Nov-17	658
Dec-17	639
Jan-18	546
Feb-18	526
Mar-18	530
Apr-18	637
May-18	907
Jun-18	1022
Jul-18	1568
Aug-18	1622
Sep-18	991
Oct-18	702

6.2 Messaging

An important component of the analysis phase is developing messaging based on findings from the data. Following analysis of a waste characterization data, the findings will demonstrate areas of possible improvement that can be communicated to the public.

Goals of Public Outreach:

- Clarifying Confusion
- Encouraging Action
- Improving Habits
- Explaining New Regulations
- Helping Visitors Understand
- Providing Specifics

NANTUCKET: WE RECYCLE LIKE NOBODY ELSE.

It's very important to Nantucket as a unique island community to maintain the island's health and beauty. Here on the island, we use a special biodigester to break down organics from household waste and turn them into reusable soil. We all love Nantucket, so we recycle and use our biodigester as much as possible!

AT THE LANDFILL: WHERE DOES IT GO?

1 PLASTICS	2 TIN/ALUMINUM	3 GLASS	4 CORRUGATED CARDBOARD	5 ORGANICS
ALL PLASTICS including common recyclables, bottle caps, plastic bags, and films.	Tin and aluminum items including beverage cans, soup cans, lids, and bottle caps.	Glass containers such as bottles and jars of all colors.	ONLY double-walled, corrugated cardboard; shipping boxes, for example.	Food waste and paper products including non-corrugated cardboard and pizza boxes.
	REMEMBER! <ul style="list-style-type: none">★ If it's going in the recycling, it needs to be clean and free of food waste or other contaminants. Otherwise, it may not actually be recycled.★ Using clear garbage bags is a requirement on the island.★ YOU can make a difference!			

OTHER MATERIALS

Yard Waste and Brush

Yard waste such as leaves and trimmings can be disposed of at the landfill for free. Brush, such as logs and tree branches, can be disposed of at the landfill for a fee.

Bulky Items

Items such as appliances, mattresses, smoke detectors, and alkaline batteries can be disposed of at the landfill.

Hazardous Waste

There are six (6) Household & Commercial Hazardous Waste collection events per year. Items that may be collected during these events include:

NANTUCKET HOUSEHOLD & COMMERCIAL HAZARDOUS WASTE COLLECTION DAY

AUTOMOTIVE PRODUCTS: Antifreeze, Brake Fluids, Motor Oil, Oil Filters, Transmission Fluid, Solvents.

CLEANING PRODUCTS: Bathroom Cleaner, Drain Opener, Furniture Polish, Metal Polish, Oven Cleaner.

PAINT & PAINT PRODUCTS: Adhesives, Aerosol Cans (not empty), Epoxies, Paint, Paint Thinner, Paint Remover, Stains, Varnishes. NO LATEX PAINT.

PESTICIDES: Fertilizer (with Weed Killer), Fungicides, Herbicides, Insecticides, Rat Poisons, Weed Killer.

OTHER PRODUCTS: Asbestos*, Batteries (Mercury and Lithium), Driveway Sealer, Gasoline, Mercury (Fluorescent Bulbs), Pool Chemicals, Photography (Chemicals), Fire Extinguishers and Aerosol Cans that are not completely empty (if empty and non-pressurized they can go into the metal bin).

Not collected at the landfill:

SYRINGES and other sharps can be taken into the Nantucket Fire Department. Please contact them at (508) 228-2323.

MEDICATION can be disposed of at local retail pharmacies during sanctioned and scheduled "Take-Back Days."

Harbor Fuel takes HOME HEATING OIL TANKS for a fee. Please contact them at (508) 228-2950.

PROPANE TANKS for grills can be taken to Yates Gas. Please contact them at (508) 228-0725.

For AMMUNITION and EXPLOSIVES please contact the Nantucket Public Safety Facility at (508) 228-1212

LATEX PAINT is non-hazardous and will not be accepted. Mix the can of latex paint with kitty litter, let harden and dispose of cans at the landfill in the metal bin.

For more information, visit www.nantucket-ma.gov/242/Solid-Waste or call Waste Options at (508) 228-4283. The Nantucket Landfill is located at 186 Madaket Rd.

On the next page is a graphic explaining the thought process used to analyze the best way of communicating findings on Nantucket, and that resulted in the poster drafts seen above.

Thought Process to Develop Messaging for Nantucket

